

ALMANAC XXXV TRANSITS OF EARTH IN BCE

The almanac XXXV contains a list of transits of Earth from the 125th millennium BCE to the 1st millennium BCE.

During the period of 250 000 years, the total number of transits of Earth is 120 546 transits of Earth (3 392 transits of Earth visible from Mars, 23 635 transits of Earth visible from Jupiter, 28 373 transits of Earth visible from Saturn, 29 404 transits of Earth visible from Uranus, 33 187 transits of Earth visible from Neptune, 5 744 transits of Earth visible from Pluto).

125TH MILLENNIUM BCE

This is a list of transits of Earth in the 125th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Pluto	-124998-04-13 06:01 J	-43933994.45	-43933994.25	-43933994.03	0.0082	0.0045		
Saturn	-124996-06-27 14:11 J	-43933188.02	-43933187.91	-43933187.78	0.0262	0.0229		
Uranus	-124982-01-19 16:20 J	-43928233.94	-43928233.82	-43928233.65	0.0131	0.0105		
Uranus	-124981-01-23 14:54 J	-43927865.13	-43927864.88	-43927864.64	0.0131	0.0003		
Saturn	-124980-01-03 14:39 J	-43927519.07	-43927518.89	-43927518.70	0.0299	0.0193		
Uranus	-124980-01-26 12:01 J	-43927496.13	-43927496.00	-43927495.87	0.0131	0.0110		
Jupiter	-124978-01-12 18:01 J	-43926779.92	-43926779.75	-43926779.58	0.0520	0.0343		
Saturn	-124967-06-22 14:39 J	-43922601.12	-43922600.89	-43922600.65	0.0264	0.0096		
Jupiter	-124966-01-17 11:03 J	-43922392.26	-43922392.04	-43922391.82	0.0522	0.0113		
Mars	-124964-12-29 08:25 J	-43921315.29	-43921315.15	-43921315.01	0.1673	0.1080		
Saturn	-124952-12-28 12:44 J	-43916933.05	-43916932.97	-43916932.86	0.0298	0.0272		
Jupiter	-124949-07-06 20:54 J	-43916011.83	-43916011.63	-43916011.42	0.0505	0.0269		
Uranus	-124939-07-16 09:51 J	-43912350.32	-43912350.09	-43912349.84	0.0148	0.0056		
Uranus	-124938-07-21 23:32 J	-43911979.68	-43911979.52	-43911979.34	0.0148	0.0113		
Jupiter	-124937-07-11 18:30 J	-43911623.95	-43911623.73	-43911623.50	0.0504	0.0173		
Neptune	-124934-12-23 19:56 J	-43910363.83	-43910363.67	-43910363.48	0.0089	0.0064		
Neptune	-124933-12-25 06:01 J	-43909996.47	-43909996.25	-43909996.01	0.0088	0.0039		
Neptune	-124932-12-27 16:20 J	-43909629.06	-43909628.82	-43909628.56	0.0088	0.0014		
Neptune	-124931-12-30 02:25 J	-43909261.65	-43909261.40	-43909261.15	0.0088	0.0012		
Neptune	-124929-01-01 11:47 J	-43908894.22	-43908894.01	-43908893.76	0.0088	0.0038		
Neptune	-124928-01-02 21:37 J	-43908526.77	-43908526.60	-43908526.42	0.0088	0.0062		
Neptune	-124927-01-05 06:44 J	-43908159.26	-43908159.22	-43908159.16	0.0088	0.0087		
Saturn	-124921-01-05 16:49 J	-43905967.86	-43905967.80	-43905967.71	0.0299	0.0284		
Saturn	-124908-06-23 15:23 J	-43901050.11	-43901049.86	-43901049.61	0.0264	0.0021		
Uranus	-124898-01-20 04:06 J	-43897552.48	-43897552.33	-43897552.17	0.0131	0.0100		

Uranus -124897-01-24 01:56 J -43897183.66 -43897183.42 -43897183.17 0.0131 0.0008
 Uranus -124896-01-26 23:03 J -43896814.63 -43896814.54 -43896814.40 0.0131 0.0115
 Jupiter -124895-01-12 02:25 J -43896464.53 -43896464.40 -43896464.25 0.0520 0.0413
 Saturn -124893-12-29 17:32 J -43895381.96 -43895381.77 -43895381.57 0.0298 0.0174
 Jupiter -124883-01-16 17:03 J -43892077.02 -43892076.79 -43892076.56 0.0521 0.0034
 Jupiter -124871-01-21 06:01 J -43887689.33 -43887689.25 -43887689.16 0.0522 0.0478
 Jupiter -124866-07-07 03:51 J -43885696.51 -43885696.34 -43885696.15 0.0506 0.0332
 Uranus -124855-07-16 16:35 J -43881669.04 -43881668.81 -43881668.55 0.0148 0.0055
 Jupiter -124854-07-11 20:54 J -43881308.87 -43881308.63 -43881308.40 0.0504 0.0090
 Uranus -124854-07-22 06:01 J -43881298.40 -43881298.25 -43881298.07 0.0148 0.0114
 Neptune -124851-06-14 08:39 J -43880240.28 -43880240.14 -43880239.97 0.0089 0.0071
 Neptune -124850-06-16 21:23 J -43879872.82 -43879872.61 -43879872.37 0.0089 0.0045
 Neptune -124849-06-18 10:49 J -43879505.30 -43879505.05 -43879504.79 0.0089 0.0019
 Saturn -124849-06-24 18:44 J -43879498.96 -43879498.72 -43879498.47 0.0264 0.0062
 Neptune -124848-06-20 23:47 J -43879137.76 -43879137.51 -43879137.24 0.0089 0.0008
 Neptune -124847-06-23 12:59 J -43878770.19 -43878769.96 -43878769.70 0.0089 0.0034
 Neptune -124846-06-26 02:25 J -43878402.58 -43878402.40 -43878402.19 0.0089 0.0060
 Neptune -124845-06-27 16:20 J -43878034.87 -43878034.82 -43878034.75 0.0089 0.0086
 Mars -124844-06-19 00:30 J -43877678.68 -43877678.48 -43877678.29 0.1835 0.0363
 Pluto -124842-10-20 16:20 J -43876825.09 -43876824.82 -43876824.55 0.0063 0.0006
 Saturn -124833-01-01 04:20 J -43873830.56 -43873830.32 -43873830.08 0.0298 0.0058
 Saturn -124820-06-19 22:35 J -43868911.61 -43868911.56 -43868911.50 0.0265 0.0258
 Uranus -124814-01-20 13:42 J -43866871.08 -43866870.93 -43866870.75 0.0131 0.0097
 Uranus -124813-01-24 12:15 J -43866502.24 -43866501.99 -43866501.74 0.0131 0.0011
 Jupiter -124812-01-11 04:20 J -43866149.36 -43866149.32 -43866149.26 0.0520 0.0505
 Uranus -124812-01-27 09:23 J -43866133.19 -43866133.11 -43866132.98 0.0131 0.0119
 Jupiter -124800-01-15 20:25 J -43861761.88 -43861761.65 -43861761.42 0.0521 0.0053
 Saturn -124790-06-27 00:44 J -43857947.66 -43857947.47 -43857947.25 0.0264 0.0152
 Jupiter -124788-01-20 11:47 J -43857374.16 -43857374.01 -43857373.86 0.0522 0.0398
 Jupiter -124783-07-06 03:08 J -43855381.49 -43855381.37 -43855381.24 0.0505 0.0425

Saturn -124774-01-02 19:42 J -43852278.91 -43852278.68 -43852278.44 0.0298 0.0073
 Jupiter -124771-07-10 21:08 J -43850993.86 -43850993.62 -43850993.39 0.0505 0.0010
 Uranus -124771-07-17 03:51 J -43850987.58 -43850987.34 -43850987.09 0.0148 0.0049
 Uranus -124770-07-22 16:49 J -43850616.93 -43850616.80 -43850616.62 0.0148 0.0120
 Neptune -124770-12-23 05:47 J -43850463.37 -43850463.26 -43850463.10 0.0089 0.0075
 Neptune -124769-12-24 16:35 J -43850096.02 -43850095.81 -43850095.59 0.0089 0.0049
 Neptune -124768-12-27 02:39 J -43849728.63 -43849728.39 -43849728.13 0.0088 0.0024
 Neptune -124767-12-29 12:44 J -43849361.22 -43849360.97 -43849360.71 0.0088 0.0002
 Neptune -124766-12-31 22:20 J -43848993.79 -43848993.57 -43848993.31 0.0088 0.0028
 Neptune -124764-01-02 07:56 J -43848626.35 -43848626.17 -43848625.94 0.0088 0.0053
 Neptune -124763-01-04 17:18 J -43848258.87 -43848258.78 -43848258.62 0.0088 0.0078
 Saturn -124761-06-21 06:30 J -43847360.42 -43847360.23 -43847360.03 0.0265 0.0163
 Jupiter -124759-07-15 16:35 J -43846605.92 -43846605.81 -43846605.68 0.0504 0.0435
 Mars -124759-12-28 04:06 J -43846440.52 -43846440.33 -43846440.14 0.1679 0.0211
 Pluto -124752-04-14 18:01 J -43844140.99 -43844140.75 -43844140.49 0.0082 0.0010
 Saturn -124731-06-28 09:37 J -43836396.17 -43836396.10 -43836396.00 0.0264 0.0248
 Uranus -124730-01-21 01:13 J -43836189.61 -43836189.45 -43836189.26 0.0131 0.0093
 Uranus -124729-01-24 23:47 J -43835820.76 -43835820.51 -43835820.26 0.0131 0.0016
 Uranus -124728-01-27 21:37 J -43835451.67 -43835451.60 -43835451.51 0.0131 0.0123
 Jupiter -124717-01-15 21:23 J -43831446.83 -43831446.61 -43831446.39 0.0521 0.0155
 Saturn -124715-01-04 14:54 J -43830727.05 -43830726.88 -43830726.72 0.0298 0.0214
 Jupiter -124705-01-20 11:32 J -43827059.21 -43827059.02 -43827058.84 0.0522 0.0294
 Saturn -124702-06-23 16:35 J -43825809.04 -43825808.81 -43825808.56 0.0265 0.0065
 Jupiter -124688-07-09 20:54 J -43820678.86 -43820678.63 -43820678.39 0.0505 0.0088
 Neptune -124687-06-13 15:51 J -43820339.92 -43820339.84 -43820339.72 0.0089 0.0082
 Uranus -124687-07-17 17:18 J -43820306.02 -43820305.78 -43820305.52 0.0148 0.0039
 Saturn -124687-12-29 20:54 J -43820140.78 -43820140.63 -43820140.48 0.0297 0.0227
 Neptune -124686-06-16 04:35 J -43819972.49 -43819972.31 -43819972.09 0.0089 0.0056
 Uranus -124686-07-23 06:15 J -43819935.35 -43819935.24 -43819935.09 0.0148 0.0129
 Neptune -124685-06-17 17:32 J -43819605.00 -43819604.77 -43819604.51 0.0089 0.0030

Neptune -124684-06-20 06:44 J -43819237.48 -43819237.22 -43819236.96 0.0089 0.0004
 Neptune -124683-06-22 19:42 J -43818869.93 -43818869.68 -43818869.42 0.0089 0.0023
 Neptune -124682-06-25 08:54 J -43818502.34 -43818502.13 -43818501.90 0.0089 0.0049
 Neptune -124681-06-26 22:35 J -43818134.69 -43818134.56 -43818134.41 0.0089 0.0075
 Mars -124680-12-30 09:51 J -43817583.17 -43817583.09 -43817583.00 0.1677 0.1485
 Jupiter -124676-07-14 15:23 J -43816291.03 -43816290.86 -43816290.68 0.0503 0.0339
 Uranus -124646-01-21 12:30 J -43805508.16 -43805507.98 -43805507.79 0.0131 0.0087
 Uranus -124645-01-25 10:49 J -43805139.28 -43805139.05 -43805138.80 0.0131 0.0021
 Uranus -124644-01-28 08:39 J -43804770.17 -43804770.14 -43804770.08 0.0131 0.0128
 Saturn -124643-06-25 04:06 J -43804257.57 -43804257.33 -43804257.08 0.0264 0.0038
 Jupiter -124634-01-14 18:30 J -43801131.92 -43801131.73 -43801131.53 0.0520 0.0265
 Saturn -124628-12-31 18:15 J -43798588.97 -43798588.74 -43798588.51 0.0297 0.0080
 Jupiter -124622-01-19 08:54 J -43796744.34 -43796744.13 -43796743.92 0.0521 0.0182
 Neptune -124606-12-22 16:20 J -43790562.87 -43790562.82 -43790562.72 0.0089 0.0085
 Jupiter -124605-07-08 19:13 J -43790363.92 -43790363.70 -43790363.48 0.0505 0.0184
 Neptune -124605-12-24 02:54 J -43790195.55 -43790195.38 -43790195.17 0.0089 0.0060
 Neptune -124604-12-26 13:27 J -43789828.17 -43789827.94 -43789827.70 0.0089 0.0034
 Uranus -124603-07-18 06:01 J -43789624.50 -43789624.25 -43789623.99 0.0148 0.0030
 Neptune -124603-12-28 23:47 J -43789460.76 -43789460.51 -43789460.25 0.0088 0.0008
 Uranus -124602-07-23 19:13 J -43789253.80 -43789253.70 -43789253.61 0.0148 0.0138
 Neptune -124602-12-31 09:37 J -43789093.35 -43789093.10 -43789092.85 0.0088 0.0017
 Neptune -124600-01-01 19:13 J -43788725.91 -43788725.70 -43788725.46 0.0088 0.0043
 Neptune -124599-01-04 04:49 J -43788358.44 -43788358.30 -43788358.11 0.0088 0.0068
 Pluto -124596-10-21 22:35 J -43786971.83 -43786971.56 -43786971.29 0.0063 0.0006
 Jupiter -124593-07-13 11:03 J -43785976.25 -43785976.04 -43785975.83 0.0504 0.0235
 Saturn -124584-06-26 15:51 J -43782706.04 -43782705.84 -43782705.62 0.0264 0.0141
 Saturn -124568-01-02 13:56 J -43777037.15 -43777036.92 -43777036.68 0.0298 0.0062
 Uranus -124562-01-21 23:47 J -43774826.69 -43774826.51 -43774826.31 0.0131 0.0082
 Uranus -124561-01-25 22:06 J -43774457.81 -43774457.58 -43774457.33 0.0131 0.0026
 Mars -124560-06-18 15:08 J -43773948.03 -43773947.87 -43773947.71 0.1830 0.1065

Saturn -124555-06-21 20:11 J -43772118.83 -43772118.66 -43772118.46 0.0265 0.0178
 Mars -124554-12-26 22:35 J -43771565.63 -43771565.56 -43771565.49 0.1684 0.1554
 Jupiter -124551-01-13 17:18 J -43770816.93 -43770816.78 -43770816.61 0.0520 0.0371
 Jupiter -124539-01-18 09:23 J -43766429.34 -43766429.11 -43766428.89 0.0521 0.0083
 Saturn -124525-06-28 02:39 J -43761154.49 -43761154.39 -43761154.28 0.0264 0.0238
 Neptune -124522-06-15 12:30 J -43760072.12 -43760071.98 -43760071.77 0.0089 0.0067
 Jupiter -124522-07-08 14:54 J -43760049.07 -43760048.88 -43760048.68 0.0506 0.0288
 Neptune -124521-06-17 01:56 J -43759704.65 -43759704.42 -43759704.19 0.0089 0.0040
 Neptune -124520-06-19 14:39 J -43759337.14 -43759336.89 -43759336.62 0.0089 0.0014
 Neptune -124519-06-22 03:37 J -43758969.60 -43758969.35 -43758969.08 0.0089 0.0013
 Uranus -124519-07-18 15:37 J -43758943.10 -43758942.85 -43758942.58 0.0148 0.0025
 Neptune -124518-06-24 16:49 J -43758602.01 -43758601.80 -43758601.55 0.0089 0.0039
 Uranus -124518-07-24 04:20 J -43758572.36 -43758572.32 -43758572.23 0.0148 0.0143
 Neptune -124517-06-26 06:30 J -43758234.41 -43758234.23 -43758234.05 0.0089 0.0065
 Jupiter -124510-07-13 11:03 J -43755661.26 -43755661.04 -43755660.81 0.0505 0.0148
 Saturn -124509-01-05 05:32 J -43755485.45 -43755485.27 -43755485.08 0.0299 0.0190
 Pluto -124506-04-17 04:35 J -43754287.56 -43754287.31 -43754287.07 0.0082 0.0018
 Saturn -124496-06-23 06:44 J -43750567.45 -43750567.22 -43750566.98 0.0265 0.0080
 Saturn -124481-12-29 05:47 J -43744899.35 -43744899.26 -43744899.15 0.0297 0.0268
 Uranus -124478-01-22 09:23 J -43744145.29 -43744145.11 -43744144.90 0.0131 0.0079
 Uranus -124477-01-26 07:56 J -43743776.41 -43743776.17 -43743775.93 0.0131 0.0029
 Mars -124475-12-29 04:49 J -43742708.49 -43742708.30 -43742708.12 0.1682 0.0173
 Jupiter -124468-01-12 22:49 J -43740501.66 -43740501.55 -43740501.43 0.0519 0.0447
 Jupiter -124456-01-17 12:01 J -43736114.23 -43736114.00 -43736113.77 0.0520 0.0006
 Jupiter -124444-01-22 02:11 J -43731726.53 -43731726.41 -43731726.29 0.0522 0.0440
 Neptune -124441-12-23 14:39 J -43730295.02 -43730294.89 -43730294.70 0.0089 0.0069
 Neptune -124440-12-26 01:13 J -43729927.65 -43729927.45 -43729927.21 0.0089 0.0044
 Jupiter -124439-07-07 19:27 J -43729733.85 -43729733.69 -43729733.52 0.0506 0.0360
 Neptune -124439-12-28 11:47 J -43729560.26 -43729560.01 -43729559.76 0.0089 0.0018
 Neptune -124438-12-30 21:51 J -43729192.84 -43729192.59 -43729192.33 0.0089 0.0008

Saturn -124437-06-24 14:25 J -43729016.15 -43729015.90 -43729015.65 0.0264 0.0011
 Neptune -124436-01-01 07:56 J -43728825.40 -43728825.17 -43728824.93 0.0088 0.0033
 Neptune -124435-01-03 17:03 J -43728457.96 -43728457.79 -43728457.58 0.0088 0.0059
 Uranus -124435-07-18 20:39 J -43728261.89 -43728261.64 -43728261.38 0.0148 0.0026
 Neptune -124434-01-06 02:39 J -43728090.45 -43728090.39 -43728090.28 0.0088 0.0084
 Uranus -124434-07-24 09:08 J -43727891.18 -43727891.12 -43727891.03 0.0148 0.0141
 Jupiter -124427-07-12 15:37 J -43725346.09 -43725345.85 -43725345.62 0.0505 0.0077
 Saturn -124422-12-31 13:27 J -43723348.14 -43723347.94 -43723347.74 0.0297 0.0166
 Jupiter -124415-07-17 06:30 J -43720958.27 -43720958.23 -43720958.19 0.0504 0.0495
 Uranus -124394-01-22 19:13 J -43713463.90 -43713463.70 -43713463.49 0.0131 0.0076
 Uranus -124393-01-26 17:18 J -43713095.01 -43713094.78 -43713094.53 0.0131 0.0032
 Saturn -124378-06-26 18:44 J -43707464.95 -43707464.72 -43707464.48 0.0264 0.0092
 Jupiter -124373-01-17 17:03 J -43705799.02 -43705798.79 -43705798.57 0.0520 0.0085
 Saturn -124362-01-01 16:06 J -43701797.05 -43701796.83 -43701796.59 0.0297 0.0077
 Jupiter -124361-01-22 10:20 J -43701411.22 -43701411.07 -43701410.91 0.0521 0.0377
 Neptune -124358-06-14 21:23 J -43700171.71 -43700171.61 -43700171.45 0.0089 0.0077
 Neptune -124357-06-16 10:06 J -43699804.27 -43699804.08 -43699803.85 0.0089 0.0051
 Neptune -124356-06-18 23:03 J -43699436.77 -43699436.54 -43699436.27 0.0089 0.0025
 Jupiter -124356-07-06 20:25 J -43699418.76 -43699418.65 -43699418.54 0.0506 0.0443
 Neptune -124355-06-21 12:30 J -43699069.24 -43699068.98 -43699068.72 0.0089 0.0002
 Neptune -124354-06-24 01:13 J -43698701.68 -43698701.45 -43698701.19 0.0089 0.0029
 Neptune -124353-06-25 14:25 J -43698334.09 -43698333.90 -43698333.68 0.0089 0.0055
 Neptune -124352-06-28 03:37 J -43697966.42 -43697966.35 -43697966.22 0.0089 0.0082
 Uranus -124351-07-18 23:32 J -43697580.77 -43697580.52 -43697580.26 0.0148 0.0030
 Pluto -124351-10-22 17:32 J -43697484.89 -43697484.77 -43697484.59 0.0063 0.0052
 Uranus -124350-07-24 12:15 J -43697210.09 -43697209.99 -43697209.89 0.0148 0.0136
 Pluto -124350-10-24 06:44 J -43697118.44 -43697118.22 -43697117.95 0.0063 0.0026
 Saturn -124349-06-20 21:08 J -43696877.73 -43696877.62 -43696877.49 0.0265 0.0231
 Jupiter -124344-07-11 16:06 J -43695031.07 -43695030.83 -43695030.59 0.0505 0.0010
 Jupiter -124332-07-16 13:13 J -43690643.07 -43690642.95 -43690642.83 0.0504 0.0434

Saturn -124319-06-27 19:42 J -43685913.87 -43685913.68 -43685913.48 0.0264 0.0165
 Uranus -124310-01-23 02:54 J -43682782.56 -43682782.38 -43682782.16 0.0131 0.0076
 Uranus -124309-01-27 01:42 J -43682413.67 -43682413.43 -43682413.19 0.0131 0.0032
 Saturn -124303-01-02 13:42 J -43680246.17 -43680245.93 -43680245.69 0.0297 0.0004
 Jupiter -124290-01-17 07:27 J -43675483.41 -43675483.19 -43675482.97 0.0520 0.0125
 Saturn -124290-06-22 20:39 J -43675326.83 -43675326.64 -43675326.44 0.0265 0.0160
 Jupiter -124278-01-21 21:51 J -43671095.77 -43671095.59 -43671095.41 0.0521 0.0321
 Neptune -124277-12-23 02:54 J -43670394.47 -43670394.38 -43670394.24 0.0089 0.0079
 Mars -124276-06-18 09:08 J -43670217.20 -43670217.12 -43670217.04 0.1824 0.1643
 Neptune -124276-12-25 13:42 J -43670027.12 -43670026.93 -43670026.71 0.0089 0.0053
 Neptune -124275-12-28 00:30 J -43669659.72 -43669659.48 -43669659.24 0.0089 0.0027
 Neptune -124274-12-30 10:49 J -43669292.31 -43669292.05 -43669291.80 0.0089 0.0002
 Jupiter -124273-07-06 04:35 J -43669103.33 -43669103.31 -43669103.26 0.0507 0.0501
 Neptune -124273-12-31 20:39 J -43668924.88 -43668924.64 -43668924.39 0.0089 0.0024
 Neptune -124271-01-03 06:15 J -43668557.43 -43668557.24 -43668557.01 0.0088 0.0050
 Neptune -124270-01-05 15:51 J -43668189.96 -43668189.84 -43668189.69 0.0088 0.0075
 Mars -124270-12-27 22:06 J -43667833.71 -43667833.58 -43667833.44 0.1688 0.1201
 Uranus -124267-07-19 04:49 J -43666899.55 -43666899.30 -43666899.05 0.0148 0.0032
 Uranus -124266-07-24 16:35 J -43666528.90 -43666528.81 -43666528.69 0.0148 0.0134
 Jupiter -124261-07-11 03:23 J -43664715.60 -43664715.36 -43664715.12 0.0506 0.0053
 Pluto -124260-04-18 18:59 J -43664433.85 -43664433.71 -43664433.53 0.0082 0.0062
 Saturn -124260-06-28 17:47 J -43664362.87 -43664362.76 -43664362.63 0.0263 0.0230
 Jupiter -124249-07-16 00:44 J -43660327.61 -43660327.47 -43660327.31 0.0504 0.0391
 Saturn -124244-01-03 08:11 J -43658695.39 -43658695.16 -43658694.92 0.0298 0.0061
 Saturn -124231-06-23 17:18 J -43653776.00 -43653775.78 -43653775.54 0.0265 0.0098
 Uranus -124226-01-23 11:47 J -43652101.21 -43652101.01 -43652100.80 0.0131 0.0075
 Uranus -124225-01-27 10:20 J -43651732.30 -43651732.07 -43651731.83 0.0131 0.0033
 Jupiter -124207-01-16 17:47 J -43645167.97 -43645167.76 -43645167.54 0.0520 0.0184
 Mars -124197-06-21 12:30 J -43641359.09 -43641358.98 -43641358.86 0.1828 0.1458
 Jupiter -124195-01-21 08:11 J -43640780.35 -43640780.16 -43640779.96 0.0521 0.0265

Neptune -124194-06-14 07:56 J -43640271.21 -43640271.17 -43640271.09 0.0089 0.0086
 Neptune -124193-06-15 20:25 J -43639903.83 -43639903.65 -43639903.45 0.0089 0.0060
 Neptune -124192-06-18 09:08 J -43639536.35 -43639536.12 -43639535.87 0.0089 0.0034
 Neptune -124191-06-20 22:06 J -43639168.83 -43639168.58 -43639168.31 0.0089 0.0008
 Mars -124191-12-30 04:20 J -43638976.50 -43638976.32 -43638976.14 0.1686 0.0539
 Neptune -124190-06-23 11:03 J -43638801.29 -43638801.04 -43638800.78 0.0089 0.0019
 Neptune -124189-06-24 23:47 J -43638433.71 -43638433.51 -43638433.26 0.0089 0.0046
 Neptune -124188-06-27 13:27 J -43638066.08 -43638065.94 -43638065.78 0.0089 0.0072
 Saturn -124185-01-05 00:44 J -43637144.69 -43637144.47 -43637144.25 0.0298 0.0120
 Uranus -124183-07-19 14:11 J -43636218.16 -43636217.91 -43636217.65 0.0148 0.0028
 Uranus -124182-07-25 02:11 J -43635847.49 -43635847.41 -43635847.31 0.0148 0.0138
 Jupiter -124178-07-11 09:23 J -43634400.34 -43634400.11 -43634399.88 0.0505 0.0118
 Saturn -124172-06-24 12:30 J -43632225.23 -43632224.98 -43632224.73 0.0265 0.0038
 Jupiter -124166-07-16 05:32 J -43630012.45 -43630012.27 -43630012.09 0.0505 0.0321
 Uranus -124142-01-23 20:11 J -43621419.84 -43621419.66 -43621419.43 0.0131 0.0074
 Uranus -124141-01-27 19:13 J -43621050.94 -43621050.70 -43621050.46 0.0131 0.0035
 Saturn -124126-01-05 17:47 J -43615593.95 -43615593.76 -43615593.57 0.0298 0.0181
 Jupiter -124124-01-16 06:59 J -43614852.41 -43614852.21 -43614852.00 0.0520 0.0228
 Saturn -124113-06-25 06:59 J -43610674.46 -43610674.21 -43610673.96 0.0265 0.0021
 Neptune -124113-12-22 15:23 J -43610493.87 -43610493.86 -43610493.81 0.0089 0.0088
 Jupiter -124112-01-21 00:59 J -43610464.66 -43610464.46 -43610464.25 0.0521 0.0232
 Neptune -124112-12-25 02:25 J -43610126.57 -43610126.40 -43610126.21 0.0089 0.0062
 Neptune -124111-12-27 12:59 J -43609759.18 -43609758.96 -43609758.71 0.0089 0.0037
 Neptune -124110-12-29 23:32 J -43609391.77 -43609391.52 -43609391.26 0.0089 0.0010
 Neptune -124109-12-31 09:37 J -43609024.34 -43609024.10 -43609023.84 0.0089 0.0016
 Neptune -124107-01-02 19:27 J -43608656.90 -43608656.69 -43608656.45 0.0089 0.0041
 Neptune -124106-01-05 05:18 J -43608289.43 -43608289.28 -43608289.10 0.0089 0.0066
 Pluto -124105-10-24 00:01 J -43607631.70 -43607631.50 -43607631.28 0.0063 0.0039
 Pluto -124104-10-25 12:44 J -43607265.16 -43607264.97 -43607264.74 0.0063 0.0038
 Uranus -124099-07-20 01:42 J -43605536.69 -43605536.43 -43605536.17 0.0148 0.0020

Uranus -124098-07-25 13:42 J -43605165.97 -43605165.93 -43605165.88 0.0148 0.0145
 Saturn -124098-12-30 12:59 J -43605008.02 -43605007.96 -43605007.89 0.0296 0.0283
 Jupiter -124095-07-10 19:27 J -43604084.91 -43604084.69 -43604084.46 0.0506 0.0170
 Jupiter -124083-07-15 17:32 J -43599696.96 -43599696.77 -43599696.57 0.0505 0.0277
 Saturn -124067-01-06 12:59 J -43594043.08 -43594042.96 -43594042.82 0.0298 0.0250
 Uranus -124058-01-24 06:30 J -43590738.43 -43590738.23 -43590738.01 0.0131 0.0069
 Uranus -124057-01-28 05:32 J -43590369.51 -43590369.27 -43590369.04 0.0131 0.0039
 Saturn -124054-06-27 02:39 J -43589123.62 -43589123.39 -43589123.15 0.0265 0.0083
 Jupiter -124041-01-16 19:27 J -43584536.88 -43584536.69 -43584536.49 0.0520 0.0282
 Saturn -124039-12-31 10:20 J -43583457.23 -43583457.07 -43583456.89 0.0296 0.0209
 Jupiter -124029-01-21 10:20 J -43580149.28 -43580149.07 -43580148.85 0.0520 0.0168
 Neptune -124029-06-15 06:44 J -43580003.35 -43580003.22 -43580003.03 0.0089 0.0070
 Neptune -124028-06-17 19:13 J -43579635.90 -43579635.70 -43579635.45 0.0089 0.0044
 Neptune -124027-06-20 08:25 J -43579268.41 -43579268.15 -43579267.90 0.0089 0.0017
 Neptune -124026-06-22 20:54 J -43578900.88 -43578900.63 -43578900.36 0.0089 0.0010
 Saturn -124025-06-21 00:44 J -43578536.53 -43578536.47 -43578536.37 0.0267 0.0252
 Neptune -124025-06-24 09:51 J -43578533.31 -43578533.09 -43578532.84 0.0089 0.0036
 Neptune -124024-06-26 23:03 J -43578165.70 -43578165.54 -43578165.33 0.0089 0.0063
 Pluto -124015-04-19 01:27 J -43574947.56 -43574947.44 -43574947.31 0.0082 0.0070
 Uranus -124015-07-20 12:30 J -43574855.24 -43574854.98 -43574854.72 0.0148 0.0014
 Jupiter -124012-07-10 06:30 J -43573769.45 -43573769.23 -43573769.02 0.0506 0.0218

124TH MILLENNIUM BCE

This is a list of transits of Earth in the 124th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-124000-07-14 23:03 J	-43569381.76	-43569381.54	-43569381.32	0.0504	0.0206		
Saturn	-123995-06-28 00:59 J	-43567572.66	-43567572.46	-43567572.25	0.0266	0.0152		
Mars	-123986-12-28 21:23 J	-43564101.77	-43564101.61	-43564101.44	0.1692	0.0851		
Saturn	-123979-01-01 12:15 J	-43561906.20	-43561905.99	-43561905.76	0.0296	0.0121		
Uranus	-123974-01-24 15:37 J	-43560057.05	-43560056.85	-43560056.63	0.0131	0.0067		
Uranus	-123973-01-28 14:11 J	-43559688.14	-43559687.91	-43559687.67	0.0131	0.0041		
Saturn	-123966-06-23 00:30 J	-43556985.65	-43556985.48	-43556985.28	0.0267	0.0179		
Jupiter	-123958-01-16 01:13 J	-43554221.61	-43554221.45	-43554221.28	0.0519	0.0358		
Neptune	-123948-12-24 14:54 J	-43550226.01	-43550225.88	-43550225.70	0.0089	0.0072		
Neptune	-123947-12-27 01:56 J	-43549858.62	-43549858.42	-43549858.18	0.0089	0.0046		
Jupiter	-123946-01-20 18:01 J	-43549833.97	-43549833.75	-43549833.52	0.0521	0.0099		
Neptune	-123946-12-29 12:59 J	-43549491.20	-43549490.96	-43549490.70	0.0089	0.0020		
Neptune	-123945-12-30 23:18 J	-43549123.78	-43549123.53	-43549123.27	0.0089	0.0007		
Neptune	-123943-01-02 09:23 J	-43548756.33	-43548756.11	-43548755.86	0.0089	0.0033		
Neptune	-123942-01-04 19:27 J	-43548388.87	-43548388.69	-43548388.48	0.0089	0.0058		
Neptune	-123941-01-07 05:18 J	-43548021.36	-43548021.28	-43548021.18	0.0089	0.0083		
Saturn	-123936-06-29 01:56 J	-43546021.53	-43546021.42	-43546021.28	0.0266	0.0228		
Uranus	-123931-07-20 19:56 J	-43544173.93	-43544173.67	-43544173.41	0.0148	0.0012		
Jupiter	-123929-07-09 08:39 J	-43543454.32	-43543454.14	-43543453.94	0.0506	0.0301		
Saturn	-123920-01-02 19:13 J	-43540354.94	-43540354.70	-43540354.45	0.0296	0.0018		
Jupiter	-123917-07-14 03:08 J	-43539066.59	-43539066.37	-43539066.13	0.0505	0.0132		
Mars	-123913-06-21 07:27 J	-43537628.37	-43537628.19	-43537628.02	0.1822	0.0882		
Saturn	-123907-06-24 03:51 J	-43535434.56	-43535434.34	-43535434.10	0.0267	0.0097		
Mars	-123907-12-31 03:51 J	-43535244.50	-43535244.34	-43535244.18	0.1690	0.0910		
Uranus	-123890-01-25 00:15 J	-43529375.69	-43529375.49	-43529375.26	0.0131	0.0065		
Uranus	-123889-01-28 23:03 J	-43529006.76	-43529006.54	-43529006.30	0.0131	0.0043		

Jupiter -123875-01-15 06:59 J -43523906.33 -43523906.21 -43523906.09 0.0520 0.0439
 Neptune -123865-06-14 18:15 J -43520102.83 -43520102.74 -43520102.59 0.0089 0.0079
 Neptune -123864-06-17 06:30 J -43519735.42 -43519735.23 -43519735.00 0.0089 0.0053
 Jupiter -123863-01-19 22:20 J -43519518.79 -43519518.57 -43519518.34 0.0520 0.0016
 Neptune -123863-06-19 18:44 J -43519367.95 -43519367.72 -43519367.45 0.0089 0.0027
 Neptune -123862-06-22 07:42 J -43519000.44 -43519000.18 -43518999.92 0.0089 0.0000
 Saturn -123861-01-05 08:54 J -43518803.35 -43518803.13 -43518802.90 0.0296 0.0105
 Neptune -123861-06-23 20:11 J -43518632.89 -43518632.66 -43518632.39 0.0089 0.0027
 Neptune -123860-06-26 09:23 J -43518265.31 -43518265.11 -43518264.90 0.0089 0.0053
 Neptune -123859-06-28 22:20 J -43517897.66 -43517897.57 -43517897.44 0.0089 0.0080
 Pluto -123859-10-26 06:15 J -43517778.47 -43517778.24 -43517777.98 0.0063 0.0026
 Pluto -123858-10-27 19:13 J -43517411.84 -43517411.70 -43517411.53 0.0063 0.0052
 Jupiter -123851-01-24 12:59 J -43515131.06 -43515130.96 -43515130.85 0.0521 0.0462
 Saturn -123848-06-25 11:03 J -43513883.29 -43513883.04 -43513882.79 0.0267 0.0006
 Uranus -123847-07-20 23:18 J -43513492.79 -43513492.53 -43513492.27 0.0148 0.0015
 Jupiter -123846-07-09 10:20 J -43513139.22 -43513139.07 -43513138.91 0.0506 0.0385
 Jupiter -123834-07-14 06:15 J -43508751.48 -43508751.24 -43508751.00 0.0505 0.0054
 Jupiter -123822-07-19 00:01 J -43504363.57 -43504363.50 -43504363.43 0.0504 0.0480
 Uranus -123806-01-25 08:25 J -43498694.35 -43498694.15 -43498693.92 0.0131 0.0064
 Uranus -123805-01-29 06:59 J -43498325.43 -43498325.21 -43498324.96 0.0131 0.0044
 Saturn -123802-01-07 02:11 J -43497251.55 -43497251.41 -43497251.26 0.0296 0.0238
 Saturn -123789-06-26 21:08 J -43492331.85 -43492331.62 -43492331.38 0.0266 0.0093
 Neptune -123784-12-24 03:37 J -43490325.44 -43490325.35 -43490325.23 0.0089 0.0081
 Neptune -123783-12-26 14:39 J -43489958.07 -43489957.89 -43489957.67 0.0089 0.0055
 Neptune -123782-12-29 01:42 J -43489590.67 -43489590.43 -43489590.18 0.0089 0.0029
 Neptune -123781-12-30 12:30 J -43489223.23 -43489222.98 -43489222.72 0.0089 0.0003
 Jupiter -123780-01-18 21:08 J -43489203.84 -43489203.62 -43489203.39 0.0520 0.0094
 Neptune -123779-01-01 23:03 J -43488855.78 -43488855.54 -43488855.29 0.0089 0.0023
 Neptune -123778-01-04 09:08 J -43488488.33 -43488488.12 -43488487.90 0.0089 0.0049
 Neptune -123777-01-06 18:44 J -43488120.83 -43488120.72 -43488120.56 0.0089 0.0075

Saturn -123773-01-01 09:23 J -43486665.29 -43486665.11 -43486664.92 0.0295 0.0190
 Pluto -123769-04-20 12:44 J -43485094.19 -43485093.97 -43485093.74 0.0082 0.0037
 Jupiter -123768-01-23 12:01 J -43484816.16 -43484816.00 -43484815.83 0.0521 0.0357
 Jupiter -123763-07-08 10:49 J -43482824.13 -43482824.05 -43482823.97 0.0506 0.0475
 Uranus -123763-07-21 01:27 J -43482811.69 -43482811.44 -43482811.17 0.0148 0.0021
 Uranus -123762-07-26 13:27 J -43482440.97 -43482440.94 -43482440.87 0.0148 0.0145
 Saturn -123760-06-22 00:30 J -43481744.61 -43481744.48 -43481744.36 0.0268 0.0229
 Jupiter -123751-07-13 04:49 J -43478436.54 -43478436.30 -43478436.07 0.0505 0.0043
 Jupiter -123739-07-17 20:39 J -43474048.79 -43474048.64 -43474048.48 0.0504 0.0380
 Saturn -123730-06-29 08:54 J -43470780.28 -43470780.13 -43470779.95 0.0266 0.0196
 Uranus -123722-01-25 16:06 J -43468013.03 -43468012.83 -43468012.60 0.0131 0.0065
 Uranus -123721-01-29 15:08 J -43467644.09 -43467643.87 -43467643.62 0.0131 0.0044
 Saturn -123714-01-03 06:44 J -43465113.46 -43465113.22 -43465112.98 0.0295 0.0047
 Mars -123702-12-29 19:27 J -43460369.87 -43460369.69 -43460369.51 0.1696 0.0528
 Neptune -123701-06-14 05:47 J -43460202.27 -43460202.26 -43460202.20 0.0089 0.0088
 Saturn -123701-06-23 13:13 J -43460193.17 -43460192.95 -43460192.73 0.0268 0.0123
 Neptune -123700-06-16 18:01 J -43459834.92 -43459834.75 -43459834.55 0.0089 0.0062
 Neptune -123699-06-19 06:01 J -43459467.47 -43459467.25 -43459466.99 0.0089 0.0036
 Neptune -123698-06-21 18:59 J -43459099.96 -43459099.71 -43459099.45 0.0089 0.0009
 Jupiter -123697-01-18 19:13 J -43458888.90 -43458888.70 -43458888.48 0.0520 0.0204
 Neptune -123697-06-23 07:13 J -43458732.44 -43458732.20 -43458731.93 0.0089 0.0018
 Neptune -123696-06-25 19:56 J -43458364.88 -43458364.67 -43458364.43 0.0089 0.0044
 Neptune -123695-06-28 08:54 J -43457997.27 -43457997.13 -43457996.96 0.0089 0.0071
 Jupiter -123685-01-23 11:03 J -43454501.24 -43454501.04 -43454500.84 0.0521 0.0252
 Uranus -123679-07-21 06:58 J -43452130.47 -43452130.21 -43452129.96 0.0148 0.0022
 Uranus -123678-07-26 18:30 J -43451759.78 -43451759.73 -43451759.65 0.0148 0.0143
 Jupiter -123668-07-12 00:01 J -43448121.73 -43448121.50 -43448121.27 0.0506 0.0149
 Jupiter -123656-07-16 19:13 J -43443733.89 -43443733.70 -43443733.50 0.0505 0.0287
 Saturn -123655-01-05 03:37 J -43443561.58 -43443561.35 -43443561.12 0.0296 0.0096
 Saturn -123642-06-26 01:42 J -43438641.67 -43438641.43 -43438641.18 0.0267 0.0020

Uranus -123638-01-25 23:46 J -43437331.71 -43437331.51 -43437331.28 0.0131 0.0064
 Uranus -123637-01-29 23:03 J -43436962.77 -43436962.54 -43436962.30 0.0131 0.0044
 Mars -123629-06-21 03:51 J -43433897.54 -43433897.34 -43433897.15 0.1817 0.0369
 Mars -123622-01-01 03:22 J -43431512.48 -43431512.36 -43431512.24 0.1694 0.1279
 Neptune -123619-12-26 03:51 J -43430057.50 -43430057.34 -43430057.15 0.0089 0.0064
 Neptune -123618-12-28 14:54 J -43429690.10 -43429689.88 -43429689.64 0.0089 0.0038
 Neptune -123617-12-30 01:42 J -43429322.68 -43429322.43 -43429322.17 0.0089 0.0012
 Neptune -123615-01-01 12:15 J -43428955.24 -43428954.99 -43428954.73 0.0089 0.0014
 Neptune -123614-01-03 22:20 J -43428587.77 -43428587.57 -43428587.32 0.0089 0.0041
 Jupiter -123614-01-17 21:08 J -43428573.80 -43428573.62 -43428573.43 0.0519 0.0293
 Neptune -123613-01-06 08:39 J -43428220.29 -43428220.14 -43428219.96 0.0089 0.0066
 Pluto -123613-10-27 09:22 J -43427925.35 -43427925.11 -43427924.84 0.0063 0.0020
 Pluto -123612-10-28 22:20 J -43427558.66 -43427558.57 -43427558.44 0.0063 0.0058
 Jupiter -123602-01-22 10:06 J -43424186.29 -43424186.08 -43424185.86 0.0520 0.0149
 Saturn -123596-01-06 21:08 J -43422009.76 -43422009.62 -43422009.46 0.0297 0.0228
 Uranus -123595-07-21 16:34 J -43421449.07 -43421448.81 -43421448.56 0.0148 0.0018
 Uranus -123594-07-27 03:51 J -43421078.35 -43421078.34 -43421078.29 0.0148 0.0147
 Jupiter -123585-07-11 01:27 J -43417806.65 -43417806.44 -43417806.22 0.0506 0.0233
 Saturn -123583-06-27 13:13 J -43417090.18 -43417089.95 -43417089.71 0.0266 0.0081
 Jupiter -123573-07-15 20:39 J -43413418.86 -43413418.64 -43413418.43 0.0505 0.0203
 Saturn -123567-01-01 00:01 J -43411423.65 -43411423.50 -43411423.32 0.0294 0.0214
 Uranus -123554-01-26 09:22 J -43406650.32 -43406650.11 -43406649.88 0.0131 0.0061
 Saturn -123554-06-22 17:32 J -43406502.87 -43406502.77 -43406502.65 0.0268 0.0239
 Uranus -123553-01-30 08:54 J -43406281.36 -43406281.13 -43406280.90 0.0131 0.0046
 Neptune -123536-06-16 05:03 J -43399934.42 -43399934.29 -43399934.11 0.0089 0.0072
 Neptune -123535-06-18 17:32 J -43399566.98 -43399566.77 -43399566.54 0.0089 0.0045
 Neptune -123534-06-21 05:46 J -43399199.50 -43399199.26 -43399198.99 0.0089 0.0019
 Neptune -123533-06-22 18:30 J -43398831.99 -43398831.73 -43398831.47 0.0089 0.0008
 Neptune -123532-06-25 06:30 J -43398464.45 -43398464.23 -43398463.97 0.0089 0.0035
 Jupiter -123531-01-16 21:08 J -43398258.76 -43398258.62 -43398258.46 0.0519 0.0392

Neptune -123531-06-27 18:58 J -43398096.87 -43398096.71 -43398096.49 0.0089 0.0062
 Neptune -123530-06-30 08:25 J -43397729.17 -43397729.15 -43397729.10 0.0089 0.0088
 Saturn -123524-06-28 21:51 J -43395538.78 -43395538.59 -43395538.40 0.0266 0.0173
 Pluto -123523-04-22 17:32 J -43395240.99 -43395240.77 -43395240.52 0.0082 0.0029
 Jupiter -123519-01-21 11:18 J -43393871.26 -43393871.03 -43393870.80 0.0520 0.0054
 Uranus -123511-07-22 03:22 J -43390767.61 -43390767.36 -43390767.09 0.0148 0.0012
 Saturn -123508-01-02 09:37 J -43389872.32 -43389872.10 -43389871.87 0.0295 0.0107
 Jupiter -123507-01-26 04:06 J -43389483.36 -43389483.33 -43389483.29 0.0521 0.0513
 Jupiter -123502-07-10 23:18 J -43387491.71 -43387491.53 -43387491.35 0.0506 0.0329
 Saturn -123495-06-24 01:13 J -43384951.64 -43384951.45 -43384951.23 0.0268 0.0148
 Jupiter -123490-07-15 18:01 J -43383103.98 -43383103.75 -43383103.51 0.0505 0.0108
 Uranus -123470-01-26 18:58 J -43375968.92 -43375968.71 -43375968.48 0.0131 0.0059
 Uranus -123469-01-30 18:01 J -43375599.97 -43375599.75 -43375599.51 0.0131 0.0050
 Saturn -123465-06-30 03:22 J -43373987.42 -43373987.36 -43373987.30 0.0265 0.0257
 Neptune -123455-12-25 16:06 J -43370156.95 -43370156.83 -43370156.66 0.0089 0.0074
 Neptune -123454-12-28 03:37 J -43369789.56 -43369789.35 -43369789.13 0.0089 0.0047
 Neptune -123453-12-29 14:39 J -43369422.14 -43369421.89 -43369421.64 0.0089 0.0021
 Neptune -123451-01-01 01:13 J -43369054.70 -43369054.45 -43369054.19 0.0089 0.0006
 Neptune -123450-01-03 11:46 J -43368687.25 -43368687.01 -43368686.77 0.0089 0.0031
 Saturn -123449-01-04 13:56 J -43368321.16 -43368320.92 -43368320.67 0.0295 0.0016
 Neptune -123449-01-05 22:20 J -43368319.77 -43368319.57 -43368319.38 0.0089 0.0057
 Neptune -123448-01-07 07:56 J -43367952.23 -43367952.17 -43367952.06 0.0088 0.0083
 Jupiter -123448-01-16 03:22 J -43367943.45 -43367943.36 -43367943.25 0.0519 0.0464
 Jupiter -123436-01-20 21:37 J -43363555.83 -43363555.60 -43363555.37 0.0520 0.0003
 Saturn -123436-06-25 05:03 J -43363400.52 -43363400.29 -43363400.04 0.0267 0.0067
 Uranus -123427-07-22 13:42 J -43360086.19 -43360085.93 -43360085.67 0.0148 0.0006
 Jupiter -123424-01-25 12:01 J -43359168.12 -43359168.00 -43359167.88 0.0521 0.0443
 Jupiter -123419-07-10 04:34 J -43357176.46 -43357176.31 -43357176.17 0.0507 0.0399
 Mars -123418-12-30 17:18 J -43356637.97 -43356637.78 -43356637.60 0.1700 0.0215
 Jupiter -123407-07-15 02:25 J -43352788.64 -43352788.40 -43352788.17 0.0506 0.0050

Jupiter -123395-07-19 22:49 J -43348400.59 -43348400.55 -43348400.49 0.0505 0.0493
 Saturn -123390-01-05 13:13 J -43346770.19 -43346769.95 -43346769.72 0.0295 0.0061
 Uranus -123386-01-27 04:34 J -43345287.53 -43345287.31 -43345287.08 0.0131 0.0055
 Uranus -123385-01-31 03:37 J -43344918.57 -43344918.35 -43344918.12 0.0131 0.0052
 Saturn -123377-06-26 06:15 J -43341849.49 -43341849.24 -43341848.99 0.0267 0.0008
 Neptune -123372-06-15 16:20 J -43340033.90 -43340033.82 -43340033.69 0.0089 0.0081
 Neptune -123371-06-18 04:20 J -43339666.50 -43339666.32 -43339666.09 0.0089 0.0055
 Neptune -123370-06-20 16:49 J -43339299.04 -43339298.80 -43339298.55 0.0089 0.0028
 Neptune -123369-06-22 05:18 J -43338931.54 -43338931.28 -43338931.02 0.0089 0.0002
 Neptune -123368-06-24 17:18 J -43338564.01 -43338563.78 -43338563.51 0.0089 0.0026
 Neptune -123367-06-27 06:15 J -43338196.44 -43338196.24 -43338196.02 0.0089 0.0052
 Pluto -123367-10-29 15:51 J -43338072.10 -43338071.84 -43338071.56 0.0063 0.0007
 Neptune -123366-06-29 18:44 J -43337828.82 -43337828.72 -43337828.58 0.0089 0.0079
 Jupiter -123353-01-21 05:32 J -43333240.49 -43333240.27 -43333240.04 0.0519 0.0071
 Mars -123345-06-21 00:58 J -43330166.66 -43330166.46 -43330166.26 0.1811 0.0088
 Uranus -123343-07-22 20:10 J -43329404.92 -43329404.66 -43329404.40 0.0148 0.0005
 Jupiter -123341-01-25 20:10 J -43328852.81 -43328852.66 -43328852.50 0.0521 0.0379
 Mars -123338-01-02 01:27 J -43327780.49 -43327780.44 -43327780.39 0.1698 0.1624
 Jupiter -123336-07-09 15:37 J -43326860.96 -43326860.85 -43326860.74 0.0507 0.0445
 Saturn -123331-01-06 07:56 J -43325219.38 -43325219.17 -43325218.94 0.0296 0.0127
 Jupiter -123324-07-14 06:44 J -43322473.46 -43322473.22 -43322472.98 0.0506 0.0023
 Saturn -123318-06-28 04:34 J -43320298.55 -43320298.31 -43320298.07 0.0267 0.0076
 Jupiter -123312-07-19 02:25 J -43318085.53 -43318085.40 -43318085.27 0.0505 0.0417
 Uranus -123302-01-27 13:27 J -43314606.16 -43314605.94 -43314605.70 0.0131 0.0053
 Uranus -123301-01-31 12:15 J -43314237.20 -43314236.99 -43314236.75 0.0131 0.0054
 Neptune -123291-12-25 04:34 J -43310256.38 -43310256.31 -43310256.20 0.0089 0.0083
 Neptune -123290-12-27 15:37 J -43309889.02 -43309888.85 -43309888.63 0.0089 0.0057
 Saturn -123289-06-22 00:30 J -43309711.50 -43309711.48 -43309711.43 0.0268 0.0265
 Neptune -123289-12-29 02:54 J -43309521.60 -43309521.38 -43309521.12 0.0089 0.0031
 Neptune -123288-12-31 13:56 J -43309154.18 -43309153.92 -43309153.66 0.0089 0.0004

Neptune -123286-01-03 00:30 J -43308786.72 -43308786.48 -43308786.22 0.0089 0.0022
 Neptune -123285-01-05 10:49 J -43308419.25 -43308419.05 -43308418.82 0.0089 0.0048
 Neptune -123284-01-06 20:54 J -43308051.75 -43308051.63 -43308051.47 0.0089 0.0074
 Pluto -123277-04-24 03:37 J -43305387.59 -43305387.35 -43305387.09 0.0082 0.0004
 Saturn -123272-01-07 01:56 J -43303668.60 -43303668.42 -43303668.23 0.0296 0.0189
 Jupiter -123270-01-20 18:15 J -43302924.96 -43302924.74 -43302924.51 0.0519 0.0117
 Saturn -123259-06-29 00:44 J -43298747.67 -43298747.47 -43298747.25 0.0267 0.0139
 Uranus -123259-07-22 23:03 J -43298723.80 -43298723.54 -43298723.28 0.0148 0.0009
 Jupiter -123258-01-25 12:44 J -43298537.14 -43298536.97 -43298536.80 0.0521 0.0347
 Saturn -123244-12-31 20:54 J -43293082.73 -43293082.63 -43293082.53 0.0294 0.0267
 Jupiter -123241-07-13 16:49 J -43292158.03 -43292157.80 -43292157.56 0.0506 0.0074
 Saturn -123230-06-23 20:25 J -43288160.80 -43288160.65 -43288160.48 0.0268 0.0203
 Jupiter -123229-07-18 14:39 J -43287770.05 -43287769.89 -43287769.73 0.0505 0.0375
 Uranus -123218-01-27 22:20 J -43283924.79 -43283924.57 -43283924.33 0.0131 0.0052
 Uranus -123217-01-31 21:22 J -43283555.84 -43283555.61 -43283555.39 0.0131 0.0055
 Saturn -123213-01-08 18:44 J -43282117.84 -43282117.72 -43282117.58 0.0296 0.0248
 Neptune -123207-06-17 14:39 J -43279766.04 -43279765.89 -43279765.69 0.0089 0.0065
 Neptune -123206-06-20 03:08 J -43279398.60 -43279398.37 -43279398.14 0.0089 0.0038
 Neptune -123205-06-21 15:08 J -43279031.12 -43279030.87 -43279030.61 0.0089 0.0012
 Neptune -123204-06-24 03:51 J -43278663.60 -43278663.34 -43278663.09 0.0089 0.0015
 Neptune -123203-06-26 16:06 J -43278296.05 -43278295.83 -43278295.60 0.0089 0.0042
 Neptune -123202-06-29 04:34 J -43277928.46 -43277928.31 -43277928.13 0.0089 0.0069
 Saturn -123200-06-29 20:25 J -43277196.81 -43277196.65 -43277196.49 0.0267 0.0200
 Jupiter -123187-01-20 08:25 J -43272609.37 -43272609.15 -43272608.94 0.0519 0.0164
 Saturn -123184-01-01 15:22 J -43271532.04 -43271531.86 -43271531.69 0.0294 0.0202
 Jupiter -123175-01-24 23:46 J -43268221.70 -43268221.51 -43268221.32 0.0520 0.0290
 Uranus -123175-07-23 01:13 J -43268042.70 -43268042.45 -43268042.19 0.0148 0.0014
 Saturn -123171-06-24 16:06 J -43266610.03 -43266609.83 -43266609.61 0.0269 0.0141
 Jupiter -123158-07-14 05:32 J -43261842.50 -43261842.27 -43261842.04 0.0506 0.0115
 Jupiter -123146-07-18 21:37 J -43257454.78 -43257454.60 -43257454.41 0.0505 0.0310

Saturn -123141-06-30 15:37 J -43255645.88 -43255645.85 -43255645.79 0.0267 0.0262
 Uranus -123134-01-28 06:15 J -43253243.46 -43253243.24 -43253243.00 0.0131 0.0051
 Mars -123134-12-31 13:56 J -43252906.11 -43252905.92 -43252905.73 0.1705 0.0097
 Uranus -123133-02-01 05:03 J -43252874.50 -43252874.29 -43252874.05 0.0131 0.0057
 Neptune -123126-12-27 03:37 J -43249988.50 -43249988.35 -43249988.16 0.0089 0.0067
 Saturn -123125-01-03 11:32 J -43249981.23 -43249981.02 -43249980.80 0.0293 0.0132
 Neptune -123125-12-28 15:08 J -43249621.10 -43249620.87 -43249620.64 0.0089 0.0040
 Neptune -123124-12-31 02:10 J -43249253.66 -43249253.41 -43249253.16 0.0089 0.0014
 Neptune -123122-01-02 12:44 J -43248886.22 -43248885.97 -43248885.71 0.0089 0.0013
 Neptune -123121-01-04 23:03 J -43248518.75 -43248518.54 -43248518.29 0.0089 0.0039
 Pluto -123121-10-30 21:51 J -43248218.86 -43248218.59 -43248218.32 0.0063 0.0004
 Neptune -123120-01-06 09:22 J -43248151.26 -43248151.11 -43248150.91 0.0089 0.0065
 Saturn -123112-06-25 12:30 J -43245059.22 -43245058.98 -43245058.74 0.0269 0.0077
 Jupiter -123104-01-19 17:03 J -43242293.99 -43242293.79 -43242293.58 0.0519 0.0228
 Jupiter -123092-01-24 10:34 J -43237906.26 -43237906.06 -43237905.85 0.0520 0.0235
 Uranus -123091-07-23 07:56 J -43237361.43 -43237361.17 -43237360.92 0.0148 0.0014
 Jupiter -123075-07-13 10:49 J -43231527.27 -43231527.05 -43231526.83 0.0506 0.0188
 Saturn -123066-01-04 12:15 J -43228430.23 -43228429.99 -43228429.75 0.0293 0.0049
 Jupiter -123063-07-18 05:32 J -43227139.47 -43227139.27 -43227139.06 0.0505 0.0250
 Mars -123061-06-21 00:44 J -43226435.66 -43226435.47 -43226435.28 0.1805 0.0449
 Saturn -123053-06-26 10:20 J -43223508.32 -43223508.07 -43223507.82 0.0269 0.0009
 Uranus -123050-01-28 15:51 J -43222562.07 -43222561.84 -43222561.61 0.0131 0.0049
 Uranus -123049-02-01 14:39 J -43222193.10 -43222192.89 -43222192.66 0.0131 0.0058
 Neptune -123043-06-17 00:58 J -43219865.58 -43219865.46 -43219865.30 0.0089 0.0075
 Neptune -123042-06-19 12:30 J -43219498.17 -43219497.98 -43219497.74 0.0089 0.0049
 Neptune -123041-06-21 00:58 J -43219130.70 -43219130.46 -43219130.20 0.0089 0.0022
 Neptune -123040-06-23 13:27 J -43218763.20 -43218762.94 -43218762.68 0.0089 0.0005
 Neptune -123039-06-26 01:42 J -43218395.67 -43218395.43 -43218395.18 0.0089 0.0032
 Neptune -123038-06-28 13:42 J -43218028.10 -43218027.93 -43218027.71 0.0089 0.0059
 Neptune -123037-06-30 02:25 J -43217660.44 -43217660.40 -43217660.31 0.0089 0.0086

Pluto -123031-04-26 12:15 J -43215534.23 -43215533.99 -43215533.74 0.0082 0.0018

Jupiter -123021-01-20 02:54 J -43211978.57 -43211978.38 -43211978.19 0.0520 0.0291

Jupiter -123009-01-24 19:13 J -43207590.92 -43207590.70 -43207590.48 0.0520 0.0165

Saturn -123007-01-05 17:18 J -43206879.02 -43206878.78 -43206878.54 0.0293 0.0046

Uranus -123007-07-23 18:30 J -43206679.99 -43206679.73 -43206679.47 0.0148 0.0008

123RD MILLENNIUM BCE

This is a list of transits of Earth in the 123rd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-122994-06-28 11:18 J	-43201957.26	-43201957.03	-43201956.78	0.0269	0.0067		
Jupiter	-122992-07-12 16:34 J	-43201212.01	-43201211.81	-43201211.61	0.0507	0.0256		
Jupiter	-122980-07-17 12:30 J	-43196824.20	-43196823.98	-43196823.75	0.0505	0.0186		
Uranus	-122966-01-29 02:10 J	-43191880.65	-43191880.41	-43191880.18	0.0131	0.0045		
Uranus	-122965-02-02 00:58 J	-43191511.67	-43191511.46	-43191511.23	0.0131	0.0063		
Saturn	-122965-06-22 08:54 J	-43191370.14	-43191370.13	-43191370.10	0.0271	0.0270		
Neptune	-122962-12-26 13:42 J	-43190088.03	-43190087.93	-43190087.78	0.0089	0.0078		
Neptune	-122961-12-28 01:27 J	-43189720.63	-43189720.44	-43189720.21	0.0089	0.0051		
Neptune	-122960-12-30 12:44 J	-43189353.21	-43189352.97	-43189352.71	0.0089	0.0024		
Neptune	-122958-01-01 23:46 J	-43188985.76	-43188985.51	-43188985.25	0.0089	0.0003		
Neptune	-122957-01-04 10:20 J	-43188618.30	-43188618.07	-43188617.81	0.0089	0.0029		
Neptune	-122956-01-05 20:39 J	-43188250.82	-43188250.64	-43188250.42	0.0089	0.0055		

Neptune -122955-01-08 06:58 J -43187883.29 -43187883.21 -43187883.08 0.0089 0.0081
 Saturn -122948-01-07 03:51 J -43185327.54 -43185327.34 -43185327.13 0.0294 0.0157
 Jupiter -122938-01-19 07:27 J -43181663.35 -43181663.19 -43181663.03 0.0519 0.0373
 Saturn -122935-06-29 15:37 J -43180406.05 -43180405.85 -43180405.64 0.0269 0.0151
 Mars -122929-12-29 00:01 J -43178031.58 -43178031.50 -43178031.42 0.1712 0.1540
 Jupiter -122926-01-23 20:54 J -43177275.86 -43177275.63 -43177275.40 0.0520 0.0072
 Uranus -122923-07-24 06:58 J -43175998.47 -43175998.21 -43175997.95 0.0148 0.0003
 Saturn -122919-01-01 09:08 J -43174741.21 -43174741.12 -43174741.02 0.0292 0.0265
 Jupiter -122909-07-11 19:27 J -43170896.86 -43170896.69 -43170896.51 0.0506 0.0338
 Saturn -122906-06-24 15:08 J -43169819.04 -43169818.87 -43169818.67 0.0271 0.0181
 Jupiter -122897-07-16 13:13 J -43166509.18 -43166508.95 -43166508.71 0.0505 0.0096
 Saturn -122889-01-09 19:13 J -43163775.76 -43163775.70 -43163775.62 0.0294 0.0281
 Uranus -122882-01-29 13:42 J -43161199.16 -43161198.93 -43161198.68 0.0131 0.0039
 Uranus -122881-02-02 12:30 J -43160830.17 -43160829.98 -43160829.75 0.0131 0.0068
 Neptune -122879-06-16 10:20 J -43159965.11 -43159965.07 -43159964.97 0.0089 0.0086
 Neptune -122878-06-18 22:20 J -43159597.75 -43159597.57 -43159597.37 0.0089 0.0059
 Neptune -122877-06-20 09:51 J -43159230.31 -43159230.09 -43159229.83 0.0089 0.0033
 Neptune -122876-06-22 22:20 J -43158862.83 -43158862.57 -43158862.31 0.0089 0.0006
 Saturn -122876-07-01 00:01 J -43158854.60 -43158854.50 -43158854.40 0.0268 0.0244
 Pluto -122876-10-31 16:06 J -43158731.92 -43158731.83 -43158731.68 0.0063 0.0056
 Neptune -122875-06-25 10:20 J -43158495.32 -43158495.07 -43158494.82 0.0089 0.0021
 Pluto -122875-11-02 05:32 J -43158365.52 -43158365.27 -43158365.01 0.0063 0.0021
 Neptune -122874-06-27 22:34 J -43158127.77 -43158127.56 -43158127.33 0.0089 0.0048
 Neptune -122873-06-29 11:03 J -43157760.15 -43157760.04 -43157759.88 0.0089 0.0075
 Saturn -122860-01-03 02:54 J -43153189.59 -43153189.38 -43153189.16 0.0292 0.0135
 Jupiter -122855-01-18 06:30 J -43151348.31 -43151348.23 -43151348.14 0.0519 0.0476
 Mars -122849-01-01 09:22 J -43149174.30 -43149174.11 -43149173.93 0.1709 0.0353
 Saturn -122847-06-26 01:27 J -43148267.68 -43148267.44 -43148267.21 0.0270 0.0083
 Jupiter -122843-01-22 20:54 J -43146960.86 -43146960.63 -43146960.40 0.0520 0.0030
 Uranus -122839-07-24 18:44 J -43145316.98 -43145316.72 -43145316.46 0.0148 0.0009

Jupiter -122831-01-27 12:58 J -43142573.09 -43142572.96 -43142572.83 0.0521 0.0426
 Jupiter -122826-07-11 16:49 J -43140581.91 -43140581.80 -43140581.68 0.0507 0.0438
 Jupiter -122814-07-16 10:34 J -43136194.30 -43136194.06 -43136193.83 0.0506 0.0008
 Jupiter -122802-07-21 05:18 J -43131806.40 -43131806.28 -43131806.16 0.0505 0.0434
 Saturn -122801-01-05 23:18 J -43131637.77 -43131637.53 -43131637.28 0.0293 0.0003
 Uranus -122798-01-30 00:58 J -43130517.69 -43130517.46 -43130517.21 0.0131 0.0034
 Neptune -122798-12-25 23:32 J -43130187.52 -43130187.52 -43130187.49 0.0089 0.0088
 Uranus -122797-02-03 00:01 J -43130148.70 -43130148.50 -43130148.29 0.0131 0.0073
 Neptune -122797-12-27 11:03 J -43129820.21 -43129820.04 -43129819.84 0.0089 0.0062
 Neptune -122796-12-29 23:03 J -43129452.78 -43129452.54 -43129452.31 0.0089 0.0035
 Neptune -122794-01-01 10:20 J -43129085.32 -43129085.07 -43129084.81 0.0089 0.0009
 Neptune -122793-01-03 21:08 J -43128717.87 -43128717.62 -43128717.36 0.0089 0.0018
 Neptune -122792-01-05 07:27 J -43128350.39 -43128350.19 -43128349.94 0.0089 0.0045
 Neptune -122791-01-07 18:01 J -43127982.88 -43127982.75 -43127982.57 0.0089 0.0071
 Saturn -122788-06-27 14:10 J -43126716.16 -43126715.91 -43126715.67 0.0270 0.0023
 Pluto -122785-04-28 02:25 J -43125680.56 -43125680.40 -43125680.21 0.0082 0.0058
 Mars -122777-06-21 01:56 J -43122704.59 -43122704.42 -43122704.24 0.1799 0.0753
 Jupiter -122760-01-21 21:37 J -43116645.82 -43116645.60 -43116645.38 0.0519 0.0125
 Uranus -122755-07-25 02:54 J -43114635.64 -43114635.38 -43114635.12 0.0148 0.0012
 Jupiter -122748-01-26 10:34 J -43112258.24 -43112258.06 -43112257.88 0.0520 0.0317
 Saturn -122742-01-07 19:27 J -43110085.89 -43110085.69 -43110085.46 0.0293 0.0140
 Jupiter -122731-07-15 10:34 J -43105879.29 -43105879.06 -43105878.82 0.0506 0.0094
 Saturn -122729-06-29 04:20 J -43105164.54 -43105164.32 -43105164.10 0.0269 0.0129
 Jupiter -122719-07-20 04:20 J -43101491.49 -43101491.32 -43101491.14 0.0505 0.0342
 Uranus -122714-01-30 12:44 J -43099836.21 -43099835.97 -43099835.72 0.0131 0.0028
 Neptune -122714-06-18 07:13 J -43099697.34 -43099697.20 -43099697.03 0.0089 0.0070
 Saturn -122713-01-02 03:51 J -43099499.41 -43099499.34 -43099499.26 0.0291 0.0275
 Uranus -122713-02-03 11:46 J -43099467.20 -43099467.01 -43099466.81 0.0131 0.0078
 Neptune -122713-06-19 18:44 J -43099329.93 -43099329.72 -43099329.48 0.0089 0.0044
 Neptune -122712-06-22 06:30 J -43098962.48 -43098962.23 -43098961.98 0.0089 0.0017

Neptune -122711-06-24 18:15 J -43098594.99 -43098594.74 -43098594.48 0.0089 0.0010
 Neptune -122710-06-27 06:15 J -43098227.46 -43098227.24 -43098226.99 0.0089 0.0037
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 Saturn -122700-06-24 08:54 J -43094577.30 -43094577.13 -43094576.96 0.0271 0.0191
 Saturn -122683-01-09 14:54 J -43088533.96 -43088533.88 -43088533.79 0.0294 0.0274
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 Saturn -122670-07-01 17:32 J -43083612.88 -43083612.77 -43083612.64 0.0268 0.0234
 Jupiter -122665-01-26 08:10 J -43081943.36 -43081943.16 -43081942.94 0.0520 0.0209
 Saturn -122654-01-03 20:10 J -43077947.86 -43077947.66 -43077947.44 0.0292 0.0152
 Jupiter -122648-07-14 06:01 J -43075564.47 -43075564.25 -43075564.03 0.0506 0.0199
 Mars -122645-12-29 18:15 J -43074299.86 -43074299.74 -43074299.62 0.1717 0.1319
 Saturn -122641-06-25 21:51 J -43073025.82 -43073025.59 -43073025.35 0.0270 0.0086
 Jupiter -122636-07-18 23:46 J -43071176.72 -43071176.51 -43071176.30 0.0506 0.0237
 Neptune -122633-12-26 18:58 J -43069919.83 -43069919.71 -43069919.55 0.0089 0.0074
 Neptune -122632-12-29 06:58 J -43069552.42 -43069552.21 -43069551.99 0.0089 0.0047
 Uranus -122631-01-27 00:01 J -43069523.50 -43069523.50 -43069523.47 0.0131 0.0131
 Neptune -122631-12-31 18:15 J -43069184.98 -43069184.74 -43069184.48 0.0089 0.0021
 Uranus -122630-01-31 00:01 J -43069154.74 -43069154.50 -43069154.25 0.0131 0.0023
 Pluto -122630-11-02 22:49 J -43068878.72 -43068878.55 -43068878.34 0.0063 0.0044
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 Pluto -122629-11-03 11:46 J -43068512.22 -43068512.01 -43068511.76 0.0063 0.0033
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 Saturn -122595-01-05 08:54 J -43056396.37 -43056396.13 -43056395.89 0.0292 0.0038
 Jupiter -122594-01-20 20:39 J -43056015.82 -43056015.64 -43056015.46 0.0519 0.0326
 Uranus -122587-07-25 13:42 J -43053273.19 -43053272.93 -43053272.67 0.0148 0.0009
 Jupiter -122582-01-25 14:25 J -43051628.11 -43051627.90 -43051627.67 0.0520 0.0137

Saturn -122582-06-28 08:25 J -43051474.40 -43051474.15 -43051473.90 0.0270 0.0012
 Mars -122565-01-02 04:20 J -43045442.50 -43045442.32 -43045442.15 0.1714 0.0619
 Jupiter -122565-07-13 07:56 J -43045249.37 -43045249.17 -43045248.98 0.0507 0.0282
 Jupiter -122553-07-18 04:34 J -43040861.53 -43040861.31 -43040861.08 0.0506 0.0166
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 Neptune -122549-06-19 02:54 J -43039429.57 -43039429.38 -43039429.17 0.0089 0.0055
 Neptune -122548-06-21 14:10 J -43039062.14 -43039061.91 -43039061.65 0.0089 0.0029
 Uranus -122547-01-27 11:18 J -43038842.08 -43038842.03 -43038841.95 0.0131 0.0127
 Neptune -122547-06-24 02:25 J -43038694.66 -43038694.40 -43038694.14 0.0089 0.0002
 Uranus -122546-01-31 11:32 J -43038473.26 -43038473.02 -43038472.77 0.0131 0.0019
 Neptune -122546-06-26 13:56 J -43038327.16 -43038326.92 -43038326.66 0.0089 0.0025
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 Pluto -122540-04-28 09:08 J -43036194.21 -43036194.12 -43036194.02 0.0082 0.0075
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 Saturn -122536-01-06 15:08 J -43034845.11 -43034844.87 -43034844.63 0.0293 0.0057
 Saturn -122523-06-29 14:10 J -43029923.13 -43029922.91 -43029922.67 0.0269 0.0101
 Jupiter -122511-01-20 03:37 J -43025700.49 -43025700.35 -43025700.20 0.0518 0.0397
 Uranus -122504-07-20 13:13 J -43022961.96 -43022961.95 -43022961.90 0.0148 0.0147
 Uranus -122503-07-26 00:30 J -43022591.74 -43022591.48 -43022591.23 0.0148 0.0015
 Jupiter -122499-01-24 18:58 J -43021312.94 -43021312.71 -43021312.49 0.0519 0.0054
 Saturn -122494-06-24 12:15 J -43019336.10 -43019335.99 -43019335.87 0.0271 0.0238
 Mars -122493-06-21 04:06 J -43018973.49 -43018973.33 -43018973.17 0.1793 0.1000
 Jupiter -122487-01-29 09:22 J -43016925.16 -43016925.11 -43016925.06 0.0520 0.0504
 Jupiter -122482-07-13 15:51 J -43014934.01 -43014933.84 -43014933.66 0.0507 0.0340
 Saturn -122477-01-08 16:20 J -43013294.02 -43013293.82 -43013293.60 0.0293 0.0139
 Jupiter -122470-07-18 06:15 J -43010546.48 -43010546.24 -43010546.01 0.0506 0.0083
 Neptune -122469-12-26 02:25 J -43010019.45 -43010019.40 -43010019.33 0.0089 0.0086
 Neptune -122468-12-28 13:42 J -43009652.10 -43009651.93 -43009651.72 0.0089 0.0060

Neptune -122467-12-31 01:27 J -43009284.66 -43009284.44 -43009284.18 0.0089 0.0033
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 Neptune -122464-01-04 00:15 J -43008549.73 -43008549.49 -43008549.23 0.0089 0.0021
 Saturn -122464-06-30 16:20 J -43008372.00 -43008371.82 -43008371.63 0.0269 0.0177
 Neptune -122463-01-06 11:03 J -43008182.24 -43008182.04 -43008181.81 0.0089 0.0048
 Uranus -122463-01-27 23:32 J -43008160.60 -43008160.52 -43008160.40 0.0131 0.0120
 Neptune -122462-01-08 21:51 J -43007814.71 -43007814.59 -43007814.43 0.0089 0.0074
 Uranus -122462-01-31 23:46 J -43007791.75 -43007791.51 -43007791.26 0.0131 0.0013
 Uranus -122461-02-04 22:34 J -43007422.71 -43007422.56 -43007422.36 0.0131 0.0094
 Saturn -122435-06-25 12:15 J -42997785.17 -42997784.99 -42997784.78 0.0271 0.0166
 Jupiter -122428-01-19 10:20 J -42995385.16 -42995385.07 -42995384.96 0.0518 0.0467
 Uranus -122420-07-21 03:22 J -42992280.45 -42992280.36 -42992280.26 0.0148 0.0136
 Uranus -122419-07-26 14:10 J -42991910.17 -42991909.91 -42991909.65 0.0148 0.0025
 Saturn -122418-01-09 12:44 J -42991743.14 -42991742.97 -42991742.79 0.0293 0.0207
 Jupiter -122416-01-24 05:03 J -42990997.52 -42990997.29 -42990997.06 0.0519 0.0002
 Mars -122414-06-25 00:01 J -42990115.59 -42990115.50 -42990115.40 0.1797 0.1570
 Saturn -122405-07-01 14:54 J -42986820.97 -42986820.88 -42986820.77 0.0269 0.0245
 Jupiter -122404-01-28 23:46 J -42986609.60 -42986609.51 -42986609.40 0.0520 0.0464
 Jupiter -122399-07-12 19:13 J -42984618.82 -42984618.70 -42984618.55 0.0507 0.0419
 Saturn -122389-01-03 09:51 J -42981157.23 -42981157.09 -42981156.94 0.0291 0.0231
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 Neptune -122385-06-18 09:22 J -42979529.24 -42979529.11 -42979528.91 0.0089 0.0068
 Neptune -122384-06-20 21:08 J -42979161.83 -42979161.62 -42979161.38 0.0089 0.0041
 Pluto -122384-11-04 05:32 J -42979025.50 -42979025.27 -42979025.04 0.0063 0.0032
 Neptune -122383-06-23 08:54 J -42978794.38 -42978794.13 -42978793.87 0.0089 0.0014
 Pluto -122383-11-05 18:01 J -42978658.91 -42978658.75 -42978658.53 0.0063 0.0045
 Neptune -122382-06-25 20:39 J -42978426.89 -42978426.64 -42978426.38 0.0089 0.0013
 Neptune -122381-06-27 07:56 J -42978059.38 -42978059.17 -42978058.92 0.0089 0.0040
 Neptune -122380-06-29 19:56 J -42977691.82 -42977691.67 -42977691.48 0.0089 0.0067
 Uranus -122379-01-28 14:10 J -42977479.03 -42977478.91 -42977478.77 0.0131 0.0112

Uranus -122378-02-01 14:25 J -42977110.15 -42977109.90 -42977109.65 0.0131 0.0005
 Uranus -122377-02-05 12:58 J -42976741.09 -42976740.96 -42976740.78 0.0131 0.0102
 Saturn -122376-06-26 09:37 J -42976234.33 -42976234.10 -42976233.87 0.0271 0.0100
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 Mars -122361-12-30 11:18 J -42970568.17 -42970568.03 -42970567.88 0.1722 0.1113
 Saturn -122359-01-10 06:01 J -42970192.33 -42970192.25 -42970192.13 0.0293 0.0268
 Jupiter -122345-01-20 02:10 J -42965069.46 -42965069.41 -42965069.36 0.0518 0.0505
 Uranus -122336-07-21 19:13 J -42961598.82 -42961598.70 -42961598.54 0.0148 0.0123
 Uranus -122335-07-27 06:15 J -42961228.49 -42961228.24 -42961227.99 0.0148 0.0038
 Jupiter -122333-01-24 18:58 J -42960681.94 -42960681.71 -42960681.48 0.0519 0.0048
 Saturn -122330-01-04 02:25 J -42959606.59 -42959606.40 -42959606.20 0.0291 0.0174
 Jupiter -122321-01-29 10:49 J -42956294.18 -42956294.05 -42956293.90 0.0520 0.0408
 Saturn -122317-06-27 04:34 J -42954683.56 -42954683.31 -42954683.07 0.0271 0.0040
 Jupiter -122316-07-12 07:27 J -42954303.28 -42954303.19 -42954303.09 0.0508 0.0463
 Jupiter -122304-07-17 04:06 J -42949915.56 -42949915.33 -42949915.09 0.0507 0.0015
 Neptune -122304-12-27 19:27 J -42949751.81 -42949751.69 -42949751.52 0.0089 0.0073
 Neptune -122303-12-30 07:13 J -42949384.40 -42949384.20 -42949383.96 0.0089 0.0046
 Neptune -122301-01-01 18:58 J -42949016.95 -42949016.71 -42949016.45 0.0089 0.0019
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 Neptune -122297-01-10 15:08 J -42947546.88 -42947546.87 -42947546.81 0.0089 0.0088
 Uranus -122295-01-29 05:03 J -42946797.44 -42946797.29 -42946797.13 0.0131 0.0102
 Uranus -122294-02-02 04:49 J -42946428.55 -42946428.30 -42946428.05 0.0131 0.0005
 Pluto -122294-04-30 20:39 J -42946340.82 -42946340.64 -42946340.40 0.0082 0.0044
 Uranus -122293-02-06 03:22 J -42946059.47 -42946059.36 -42946059.21 0.0131 0.0111
 Jupiter -122292-07-21 19:42 J -42945527.81 -42945527.68 -42945527.54 0.0505 0.0412
 Mars -122281-01-02 22:34 J -42941710.73 -42941710.56 -42941710.40 0.1719 0.0866
 Saturn -122271-01-04 19:27 J -42938055.91 -42938055.69 -42938055.47 0.0291 0.0115
 Saturn -122258-06-28 22:34 J -42933132.81 -42933132.56 -42933132.31 0.0271 0.0018

Uranus -122252-07-22 07:56 J -42930917.31 -42930917.17 -42930916.99 0.0148 0.0114
 Uranus -122251-07-27 18:44 J -42930546.95 -42930546.72 -42930546.46 0.0148 0.0048
 Jupiter -122250-01-24 05:18 J -42930366.51 -42930366.28 -42930366.06 0.0519 0.0106
 Jupiter -122238-01-28 23:32 J -42925978.68 -42925978.52 -42925978.36 0.0520 0.0360
 Neptune -122221-06-17 16:06 J -42919628.91 -42919628.83 -42919628.69 0.0089 0.0080
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 Neptune -122219-06-22 14:54 J -42918894.11 -42918893.88 -42918893.62 0.0089 0.0027
 Neptune -122218-06-25 02:39 J -42918526.65 -42918526.39 -42918526.13 0.0089 0.0001
 Neptune -122217-06-26 13:56 J -42918159.15 -42918158.92 -42918158.66 0.0089 0.0028
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 Saturn -122212-01-05 13:42 J -42916505.16 -42916504.93 -42916504.68 0.0291 0.0052
 Uranus -122211-01-29 19:42 J -42916115.85 -42916115.68 -42916115.50 0.0131 0.0093
 Uranus -122210-02-02 19:27 J -42915746.94 -42915746.69 -42915746.44 0.0131 0.0014
 Uranus -122209-02-06 18:15 J -42915377.84 -42915377.74 -42915377.64 0.0131 0.0119
 Mars -122209-06-21 09:08 J -42915242.27 -42915242.12 -42915241.98 0.1787 0.1162
 Jupiter -122209-07-21 05:46 J -42915212.42 -42915212.26 -42915212.09 0.0506 0.0360
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 Uranus -122167-07-28 05:32 J -42899865.50 -42899865.27 -42899865.02 0.0148 0.0054
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 Neptune -122139-12-29 11:46 J -42889484.18 -42889484.01 -42889483.80 0.0089 0.0059
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 Pluto -122138-11-06 09:08 J -42889172.36 -42889172.12 -42889171.87 0.0063 0.0026

Neptune -122137-01-01 00:01 J -42889116.74 -42889116.50 -42889116.26 0.0089 0.0032
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 Neptune -122133-01-09 20:25 J -42887646.77 -42887646.65 -42887646.49 0.0089 0.0075
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 Uranus -122126-02-03 09:37 J -42885065.34 -42885065.10 -42885064.85 0.0131 0.0023
 Jupiter -122126-07-21 16:34 J -42884896.99 -42884896.81 -42884896.62 0.0506 0.0311
 Uranus -122125-02-07 07:56 J -42884696.20 -42884696.17 -42884696.10 0.0131 0.0128
 Saturn -122111-06-25 08:39 J -42879444.29 -42879444.14 -42879443.96 0.0274 0.0202
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 Jupiter -122084-01-23 02:54 J -42869735.58 -42869735.38 -42869735.17 0.0519 0.0221
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 Mars -122077-12-31 04:20 J -42866836.48 -42866836.32 -42866836.16 0.1727 0.0918
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 Neptune -122055-06-21 20:10 J -42858993.88 -42858993.66 -42858993.42 0.0089 0.0040
 Jupiter -122055-07-16 02:39 J -42858969.60 -42858969.39 -42858969.16 0.0506 0.0206
 Neptune -122054-06-24 07:42 J -42858626.43 -42858626.18 -42858625.92 0.0089 0.0013
 Neptune -122053-06-25 19:13 J -42858258.94 -42858258.70 -42858258.44 0.0089 0.0015
 Saturn -122052-06-26 10:06 J -42857893.29 -42857893.08 -42857892.86 0.0273 0.0125
 Neptune -122052-06-28 06:44 J -42857891.43 -42857891.22 -42857890.97 0.0089 0.0042
 Neptune -122051-06-30 18:30 J -42857523.87 -42857523.73 -42857523.55 0.0089 0.0069
 Pluto -122048-05-02 03:08 J -42856487.59 -42856487.37 -42856487.13 0.0082 0.0033
 Uranus -122043-01-30 23:46 J -42854752.70 -42854752.51 -42854752.30 0.0131 0.0077
 Jupiter -122043-07-20 20:39 J -42854581.85 -42854581.64 -42854581.43 0.0505 0.0233

Uranus	-122042-02-03 23:18 J	-42854383.76	-42854383.53	-42854383.28	0.0131	0.0030
Saturn	-122035-01-09 23:18 J	-42851851.70	-42851851.53	-42851851.36	0.0291	0.0210
Saturn	-122006-01-04 05:46 J	-42841265.43	-42841265.26	-42841265.08	0.0289	0.0197
Jupiter	-122001-01-23 05:46 J	-42839420.44	-42839420.26	-42839420.07	0.0519	0.0309

122ND MILLENNIUM BCE

This is a list of transits of Earth in the 122nd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-122000-07-23 10:20 J	-42838873.23	-42838873.07	-42838872.87	0.0148	0.0104		
Uranus	-121999-07-28 20:54 J	-42838502.86	-42838502.63	-42838502.39	0.0148	0.0057		
Mars	-121997-01-03 15:51 J	-42837978.99	-42837978.84	-42837978.69	0.1724	0.1091		
Saturn	-121993-06-27 15:22 J	-42836342.10	-42836341.86	-42836341.61	0.0273	0.0039		
Jupiter	-121989-01-27 21:22 J	-42835032.83	-42835032.61	-42835032.39	0.0520	0.0143		
Neptune	-121975-12-28 15:37 J	-42829583.98	-42829583.85	-42829583.69	0.0089	0.0073		
Neptune	-121974-12-31 03:37 J	-42829216.56	-42829216.35	-42829216.12	0.0089	0.0046		
Neptune	-121972-01-01 15:22 J	-42828849.11	-42828848.86	-42828848.60	0.0089	0.0019		
Jupiter	-121972-07-15 04:05 J	-42828654.52	-42828654.33	-42828654.13	0.0507	0.0290		
Neptune	-121971-01-04 03:08 J	-42828481.63	-42828481.37	-42828481.12	0.0089	0.0008		
Neptune	-121970-01-06 14:10 J	-42828114.14	-42828113.91	-42828113.67	0.0089	0.0035		
Neptune	-121969-01-09 00:58 J	-42827746.62	-42827746.46	-42827746.25	0.0089	0.0062		
Neptune	-121968-01-10 12:01 J	-42827379.02	-42827379.00	-42827378.96	0.0089	0.0088		

Jupiter -121960-07-19 21:37 J -42824266.82 -42824266.60 -42824266.37 0.0506 0.0148
 Uranus -121959-01-31 12:58 J -42824071.16 -42824070.96 -42824070.74 0.0131 0.0070
 Uranus -121958-02-04 12:58 J -42823702.19 -42823701.96 -42823701.72 0.0131 0.0037
 Saturn -121947-01-05 21:37 J -42819713.83 -42819713.60 -42819713.36 0.0289 0.0075
 Saturn -121934-06-30 00:01 J -42814790.74 -42814790.50 -42814790.26 0.0273 0.0055
 Mars -121925-06-21 15:37 J -42811510.98 -42811510.85 -42811510.71 0.1782 0.1267
 Jupiter -121918-01-22 06:15 J -42809105.38 -42809105.24 -42809105.10 0.0519 0.0407
 Uranus -121916-07-23 22:49 J -42808191.74 -42808191.55 -42808191.35 0.0148 0.0096
 Uranus -121915-07-29 08:53 J -42807821.35 -42807821.13 -42807820.88 0.0148 0.0065
 Jupiter -121906-01-26 23:03 J -42804717.77 -42804717.54 -42804717.31 0.0520 0.0052
 Jupiter -121894-01-31 12:44 J -42800330.03 -42800329.97 -42800329.90 0.0520 0.0498
 Neptune -121892-06-18 13:27 J -42799461.02 -42799460.94 -42799460.80 0.0089 0.0080
 Pluto -121892-11-07 12:15 J -42799319.22 -42799318.99 -42799318.71 0.0063 0.0023
 Neptune -121891-06-21 00:58 J -42799093.66 -42799093.46 -42799093.25 0.0089 0.0053
 Pluto -121891-11-09 01:27 J -42798952.55 -42798952.44 -42798952.27 0.0063 0.0055
 Neptune -121890-06-23 12:15 J -42798726.23 -42798725.99 -42798725.74 0.0089 0.0026
 Neptune -121889-06-24 23:46 J -42798358.76 -42798358.51 -42798358.25 0.0089 0.0002
 Jupiter -121889-07-14 04:34 J -42798339.46 -42798339.31 -42798339.15 0.0507 0.0380
 Saturn -121888-01-07 17:17 J -42798162.02 -42798161.78 -42798161.54 0.0290 0.0056
 Neptune -121888-06-27 11:03 J -42797991.27 -42797991.04 -42797990.78 0.0089 0.0028
 Neptune -121887-06-29 22:49 J -42797623.74 -42797623.55 -42797623.34 0.0089 0.0055
 Neptune -121886-07-02 10:34 J -42797256.14 -42797256.06 -42797255.95 0.0089 0.0082
 Jupiter -121877-07-18 23:03 J -42793951.78 -42793951.54 -42793951.31 0.0506 0.0061
 Uranus -121875-02-01 04:05 J -42793389.54 -42793389.33 -42793389.10 0.0131 0.0060
 Saturn -121875-07-01 11:32 J -42793239.21 -42793239.02 -42793238.81 0.0272 0.0156
 Uranus -121874-02-05 03:51 J -42793020.56 -42793020.34 -42793020.10 0.0131 0.0046
 Jupiter -121865-07-23 16:05 J -42789563.87 -42789563.83 -42789563.78 0.0505 0.0495
 Mars -121846-06-25 08:39 J -42782653.29 -42782653.14 -42782652.99 0.1785 0.1121
 Saturn -121846-06-26 13:41 J -42782652.12 -42782651.93 -42782651.74 0.0274 0.0173
 Jupiter -121835-01-21 04:20 J -42778790.34 -42778790.32 -42778790.28 0.0518 0.0512

Uranus -121832-07-24 16:20 J -42777510.02 -42777509.82 -42777509.59 0.0148 0.0081
 Uranus -121831-07-30 03:08 J -42777139.58 -42777139.37 -42777139.15 0.0148 0.0080
 Saturn -121829-01-10 13:13 J -42776610.12 -42776609.95 -42776609.75 0.0291 0.0190
 Jupiter -121823-01-25 19:27 J -42774402.91 -42774402.69 -42774402.46 0.0519 0.0063
 Saturn -121816-07-03 01:41 J -42771687.49 -42771687.43 -42771687.37 0.0271 0.0262
 Jupiter -121811-01-30 09:22 J -42770015.26 -42770015.11 -42770014.96 0.0521 0.0385
 Neptune -121811-12-27 17:46 J -42769683.77 -42769683.76 -42769683.70 0.0089 0.0088
 Neptune -121810-12-30 06:01 J -42769316.41 -42769316.25 -42769316.04 0.0089 0.0061
 Neptune -121809-12-31 18:01 J -42768948.98 -42768948.75 -42768948.50 0.0089 0.0034
 Neptune -121807-01-03 06:01 J -42768581.51 -42768581.25 -42768580.99 0.0089 0.0006
 Neptune -121806-01-05 17:17 J -42768214.02 -42768213.78 -42768213.52 0.0089 0.0021
 Jupiter -121806-07-14 04:49 J -42768024.38 -42768024.30 -42768024.20 0.0507 0.0468
 Neptune -121805-01-08 04:20 J -42767846.52 -42767846.32 -42767846.09 0.0089 0.0048
 Neptune -121804-01-09 15:51 J -42767478.98 -42767478.84 -42767478.70 0.0089 0.0074
 Pluto -121802-05-04 10:34 J -42766634.30 -42766634.06 -42766633.81 0.0082 0.0019
 Saturn -121800-01-04 00:01 J -42766023.65 -42766023.50 -42766023.32 0.0288 0.0208
 Jupiter -121794-07-18 18:01 J -42763636.98 -42763636.75 -42763636.51 0.0506 0.0047
 Mars -121793-12-31 19:27 J -42763104.86 -42763104.69 -42763104.52 0.1732 0.0761
 Uranus -121791-02-01 20:10 J -42762707.89 -42762707.66 -42762707.42 0.0131 0.0049
 Uranus -121790-02-05 19:41 J -42762338.89 -42762338.68 -42762338.44 0.0131 0.0058
 Saturn -121787-06-28 04:05 J -42761100.57 -42761100.33 -42761100.09 0.0273 0.0064
 Jupiter -121782-07-23 10:34 J -42759249.20 -42759249.06 -42759248.90 0.0505 0.0388
 Uranus -121748-07-25 08:10 J -42746828.38 -42746828.16 -42746827.93 0.0148 0.0068
 Uranus -121747-07-30 18:44 J -42746457.91 -42746457.72 -42746457.51 0.0148 0.0093
 Saturn -121741-01-06 17:17 J -42744472.01 -42744471.78 -42744471.54 0.0289 0.0085
 Jupiter -121740-01-24 18:01 J -42744087.97 -42744087.75 -42744087.54 0.0519 0.0165
 Jupiter -121728-01-29 11:46 J -42739700.19 -42739700.01 -42739699.82 0.0520 0.0298
 Saturn -121728-06-29 18:15 J -42739548.98 -42739548.74 -42739548.49 0.0273 0.0045
 Neptune -121727-06-20 05:03 J -42739193.44 -42739193.29 -42739193.10 0.0089 0.0067
 Neptune -121726-06-22 16:05 J -42738826.05 -42738825.83 -42738825.59 0.0089 0.0040

Neptune -121725-06-24 03:37 J -42738458.60 -42738458.35 -42738458.09 0.0089 0.0013
 Neptune -121724-06-26 14:39 J -42738091.13 -42738090.89 -42738090.62 0.0089 0.0015
 Neptune -121723-06-29 02:10 J -42737723.61 -42737723.41 -42737723.16 0.0089 0.0042
 Neptune -121722-07-01 13:56 J -42737356.06 -42737355.92 -42737355.73 0.0089 0.0069
 Mars -121713-01-04 08:53 J -42734247.26 -42734247.13 -42734247.01 0.1729 0.1315
 Jupiter -121711-07-17 17:03 J -42733322.02 -42733321.79 -42733321.57 0.0507 0.0142
 Uranus -121707-02-02 12:29 J -42732026.21 -42732025.98 -42732025.73 0.0131 0.0039
 Uranus -121706-02-06 12:01 J -42731657.20 -42731657.00 -42731656.77 0.0131 0.0068
 Jupiter -121699-07-22 12:15 J -42728934.17 -42728933.99 -42728933.79 0.0506 0.0305
 Saturn -121682-01-08 07:13 J -42722920.45 -42722920.20 -42722919.96 0.0289 0.0029
 Saturn -121669-07-01 06:15 J -42717997.44 -42717997.24 -42717997.03 0.0272 0.0147
 Uranus -121664-07-26 00:15 J -42716146.72 -42716146.49 -42716146.24 0.0148 0.0055
 Uranus -121663-07-31 10:49 J -42715776.21 -42715776.05 -42715775.85 0.0148 0.0106
 Jupiter -121657-01-24 20:39 J -42713772.84 -42713772.64 -42713772.44 0.0518 0.0253
 Pluto -121646-11-09 14:10 J -42709466.16 -42709465.91 -42709465.66 0.0063 0.0024
 Neptune -121646-12-29 08:53 J -42709416.26 -42709416.13 -42709415.99 0.0089 0.0075
 Jupiter -121645-01-29 12:01 J -42709385.21 -42709385.00 -42709384.79 0.0519 0.0199
 Pluto -121645-11-10 03:37 J -42709099.50 -42709099.35 -42709099.21 0.0063 0.0053
 Neptune -121645-12-30 20:53 J -42709048.84 -42709048.63 -42709048.40 0.0089 0.0048
 Neptune -121643-01-02 08:53 J -42708681.37 -42708681.13 -42708680.86 0.0089 0.0021
 Neptune -121642-01-04 20:39 J -42708313.89 -42708313.64 -42708313.38 0.0089 0.0007
 Neptune -121641-01-07 07:56 J -42707946.39 -42707946.17 -42707945.92 0.0089 0.0034
 Mars -121641-06-21 23:03 J -42707779.67 -42707779.54 -42707779.42 0.1776 0.1333
 Neptune -121640-01-08 18:58 J -42707578.88 -42707578.71 -42707578.50 0.0089 0.0061
 Saturn -121640-06-26 05:32 J -42707410.43 -42707410.27 -42707410.08 0.0274 0.0189
 Neptune -121639-01-11 06:15 J -42707211.27 -42707211.24 -42707211.18 0.0089 0.0087
 Jupiter -121628-07-16 21:22 J -42703006.83 -42703006.61 -42703006.40 0.0507 0.0214
 Saturn -121623-01-09 15:37 J -42701369.07 -42701368.85 -42701368.63 0.0290 0.0128
 Uranus -121623-02-03 04:34 J -42701344.55 -42701344.31 -42701344.06 0.0131 0.0027
 Uranus -121622-02-07 04:20 J -42700975.51 -42700975.32 -42700975.11 0.0131 0.0078

Jupiter -121616-07-21 10:34 J -42698619.28 -42698619.06 -42698618.84 0.0506 0.0207
 Saturn -121610-07-03 15:22 J -42696445.96 -42696445.86 -42696445.74 0.0272 0.0242
 Saturn -121594-01-03 19:13 J -42690782.74 -42690782.70 -42690782.63 0.0288 0.0280
 Saturn -121581-06-27 12:58 J -42685859.18 -42685858.96 -42685858.73 0.0273 0.0097
 Uranus -121580-07-26 09:51 J -42685465.32 -42685465.09 -42685464.83 0.0148 0.0051
 Uranus -121579-07-31 20:39 J -42685094.80 -42685094.64 -42685094.46 0.0148 0.0110
 Jupiter -121574-01-23 23:03 J -42683457.71 -42683457.54 -42683457.36 0.0518 0.0342
 Saturn -121564-01-10 18:29 J -42679817.89 -42679817.73 -42679817.56 0.0290 0.0214
 Neptune -121563-06-19 09:08 J -42679293.20 -42679293.12 -42679292.99 0.0089 0.0081
 Jupiter -121562-01-28 17:32 J -42679069.99 -42679069.77 -42679069.55 0.0519 0.0126
 Neptune -121562-06-21 20:10 J -42678925.85 -42678925.66 -42678925.45 0.0089 0.0054
 Mars -121562-06-25 15:37 J -42678922.00 -42678921.85 -42678921.69 0.1780 0.1007
 Neptune -121561-06-23 07:13 J -42678558.44 -42678558.20 -42678557.96 0.0089 0.0027
 Neptune -121560-06-25 18:15 J -42678190.99 -42678190.74 -42678190.48 0.0089 0.0001
 Neptune -121559-06-28 05:46 J -42677823.51 -42677823.26 -42677823.01 0.0089 0.0027
 Neptune -121558-06-30 16:49 J -42677455.98 -42677455.80 -42677455.57 0.0089 0.0055
 Neptune -121557-07-02 04:34 J -42677088.38 -42677088.31 -42677088.18 0.0089 0.0082
 Pluto -121556-05-05 12:29 J -42676781.21 -42676780.98 -42676780.74 0.0082 0.0024
 Jupiter -121545-07-15 21:22 J -42672691.80 -42672691.61 -42672691.42 0.0507 0.0304
 Uranus -121540-01-30 18:44 J -42671031.77 -42671031.72 -42671031.62 0.0132 0.0126
 Uranus -121539-02-03 19:56 J -42670662.92 -42670662.67 -42670662.42 0.0131 0.0018
 Uranus -121538-02-07 19:13 J -42670293.86 -42670293.70 -42670293.49 0.0131 0.0088
 Saturn -121535-01-04 20:10 J -42669231.83 -42669231.66 -42669231.49 0.0288 0.0201
 Jupiter -121533-07-20 15:51 J -42668304.06 -42668303.84 -42668303.61 0.0506 0.0137
 Saturn -121522-06-29 16:34 J -42664308.05 -42664307.81 -42664307.56 0.0273 0.0016
 Mars -121508-01-01 09:37 J -42659373.28 -42659373.10 -42659372.92 0.1737 0.0636
 Saturn -121505-01-12 17:32 J -42658266.78 -42658266.77 -42658266.73 0.0291 0.0289
 Uranus -121496-07-26 19:13 J -42654783.94 -42654783.70 -42654783.45 0.0148 0.0047
 Uranus -121495-08-01 06:01 J -42654413.42 -42654413.25 -42654413.09 0.0148 0.0113
 Jupiter -121491-01-23 12:01 J -42653142.15 -42653142.00 -42653141.85 0.0518 0.0389

Neptune -121481-12-29 23:03 J -42649148.71 -42649148.54 -42649148.34 0.0089 0.0063
 Neptune -121479-01-01 11:17 J -42648781.25 -42648781.03 -42648780.78 0.0089 0.0036
 Jupiter -121479-01-28 05:17 J -42648754.51 -42648754.28 -42648754.05 0.0519 0.0071
 Neptune -121478-01-03 23:17 J -42648413.78 -42648413.53 -42648413.26 0.0089 0.0009
 Neptune -121477-01-06 11:03 J -42648046.28 -42648046.04 -42648045.78 0.0089 0.0020
 Saturn -121476-01-05 17:03 J -42647681.00 -42647680.79 -42647680.57 0.0288 0.0133
 Neptune -121476-01-07 22:20 J -42647678.77 -42647678.57 -42647678.33 0.0089 0.0047
 Neptune -121475-01-10 09:22 J -42647311.22 -42647311.11 -42647310.94 0.0089 0.0074
 Saturn -121463-06-30 15:51 J -42642757.08 -42642756.84 -42642756.60 0.0273 0.0056
 Jupiter -121462-07-16 07:27 J -42642376.35 -42642376.19 -42642376.02 0.0508 0.0357
 Uranus -121456-01-31 08:53 J -42640350.22 -42640350.13 -42640350.00 0.0132 0.0118
 Uranus -121455-02-04 10:20 J -42639981.32 -42639981.07 -42639980.82 0.0131 0.0010
 Uranus -121454-02-08 10:20 J -42639612.24 -42639612.07 -42639611.90 0.0131 0.0096
 Jupiter -121450-07-21 03:22 J -42637988.59 -42637988.36 -42637988.13 0.0507 0.0091
 Mars -121429-01-05 00:29 J -42630515.58 -42630515.48 -42630515.39 0.1734 0.1497
 Saturn -121417-01-07 11:32 J -42626130.25 -42626130.02 -42626129.78 0.0288 0.0071
 Uranus -121412-07-27 04:49 J -42624102.54 -42624102.30 -42624102.05 0.0148 0.0043
 Uranus -121411-08-01 14:39 J -42623732.03 -42623731.89 -42623731.72 0.0148 0.0117
 Jupiter -121408-01-22 22:34 J -42622826.67 -42622826.56 -42622826.44 0.0518 0.0445
 Saturn -121404-07-01 12:15 J -42621206.21 -42621205.99 -42621205.77 0.0273 0.0119
 Pluto -121400-11-10 13:27 J -42619613.16 -42619612.94 -42619612.68 0.0063 0.0028
 Pluto -121399-11-12 02:39 J -42619246.53 -42619246.39 -42619246.19 0.0063 0.0049
 Neptune -121398-06-21 00:15 J -42619025.63 -42619025.49 -42619025.30 0.0089 0.0068
 Neptune -121397-06-22 11:17 J -42618658.25 -42618658.03 -42618657.79 0.0089 0.0041
 Jupiter -121396-01-27 14:39 J -42618439.12 -42618438.89 -42618438.66 0.0519 0.0011
 Neptune -121396-06-24 22:34 J -42618290.82 -42618290.56 -42618290.31 0.0089 0.0014
 Neptune -121395-06-27 09:22 J -42617923.35 -42617923.11 -42617922.85 0.0089 0.0014
 Neptune -121394-06-29 20:39 J -42617555.85 -42617555.64 -42617555.39 0.0089 0.0041
 Neptune -121393-07-01 07:56 J -42617188.31 -42617188.17 -42617187.98 0.0089 0.0068
 Jupiter -121384-02-01 09:37 J -42614051.19 -42614051.10 -42614051.02 0.0520 0.0479

Jupiter -121379-07-15 15:51 J -42612060.97 -42612060.84 -42612060.71 0.0507 0.0420
 Saturn -121375-06-26 03:08 J -42610619.48 -42610619.37 -42610619.23 0.0276 0.0235
 Uranus -121372-01-31 22:49 J -42609668.68 -42609668.55 -42609668.41 0.0132 0.0110
 Uranus -121371-02-05 00:01 J -42609299.75 -42609299.50 -42609299.25 0.0131 0.0003
 Uranus -121370-02-08 23:46 J -42608930.65 -42608930.51 -42608930.34 0.0131 0.0103
 Jupiter -121367-07-20 10:05 J -42607673.31 -42607673.08 -42607672.84 0.0506 0.0025
 Saturn -121358-01-08 04:49 J -42604579.54 -42604579.30 -42604579.05 0.0288 0.0013
 Mars -121357-06-22 08:10 J -42604048.28 -42604048.16 -42604048.04 0.1770 0.1350
 Jupiter -121355-07-25 04:34 J -42603285.40 -42603285.31 -42603285.22 0.0506 0.0465
 Saturn -121345-07-02 06:01 J -42599655.43 -42599655.25 -42599655.06 0.0273 0.0177
 Uranus -121328-07-27 20:39 J -42593420.88 -42593420.64 -42593420.38 0.0148 0.0031
 Uranus -121327-08-02 06:15 J -42593050.34 -42593050.24 -42593050.09 0.0148 0.0129
 Jupiter -121325-01-23 10:20 J -42592511.12 -42592511.07 -42592511.00 0.0518 0.0496
 Neptune -121317-12-29 01:27 J -42589248.53 -42589248.44 -42589248.28 0.0089 0.0078
 Saturn -121316-06-26 20:53 J -42589068.82 -42589068.63 -42589068.44 0.0276 0.0177
 Neptune -121316-12-31 14:25 J -42588881.11 -42588880.90 -42588880.68 0.0089 0.0050
 Neptune -121314-01-03 02:25 J -42588513.64 -42588513.40 -42588513.14 0.0089 0.0023
 Neptune -121313-01-05 14:39 J -42588146.15 -42588145.89 -42588145.64 0.0089 0.0005
 Jupiter -121313-01-28 05:32 J -42588123.50 -42588123.27 -42588123.04 0.0519 0.0031
 Neptune -121312-01-07 01:56 J -42587778.64 -42587778.42 -42587778.16 0.0089 0.0033
 Neptune -121311-01-09 13:13 J -42587411.12 -42587410.95 -42587410.73 0.0089 0.0060
 Neptune -121310-01-12 00:29 J -42587043.51 -42587043.48 -42587043.40 0.0089 0.0087
 Pluto -121310-05-07 14:53 J -42586928.11 -42586927.88 -42586927.64 0.0082 0.0027
 Jupiter -121301-02-01 23:32 J -42583735.64 -42583735.52 -42583735.39 0.0520 0.0433
 Saturn -121299-01-08 23:03 J -42583028.78 -42583028.54 -42583028.30 0.0288 0.0048
 Jupiter -121296-07-15 02:25 J -42581745.48 -42581745.40 -42581745.31 0.0507 0.0471
 Uranus -121288-02-01 13:41 J -42578987.07 -42578986.93 -42578986.75 0.0132 0.0101
 Uranus -121287-02-05 14:53 J -42578618.12 -42578617.88 -42578617.63 0.0132 0.0007
 Uranus -121286-02-09 14:53 J -42578248.99 -42578248.88 -42578248.74 0.0131 0.0113
 Saturn -121286-07-03 23:32 J -42578104.65 -42578104.52 -42578104.40 0.0273 0.0233

Jupiter -121284-07-19 21:51 J -42577357.83 -42577357.59 -42577357.35 0.0507 0.0024
 Mars -121278-06-25 23:17 J -42575190.69 -42575190.53 -42575190.36 0.1774 0.0906
 Jupiter -121272-07-24 17:32 J -42572969.89 -42572969.77 -42572969.64 0.0506 0.0425
 Saturn -121257-06-27 14:10 J -42567518.13 -42567517.91 -42567517.69 0.0276 0.0122
 Uranus -121244-07-28 13:13 J -42562739.21 -42562738.95 -42562738.69 0.0147 0.0017
 Uranus -121243-08-02 22:34 J -42562368.61 -42562368.56 -42562368.47 0.0148 0.0142
 Saturn -121240-01-09 18:58 J -42561477.93 -42561477.71 -42561477.48 0.0288 0.0115
 Neptune -121234-06-20 04:34 J -42559125.39 -42559125.31 -42559125.19 0.0089 0.0082
 Neptune -121233-06-21 15:37 J -42558758.05 -42558757.85 -42558757.65 0.0089 0.0055
 Neptune -121232-06-24 02:25 J -42558390.64 -42558390.40 -42558390.15 0.0089 0.0028
 Neptune -121231-06-26 13:27 J -42558023.19 -42558022.94 -42558022.68 0.0089 0.0002
 Jupiter -121230-01-27 16:49 J -42557808.03 -42557807.80 -42557807.58 0.0519 0.0085
 Neptune -121230-06-29 00:29 J -42557655.73 -42557655.48 -42557655.23 0.0089 0.0026
 Neptune -121229-06-30 11:17 J -42557288.21 -42557288.03 -42557287.80 0.0089 0.0054
 Neptune -121228-07-02 23:03 J -42556920.62 -42556920.54 -42556920.42 0.0089 0.0081
 Mars -121224-01-01 23:03 J -42555641.72 -42555641.54 -42555641.35 0.1743 0.0528
 Jupiter -121218-02-01 08:25 J -42553420.31 -42553420.15 -42553419.99 0.0520 0.0369
 Uranus -121204-02-02 04:49 J -42548305.46 -42548305.30 -42548305.10 0.0132 0.0091
 Uranus -121203-02-06 06:29 J -42547936.48 -42547936.23 -42547935.98 0.0132 0.0017
 Uranus -121202-02-10 06:01 J -42547567.32 -42547567.25 -42547567.14 0.0131 0.0123
 Jupiter -121201-07-19 06:58 J -42547042.45 -42547042.21 -42547041.98 0.0506 0.0083
 Saturn -121198-06-29 09:37 J -42545967.34 -42545967.10 -42545966.86 0.0276 0.0060
 Jupiter -121189-07-24 00:44 J -42542654.64 -42542654.47 -42542654.30 0.0505 0.0357
 Saturn -121181-01-11 19:27 J -42539926.87 -42539926.69 -42539926.51 0.0288 0.0191
 Uranus -121160-07-29 06:29 J -42532057.49 -42532057.23 -42532056.97 0.0147 0.0002
 Pluto -121154-11-12 11:17 J -42529760.22 -42529760.03 -42529759.79 0.0063 0.0038
 Pluto -121153-11-13 00:44 J -42529393.66 -42529393.47 -42529393.23 0.0063 0.0039
 Saturn -121152-01-04 23:32 J -42529340.68 -42529340.52 -42529340.35 0.0286 0.0211
 Neptune -121152-12-30 18:15 J -42528980.91 -42528980.74 -42528980.56 0.0089 0.0064
 Neptune -121150-01-02 06:15 J -42528613.46 -42528613.24 -42528612.99 0.0089 0.0037

Neptune -121149-01-04 18:44 J -42528245.97 -42528245.72 -42528245.46 0.0089 0.0009
 Neptune -121148-01-06 06:29 J -42527878.48 -42527878.23 -42527877.97 0.0089 0.0018
 Neptune -121147-01-08 18:15 J -42527510.95 -42527510.74 -42527510.51 0.0089 0.0046
 Jupiter -121147-01-26 23:46 J -42527492.73 -42527492.51 -42527492.29 0.0519 0.0157
 Neptune -121146-01-11 05:32 J -42527143.40 -42527143.27 -42527143.10 0.0089 0.0073
 Mars -121145-01-05 14:10 J -42526783.97 -42526783.91 -42526783.84 0.1739 0.1637
 Saturn -121139-06-30 08:25 J -42524416.39 -42524416.15 -42524415.90 0.0276 0.0010
 Jupiter -121135-01-31 16:34 J -42523104.99 -42523104.81 -42523104.62 0.0520 0.0302
 Saturn -121122-01-13 00:29 J -42518375.52 -42518375.48 -42518375.42 0.0288 0.0281
 Uranus -121120-02-02 20:53 J -42517623.82 -42517623.63 -42517623.42 0.0132 0.0080
 Uranus -121119-02-06 21:51 J -42517254.83 -42517254.59 -42517254.34 0.0132 0.0027
 Jupiter -121118-07-19 12:29 J -42516727.20 -42516726.98 -42516726.75 0.0506 0.0151
 Jupiter -121106-07-24 06:01 J -42512339.44 -42512339.25 -42512339.05 0.0506 0.0289
 Saturn -121093-01-07 07:41 J -42507789.40 -42507789.18 -42507788.95 0.0286 0.0113
 Saturn -121080-07-01 11:17 J -42502865.26 -42502865.03 -42502864.80 0.0276 0.0088
 Uranus -121076-07-29 19:27 J -42501375.95 -42501375.69 -42501375.43 0.0147 0.0007
 Mars -121073-06-22 18:01 J -42500316.87 -42500316.75 -42500316.63 0.1764 0.1347
 Neptune -121069-06-20 20:25 J -42498857.79 -42498857.65 -42498857.47 0.0089 0.0069
 Neptune -121068-06-23 07:13 J -42498490.41 -42498490.20 -42498489.96 0.0089 0.0042
 Neptune -121067-06-25 18:01 J -42498123.00 -42498122.75 -42498122.49 0.0089 0.0015
 Neptune -121066-06-28 05:03 J -42497755.54 -42497755.29 -42497755.03 0.0089 0.0013
 Neptune -121065-06-29 16:05 J -42497388.05 -42497387.83 -42497387.59 0.0089 0.0040
 Jupiter -121064-01-26 04:05 J -42497177.54 -42497177.33 -42497177.13 0.0519 0.0240
 Pluto -121064-05-08 11:17 J -42497075.21 -42497075.03 -42497074.82 0.0082 0.0049
 Neptune -121064-07-02 03:22 J -42497020.51 -42497020.36 -42497020.17 0.0089 0.0067
 Jupiter -121052-01-30 21:22 J -42492789.81 -42492789.61 -42492789.40 0.0520 0.0224
 Saturn -121051-06-26 06:29 J -42492278.31 -42492278.23 -42492278.15 0.0278 0.0261
 Uranus -121036-02-03 10:34 J -42486942.25 -42486942.06 -42486941.84 0.0132 0.0072
 Uranus -121035-02-07 11:32 J -42486573.25 -42486573.02 -42486572.77 0.0132 0.0036
 Jupiter -121035-07-18 16:34 J -42486412.02 -42486411.81 -42486411.60 0.0507 0.0228

Saturn -121034-01-08 20:39 J -42486237.88 -42486237.64 -42486237.39 0.0286 0.0004

Jupiter -121023-07-23 10:05 J -42482024.29 -42482024.08 -42482023.86 0.0505 0.0212

Saturn -121021-07-02 18:44 J -42481313.90 -42481313.72 -42481313.53 0.0275 0.0180

121ST MILLENNIUM BCE

This is a list of transits of Earth in the 121st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Mars	-120994-06-26 09:08 J	-42471459.29	-42471459.12	-42471458.95	0.1768	0.0870		
Uranus	-120993-07-24 20:39 J	-42471064.68	-42471064.64	-42471064.59	0.0147	0.0144		
Saturn	-120992-06-27 16:20 J	-42470727.01	-42470726.82	-42470726.61	0.0278	0.0164		
Uranus	-120992-07-30 04:49 J	-42470694.55	-42470694.30	-42470694.04	0.0147	0.0011		
Neptune	-120988-12-29 22:34 J	-42469080.67	-42469080.56	-42469080.42	0.0089	0.0078		
Neptune	-120986-01-01 10:49 J	-42468713.24	-42468713.05	-42468712.82	0.0089	0.0051		
Neptune	-120985-01-03 23:17 J	-42468345.77	-42468345.53	-42468345.27	0.0089	0.0023		
Neptune	-120984-01-05 11:32 J	-42467978.28	-42467978.02	-42467977.76	0.0089	0.0005		
Neptune	-120983-01-07 22:49 J	-42467610.77	-42467610.55	-42467610.29	0.0089	0.0033		
Neptune	-120982-01-10 10:34 J	-42467243.23	-42467243.06	-42467242.85	0.0089	0.0060		
Neptune	-120981-01-12 21:51 J	-42466875.61	-42466875.59	-42466875.51	0.0089	0.0087		
Jupiter	-120981-01-26 03:51 J	-42466862.51	-42466862.34	-42466862.16	0.0518	0.0339		
Saturn	-120975-01-10 13:41 J	-42464686.14	-42464685.93	-42464685.70	0.0287	0.0119		
Jupiter	-120969-01-30 19:56 J	-42462474.89	-42462474.67	-42462474.44	0.0519	0.0118		

Uranus -120952-02-04 00:15 J -42456260.70 -42456260.49 -42456260.26 0.0132 0.0065
 Jupiter -120952-07-17 18:44 J -42456096.91 -42456096.72 -42456096.54 0.0507 0.0310
 Uranus -120951-02-08 01:13 J -42455891.68 -42455891.45 -42455891.20 0.0132 0.0043
 Saturn -120946-01-05 03:22 J -42454099.45 -42454099.36 -42454099.24 0.0284 0.0258
 Mars -120940-01-02 10:34 J -42451910.25 -42451910.06 -42451909.87 0.1748 0.0467
 Jupiter -120940-07-22 07:41 J -42451709.41 -42451709.18 -42451708.94 0.0506 0.0114
 Saturn -120933-06-29 06:15 J -42449175.48 -42449175.24 -42449175.00 0.0277 0.0055
 Saturn -120916-01-12 09:51 J -42443134.20 -42443134.09 -42443133.96 0.0288 0.0248
 Uranus -120909-07-25 03:37 J -42440383.39 -42440383.35 -42440383.28 0.0147 0.0143
 Uranus -120908-07-30 11:46 J -42440013.27 -42440013.01 -42440012.75 0.0147 0.0012
 Pluto -120908-11-13 05:32 J -42439907.35 -42439907.27 -42439907.10 0.0063 0.0056
 Pluto -120907-11-14 19:27 J -42439540.93 -42439540.69 -42439540.42 0.0063 0.0020
 Neptune -120905-06-20 01:56 J -42438957.48 -42438957.42 -42438957.31 0.0089 0.0083
 Neptune -120904-06-22 12:44 J -42438590.15 -42438589.97 -42438589.76 0.0089 0.0056
 Neptune -120903-06-24 23:32 J -42438222.75 -42438222.52 -42438222.27 0.0089 0.0029
 Neptune -120902-06-27 10:49 J -42437855.31 -42437855.05 -42437854.80 0.0089 0.0001
 Neptune -120901-06-28 21:51 J -42437487.84 -42437487.59 -42437487.35 0.0089 0.0026
 Neptune -120900-07-01 08:39 J -42437120.33 -42437120.14 -42437119.92 0.0089 0.0054
 Neptune -120899-07-03 19:56 J -42436752.75 -42436752.67 -42436752.55 0.0089 0.0081
 Jupiter -120898-01-24 23:17 J -42436547.63 -42436547.53 -42436547.41 0.0518 0.0455
 Saturn -120887-01-06 23:17 J -42432547.74 -42432547.53 -42432547.31 0.0285 0.0132
 Jupiter -120886-01-29 17:32 J -42432160.00 -42432159.77 -42432159.54 0.0519 0.0013
 Jupiter -120874-02-03 11:32 J -42427772.10 -42427772.02 -42427771.92 0.0520 0.0476
 Saturn -120874-07-01 21:37 J -42427623.84 -42427623.60 -42427623.36 0.0276 0.0057
 Jupiter -120869-07-16 13:41 J -42425782.06 -42425781.93 -42425781.80 0.0507 0.0420
 Uranus -120868-02-04 11:03 J -42425579.25 -42425579.04 -42425578.80 0.0132 0.0060
 Uranus -120867-02-08 12:15 J -42425210.21 -42425209.99 -42425209.75 0.0132 0.0047
 Mars -120861-01-06 02:53 J -42423052.38 -42423052.38 -42423052.37 0.1744 0.1743
 Jupiter -120857-07-21 06:15 J -42421394.48 -42421394.24 -42421394.01 0.0506 0.0017
 Jupiter -120845-07-26 00:29 J -42417006.57 -42417006.48 -42417006.38 0.0505 0.0459

Saturn -120828-01-08 18:01 J -42410996.00 -42410995.75 -42410995.51 0.0286 0.0009
 Uranus -120825-07-25 13:56 J -42409701.99 -42409701.92 -42409701.83 0.0147 0.0138
 Uranus -120824-07-30 21:37 J -42409331.85 -42409331.60 -42409331.34 0.0147 0.0016
 Neptune -120823-12-31 16:49 J -42408812.95 -42408812.80 -42408812.59 0.0089 0.0064
 Neptune -120821-01-03 05:32 J -42408445.50 -42408445.27 -42408445.02 0.0089 0.0036
 Neptune -120820-01-04 18:01 J -42408078.01 -42408077.75 -42408077.49 0.0089 0.0008
 Neptune -120819-01-07 05:46 J -42407710.51 -42407710.26 -42407710.00 0.0089 0.0020
 Neptune -120818-01-09 17:32 J -42407342.98 -42407342.77 -42407342.54 0.0089 0.0047
 Pluto -120818-05-10 06:15 J -42407222.29 -42407222.24 -42407222.14 0.0082 0.0078
 Neptune -120817-01-12 05:17 J -42406975.42 -42406975.28 -42406975.14 0.0089 0.0074
 Pluto -120817-05-11 09:37 J -42406855.17 -42406855.10 -42406854.98 0.0081 0.0076
 Saturn -120815-07-03 13:13 J -42406072.14 -42406071.95 -42406071.75 0.0276 0.0169
 Jupiter -120803-01-28 17:17 J -42401845.01 -42401844.78 -42401844.55 0.0519 0.0090
 Jupiter -120791-02-02 08:39 J -42397457.30 -42397457.14 -42397456.98 0.0520 0.0364
 Mars -120789-06-23 04:49 J -42396585.42 -42396585.30 -42396585.17 0.1758 0.1312
 Saturn -120786-06-28 12:15 J -42395485.18 -42395484.99 -42395484.80 0.0277 0.0170
 Jupiter -120786-07-16 14:39 J -42395466.89 -42395466.89 -42395466.86 0.0508 0.0507
 Uranus -120784-02-04 22:34 J -42394897.78 -42394897.56 -42394897.32 0.0132 0.0055
 Uranus -120783-02-09 00:01 J -42394528.72 -42394528.50 -42394528.26 0.0132 0.0052
 Jupiter -120774-07-21 07:56 J -42391079.40 -42391079.17 -42391078.93 0.0507 0.0067
 Saturn -120769-01-11 08:53 J -42389444.35 -42389444.13 -42389443.90 0.0286 0.0107
 Jupiter -120762-07-25 20:10 J -42386691.82 -42386691.66 -42386691.49 0.0506 0.0354
 Uranus -120741-07-26 03:22 J -42379020.46 -42379020.36 -42379020.22 0.0147 0.0128
 Saturn -120740-01-04 18:15 J -42378857.78 -42378857.74 -42378857.66 0.0284 0.0275
 Neptune -120740-06-21 19:13 J -42378689.84 -42378689.70 -42378689.52 0.0089 0.0069
 Uranus -120740-07-31 11:32 J -42378650.28 -42378650.02 -42378649.77 0.0147 0.0026
 Neptune -120739-06-24 06:01 J -42378322.46 -42378322.25 -42378322.01 0.0089 0.0042
 Neptune -120738-06-26 16:49 J -42377955.04 -42377954.80 -42377954.54 0.0089 0.0015
 Neptune -120737-06-28 03:51 J -42377587.58 -42377587.34 -42377587.08 0.0089 0.0013
 Neptune -120736-06-30 14:25 J -42377220.11 -42377219.90 -42377219.65 0.0089 0.0041

Neptune -120735-07-03 01:56 J -42376852.57 -42376852.42 -42376852.24 0.0089 0.0068
 Saturn -120727-06-30 01:13 J -42373933.69 -42373933.45 -42373933.21 0.0277 0.0064
 Jupiter -120720-01-27 15:08 J -42371530.08 -42371529.87 -42371529.66 0.0518 0.0195
 Saturn -120710-01-12 19:27 J -42367892.84 -42367892.69 -42367892.51 0.0287 0.0210
 Mars -120710-06-26 19:56 J -42367727.84 -42367727.67 -42367727.51 0.1762 0.0867
 Jupiter -120708-02-01 09:37 J -42367142.29 -42367142.10 -42367141.90 0.0520 0.0273
 Uranus -120700-02-05 10:05 J -42364216.30 -42364216.08 -42364215.83 0.0132 0.0050
 Uranus -120699-02-09 11:32 J -42363847.23 -42363847.02 -42363846.78 0.0132 0.0058
 Jupiter -120691-07-20 04:49 J -42360764.52 -42360764.30 -42360764.08 0.0507 0.0170
 Saturn -120681-01-07 01:56 J -42357306.60 -42357306.42 -42357306.22 0.0285 0.0180
 Jupiter -120679-07-24 21:51 J -42356376.78 -42356376.59 -42356376.38 0.0506 0.0270
 Saturn -120668-07-01 09:51 J -42352382.33 -42352382.09 -42352381.85 0.0276 0.0031
 Pluto -120661-11-15 10:49 J -42349688.30 -42349688.05 -42349687.77 0.0063 0.0007
 Neptune -120659-12-30 23:32 J -42348912.62 -42348912.52 -42348912.36 0.0089 0.0077
 Neptune -120657-01-02 12:01 J -42348545.19 -42348545.00 -42348544.76 0.0089 0.0049
 Uranus -120657-07-26 18:44 J -42348338.87 -42348338.72 -42348338.56 0.0147 0.0116
 Mars -120656-01-02 21:22 J -42348178.80 -42348178.61 -42348178.42 0.1754 0.0432
 Neptune -120656-01-04 00:44 J -42348177.71 -42348177.47 -42348177.21 0.0089 0.0021
 Uranus -120656-08-01 02:25 J -42347968.64 -42347968.40 -42347968.14 0.0147 0.0038
 Neptune -120655-01-06 12:58 J -42347810.21 -42347809.96 -42347809.70 0.0089 0.0007
 Neptune -120654-01-09 00:44 J -42347442.70 -42347442.47 -42347442.22 0.0089 0.0035
 Neptune -120653-01-11 12:29 J -42347075.15 -42347074.98 -42347074.79 0.0089 0.0062
 Jupiter -120637-01-28 00:01 J -42341214.70 -42341214.50 -42341214.30 0.0518 0.0259
 Jupiter -120625-02-01 17:17 J -42336826.99 -42336826.78 -42336826.56 0.0519 0.0203
 Saturn -120622-01-08 04:34 J -42335755.53 -42335755.31 -42335755.07 0.0285 0.0099
 Uranus -120616-02-05 23:03 J -42333534.76 -42333534.54 -42333534.29 0.0132 0.0042
 Uranus -120615-02-10 00:44 J -42333165.68 -42333165.47 -42333165.25 0.0132 0.0065
 Saturn -120609-07-02 14:25 J -42330831.12 -42330830.90 -42330830.68 0.0276 0.0115
 Jupiter -120608-07-19 11:32 J -42330449.22 -42330449.02 -42330448.81 0.0507 0.0236
 Jupiter -120596-07-24 06:15 J -42326061.45 -42326061.24 -42326061.03 0.0506 0.0211

Saturn -120580-06-27 07:41 J -42320244.31 -42320244.18 -42320244.05 0.0279 0.0234
 Neptune -120576-06-21 02:53 J -42318789.45 -42318789.38 -42318789.25 0.0089 0.0082
 Neptune -120575-06-23 13:41 J -42318422.11 -42318421.93 -42318421.71 0.0089 0.0055
 Neptune -120574-06-26 00:29 J -42318054.71 -42318054.48 -42318054.22 0.0089 0.0028
 Neptune -120573-06-27 11:32 J -42317687.27 -42317687.02 -42317686.76 0.0089 0.0002
 Uranus -120573-07-27 08:25 J -42317657.31 -42317657.15 -42317656.95 0.0147 0.0106
 Neptune -120572-06-29 22:20 J -42317319.80 -42317319.57 -42317319.32 0.0089 0.0028
 Uranus -120572-08-01 16:34 J -42317287.05 -42317286.81 -42317286.56 0.0147 0.0048
 Pluto -120571-05-12 21:37 J -42317002.83 -42317002.60 -42317002.35 0.0081 0.0022
 Neptune -120571-07-02 09:22 J -42316952.29 -42316952.11 -42316951.89 0.0089 0.0056
 Neptune -120570-07-04 20:39 J -42316584.71 -42316584.64 -42316584.53 0.0089 0.0083
 Saturn -120563-01-09 02:39 J -42314204.64 -42314204.39 -42314204.15 0.0285 0.0030
 Jupiter -120554-01-27 07:41 J -42310899.35 -42310899.18 -42310899.00 0.0518 0.0326
 Saturn -120550-07-04 15:08 J -42309280.05 -42309279.87 -42309279.69 0.0276 0.0190
 Jupiter -120542-01-31 23:32 J -42306511.74 -42306511.52 -42306511.30 0.0519 0.0130
 Uranus -120532-02-06 10:49 J -42302853.28 -42302853.05 -42302852.80 0.0132 0.0036
 Uranus -120531-02-10 12:29 J -42302484.19 -42302483.98 -42302483.77 0.0132 0.0071
 Jupiter -120525-07-18 17:17 J -42300133.96 -42300133.78 -42300133.59 0.0507 0.0307
 Saturn -120521-06-28 06:29 J -42298693.42 -42298693.23 -42298693.03 0.0279 0.0163
 Jupiter -120513-07-23 10:49 J -42295746.27 -42295746.05 -42295745.82 0.0506 0.0135
 Mars -120505-06-23 17:32 J -42292853.91 -42292853.77 -42292853.64 0.1753 0.1229
 Saturn -120504-01-09 21:51 J -42292653.83 -42292653.59 -42292653.35 0.0285 0.0033
 Neptune -120495-12-30 07:27 J -42289012.19 -42289012.19 -42289012.17 0.0089 0.0089
 Neptune -120493-01-01 20:10 J -42288644.83 -42288644.66 -42288644.45 0.0089 0.0061
 Neptune -120492-01-03 08:53 J -42288277.36 -42288277.13 -42288276.88 0.0089 0.0033
 Neptune -120491-01-05 21:22 J -42287909.87 -42287909.61 -42287909.35 0.0089 0.0005
 Saturn -120491-07-05 12:01 J -42287729.08 -42287729.00 -42287728.90 0.0276 0.0255
 Neptune -120490-01-08 09:22 J -42287542.35 -42287542.11 -42287541.85 0.0089 0.0023
 Neptune -120489-01-10 20:53 J -42287174.82 -42287174.63 -42287174.40 0.0089 0.0051
 Uranus -120489-07-27 18:44 J -42286975.89 -42286975.72 -42286975.51 0.0147 0.0101

Neptune -120488-01-12 08:39 J -42286807.24 -42286807.14 -42286807.00 0.0089 0.0078
 Uranus -120488-08-02 02:39 J -42286605.62 -42286605.39 -42286605.13 0.0147 0.0054
 Jupiter -120471-01-26 18:01 J -42280583.89 -42280583.75 -42280583.58 0.0518 0.0382
 Saturn -120462-06-30 02:25 J -42277142.62 -42277142.40 -42277142.17 0.0279 0.0100
 Jupiter -120459-01-31 14:10 J -42276196.14 -42276195.91 -42276195.68 0.0519 0.0088
 Uranus -120448-02-06 22:49 J -42272171.79 -42272171.55 -42272171.31 0.0132 0.0030
 Uranus -120447-02-11 00:01 J -42271802.68 -42271802.50 -42271802.28 0.0132 0.0077
 Saturn -120445-01-11 14:53 J -42271103.11 -42271102.88 -42271102.64 0.0285 0.0090
 Jupiter -120442-07-19 03:51 J -42269818.50 -42269818.34 -42269818.17 0.0507 0.0360
 Jupiter -120430-07-23 22:49 J -42265430.78 -42265430.55 -42265430.32 0.0507 0.0089
 Mars -120426-06-27 06:58 J -42263996.38 -42263996.21 -42263996.05 0.1757 0.0874
 Pluto -120415-11-16 20:10 J -42259835.83 -42259835.66 -42259835.46 0.0063 0.0045
 Pluto -120414-11-18 09:37 J -42259469.32 -42259469.10 -42259468.85 0.0063 0.0030
 Neptune -120411-06-22 22:49 J -42258521.70 -42258521.55 -42258521.36 0.0089 0.0067
 Neptune -120410-06-25 09:08 J -42258154.33 -42258154.12 -42258153.88 0.0089 0.0040
 Neptune -120409-06-26 20:10 J -42257786.92 -42257786.66 -42257786.41 0.0089 0.0012
 Neptune -120408-06-29 06:44 J -42257419.46 -42257419.22 -42257418.96 0.0089 0.0016
 Neptune -120407-07-01 18:01 J -42257051.97 -42257051.75 -42257051.52 0.0089 0.0043
 Neptune -120406-07-04 04:49 J -42256684.44 -42256684.30 -42256684.13 0.0089 0.0071
 Uranus -120405-07-28 01:27 J -42256294.62 -42256294.44 -42256294.25 0.0147 0.0100
 Uranus -120404-08-02 08:53 J -42255924.36 -42255924.13 -42255923.88 0.0147 0.0054
 Saturn -120403-06-30 20:25 J -42255591.89 -42255591.65 -42255591.41 0.0279 0.0042
 Jupiter -120388-01-26 07:56 J -42250268.29 -42250268.17 -42250268.04 0.0518 0.0428
 Saturn -120386-01-12 08:39 J -42249552.35 -42249552.14 -42249551.93 0.0285 0.0148
 Jupiter -120376-01-31 02:25 J -42245880.63 -42245880.40 -42245880.16 0.0519 0.0041
 Mars -120372-01-03 07:13 J -42244447.39 -42244447.20 -42244447.01 0.1760 0.0416
 Jupiter -120364-02-04 18:58 J -42241492.77 -42241492.71 -42241492.64 0.0520 0.0497
 Uranus -120364-02-07 08:10 J -42241490.40 -42241490.16 -42241489.91 0.0132 0.0028
 Uranus -120363-02-11 09:51 J -42241121.28 -42241121.09 -42241120.88 0.0132 0.0079
 Jupiter -120359-07-18 17:17 J -42239502.92 -42239502.78 -42239502.64 0.0508 0.0400

Saturn -120357-01-06 10:20 J -42238966.17 -42238966.07 -42238965.94 0.0282 0.0248
 Jupiter -120347-07-23 09:08 J -42235115.35 -42235115.12 -42235114.88 0.0506 0.0034
 Saturn -120344-07-01 14:10 J -42234041.15 -42234040.91 -42234040.66 0.0279 0.0016
 Jupiter -120335-07-28 02:39 J -42230727.47 -42230727.39 -42230727.31 0.0505 0.0474
 Neptune -120329-01-01 04:20 J -42228744.44 -42228744.32 -42228744.14 0.0089 0.0073
 Neptune -120328-01-02 17:17 J -42228376.99 -42228376.78 -42228376.54 0.0089 0.0045
 Neptune -120327-01-05 06:15 J -42228009.49 -42228009.24 -42228008.97 0.0089 0.0017
 Saturn -120327-01-13 04:34 J -42228001.46 -42228001.31 -42228001.13 0.0285 0.0213
 Neptune -120326-01-07 18:29 J -42227641.98 -42227641.73 -42227641.46 0.0089 0.0012
 Neptune -120325-01-10 06:29 J -42227274.45 -42227274.23 -42227273.98 0.0089 0.0040
 Pluto -120325-05-13 02:25 J -42227150.57 -42227150.40 -42227150.18 0.0082 0.0052
 Neptune -120324-01-11 18:29 J -42226906.89 -42226906.73 -42226906.55 0.0089 0.0067
 Uranus -120321-07-28 06:01 J -42225613.42 -42225613.25 -42225613.06 0.0146 0.0103
 Uranus -120320-08-02 13:13 J -42225243.18 -42225242.95 -42225242.70 0.0147 0.0051
 Jupiter -120305-01-26 17:17 J -42219952.85 -42219952.78 -42219952.71 0.0518 0.0488
 Saturn -120298-01-07 08:10 J -42217415.34 -42217415.16 -42217414.96 0.0282 0.0180
 Jupiter -120293-01-31 12:15 J -42215565.22 -42215564.99 -42215564.76 0.0519 0.0022
 Saturn -120285-07-02 08:39 J -42212490.37 -42212490.14 -42212489.90 0.0279 0.0074
 Jupiter -120281-02-05 06:29 J -42211177.34 -42211177.23 -42211177.10 0.0520 0.0444
 Uranus -120280-02-07 16:49 J -42210809.04 -42210808.80 -42210808.55 0.0132 0.0026
 Uranus -120279-02-11 18:29 J -42210439.90 -42210439.73 -42210439.51 0.0132 0.0081
 Jupiter -120276-07-18 02:39 J -42209187.48 -42209187.39 -42209187.28 0.0507 0.0457
 Saturn -120268-01-14 03:51 J -42206450.36 -42206450.34 -42206450.31 0.0285 0.0283
 Jupiter -120264-07-22 18:29 J -42204799.97 -42204799.73 -42204799.50 0.0506 0.0023
 Jupiter -120252-07-27 11:46 J -42200412.13 -42200412.01 -42200411.88 0.0506 0.0421
 Neptune -120247-06-22 09:22 J -42198621.20 -42198621.11 -42198620.96 0.0089 0.0078
 Neptune -120246-06-24 19:41 J -42198253.87 -42198253.68 -42198253.45 0.0089 0.0051
 Neptune -120245-06-26 06:01 J -42197886.48 -42197886.25 -42197885.99 0.0089 0.0024
 Neptune -120244-06-28 17:03 J -42197519.05 -42197518.79 -42197518.54 0.0089 0.0004
 Neptune -120243-07-01 03:37 J -42197151.58 -42197151.35 -42197151.10 0.0089 0.0032

Neptune -120242-07-03 13:56 J -42196784.08 -42196783.92 -42196783.70 0.0089 0.0060
 Neptune -120241-07-05 01:27 J -42196416.46 -42196416.44 -42196416.37 0.0089 0.0087
 Saturn -120239-01-08 10:05 J -42195864.31 -42195864.08 -42195863.85 0.0283 0.0102
 Uranus -120237-07-28 14:25 J -42194932.07 -42194931.90 -42194931.70 0.0146 0.0100
 Uranus -120236-08-02 21:22 J -42194561.84 -42194561.61 -42194561.36 0.0147 0.0053
 Saturn -120226-07-04 06:01 J -42190939.45 -42190939.25 -42190939.02 0.0279 0.0140
 Mars -120221-06-24 07:13 J -42189122.34 -42189122.20 -42189122.05 0.1748 0.1109
 Jupiter -120210-01-30 20:39 J -42185249.87 -42185249.64 -42185249.41 0.0519 0.0086
 Jupiter -120198-02-04 15:22 J -42180862.01 -42180861.86 -42180861.70 0.0520 0.0382
 Saturn -120197-06-27 18:58 J -42180352.83 -42180352.71 -42180352.55 0.0281 0.0230
 Uranus -120196-02-08 00:44 J -42180127.70 -42180127.47 -42180127.21 0.0132 0.0026
 Uranus -120195-02-12 02:39 J -42179758.57 -42179758.39 -42179758.18 0.0132 0.0082
 Jupiter -120181-07-22 02:39 J -42174484.62 -42174484.39 -42174484.16 0.0507 0.0082
 Saturn -120180-01-09 16:05 J -42174313.07 -42174312.83 -42174312.58 0.0283 0.0014
 Jupiter -120169-07-26 19:13 J -42170096.86 -42170096.70 -42170096.53 0.0505 0.0356
 Pluto -120168-11-18 15:22 J -42169617.10 -42169616.86 -42169616.58 0.0063 0.0017
 Saturn -120167-07-05 06:58 J -42169388.36 -42169388.21 -42169388.05 0.0279 0.0212
 Pluto -120167-11-20 04:49 J -42169250.38 -42169250.30 -42169250.19 0.0063 0.0059
 Neptune -120166-12-31 13:56 J -42168844.00 -42168843.92 -42168843.84 0.0089 0.0084
 Neptune -120164-01-02 02:39 J -42168476.58 -42168476.39 -42168476.18 0.0089 0.0056
 Neptune -120163-01-04 15:22 J -42168109.10 -42168108.86 -42168108.60 0.0089 0.0028
 Neptune -120162-01-07 04:05 J -42167741.58 -42167741.33 -42167741.06 0.0089 0.0002
 Neptune -120161-01-09 16:49 J -42167374.05 -42167373.80 -42167373.55 0.0089 0.0028
 Neptune -120160-01-11 04:34 J -42167006.50 -42167006.31 -42167006.10 0.0089 0.0056
 Neptune -120159-01-13 16:05 J -42166638.89 -42166638.83 -42166638.72 0.0089 0.0084
 Uranus -120153-07-29 01:56 J -42164250.62 -42164250.42 -42164250.23 0.0146 0.0093
 Uranus -120152-08-03 08:25 J -42163880.38 -42163880.15 -42163879.91 0.0147 0.0059
 Mars -120142-06-27 19:56 J -42160264.83 -42160264.67 -42160264.51 0.1751 0.0934
 Saturn -120138-06-29 22:34 J -42158801.76 -42158801.56 -42158801.35 0.0281 0.0148
 Jupiter -120127-01-29 23:46 J -42154934.72 -42154934.51 -42154934.29 0.0519 0.0172

Saturn -120121-01-12 03:08 J -42152761.60 -42152761.37 -42152761.13 0.0283 0.0089
 Jupiter -120115-02-03 17:17 J -42150546.97 -42150546.78 -42150546.59 0.0520 0.0290
 Uranus -120113-02-05 07:27 J -42149815.23 -42149815.19 -42149815.13 0.0133 0.0130
 Uranus -120112-02-08 10:49 J -42149446.30 -42149446.05 -42149445.80 0.0132 0.0021
 Uranus -120111-02-12 12:44 J -42149077.15 -42149076.97 -42149076.77 0.0132 0.0085
 Jupiter -120098-07-22 07:27 J -42144169.41 -42144169.19 -42144168.96 0.0506 0.0155
 Saturn -120092-01-05 17:03 J -42142174.83 -42142174.79 -42142174.73 0.0280 0.0274
 Mars -120088-01-03 15:22 J -42140716.05 -42140715.86 -42140715.67 0.1765 0.0443
 Jupiter -120086-07-26 20:39 J -42139781.84 -42139781.64 -42139781.44 0.0506 0.0271
 Neptune -120082-06-24 06:58 J -42138353.37 -42138353.21 -42138353.01 0.0089 0.0062
 Neptune -120081-06-25 17:17 J -42137986.00 -42137985.78 -42137985.53 0.0089 0.0035
 Neptune -120080-06-28 04:05 J -42137618.58 -42137618.33 -42137618.07 0.0089 0.0007
 Neptune -120079-06-30 14:10 J -42137251.15 -42137250.91 -42137250.65 0.0089 0.0021
 Saturn -120079-07-01 06:15 J -42137250.47 -42137250.24 -42137249.99 0.0281 0.0056
 Pluto -120078-05-16 03:37 J -42136931.60 -42136931.35 -42136931.11 0.0081 0.0002
 Neptune -120078-07-03 01:13 J -42136883.66 -42136883.45 -42136883.23 0.0089 0.0048
 Neptune -120077-07-04 11:46 J -42136516.12 -42136516.01 -42136515.86 0.0089 0.0076
 Uranus -120069-07-29 14:10 J -42133569.12 -42133568.91 -42133568.70 0.0146 0.0085
 Uranus -120068-08-03 20:25 J -42133198.87 -42133198.65 -42133198.41 0.0147 0.0067
 Saturn -120062-01-13 17:46 J -42131209.92 -42131209.76 -42131209.58 0.0284 0.0200
 Jupiter -120044-01-28 21:22 J -42124619.80 -42124619.61 -42124619.41 0.0519 0.0280
 Saturn -120033-01-08 09:22 J -42120623.31 -42120623.11 -42120622.91 0.0281 0.0161
 Jupiter -120032-02-02 16:20 J -42120232.03 -42120231.82 -42120231.60 0.0520 0.0191
 Uranus -120029-02-05 16:49 J -42119133.85 -42119133.80 -42119133.70 0.0133 0.0127
 Uranus -120028-02-08 20:10 J -42118764.90 -42118764.66 -42118764.40 0.0132 0.0019
 Uranus -120027-02-12 22:34 J -42118395.75 -42118395.56 -42118395.38 0.0132 0.0089
 Saturn -120020-07-02 18:29 J -42115698.96 -42115698.73 -42115698.49 0.0280 0.0049
 Jupiter -120015-07-21 04:49 J -42113854.50 -42113854.30 -42113854.09 0.0507 0.0255
 Jupiter -120003-07-25 20:53 J -42109466.85 -42109466.63 -42109466.41 0.0506 0.0181

120TH MILLENNIUM BCE

This is a list of transits of Earth in the 120th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Neptune	-120000-01-01 12:29 J	-42108576.14	-42108575.98	-42108575.80	0.0089	0.0067		
Neptune	-119999-01-04 01:27 J	-42108208.66	-42108208.44	-42108208.19	0.0089	0.0039		
Neptune	-119998-01-06 14:25 J	-42107841.15	-42107840.90	-42107840.63	0.0089	0.0011		
Neptune	-119997-01-09 02:53 J	-42107473.62	-42107473.38	-42107473.11	0.0089	0.0018		
Neptune	-119996-01-10 15:08 J	-42107106.07	-42107105.87	-42107105.63	0.0089	0.0046		
Neptune	-119995-01-13 03:08 J	-42106738.48	-42106738.37	-42106738.19	0.0089	0.0074		
Uranus	-119985-07-30 00:15 J	-42102887.69	-42102887.49	-42102887.26	0.0146	0.0080		
Uranus	-119984-08-04 07:13 J	-42102517.42	-42102517.20	-42102516.97	0.0147	0.0072		
Saturn	-119974-01-10 03:08 J	-42099071.61	-42099071.37	-42099071.12	0.0282	0.0044		
Jupiter	-119961-01-28 22:49 J	-42094304.71	-42094304.55	-42094304.39	0.0518	0.0369		
Saturn	-119961-07-04 10:05 J	-42094147.28	-42094147.08	-42094146.88	0.0279	0.0160		
Jupiter	-119949-02-02 14:53 J	-42089917.10	-42089916.88	-42089916.65	0.0519	0.0087		
Uranus	-119945-02-06 02:53 J	-42088452.45	-42088452.38	-42088452.26	0.0133	0.0123		
Uranus	-119944-02-09 06:15 J	-42088083.48	-42088083.24	-42088082.98	0.0132	0.0015		
Uranus	-119943-02-13 08:10 J	-42087714.33	-42087714.16	-42087713.97	0.0132	0.0092		
Mars	-119937-06-24 22:49 J	-42085390.71	-42085390.55	-42085390.39	0.1742	0.0951		
Saturn	-119932-06-29 07:41 J	-42083560.35	-42083560.18	-42083559.99	0.0281	0.0184		
Jupiter	-119932-07-20 06:01 J	-42083539.42	-42083539.25	-42083539.07	0.0507	0.0341		

Pluto -119921-11-20 07:56 J -42079398.44 -42079398.17 -42079397.90 0.0063 0.0002
 Jupiter -119920-07-24 22:05 J -42079151.81 -42079151.58 -42079151.35 0.0506 0.0096
 Neptune -119918-06-23 19:56 J -42078452.82 -42078452.67 -42078452.53 0.0089 0.0072
 Neptune -119917-06-25 05:46 J -42078085.47 -42078085.26 -42078085.04 0.0089 0.0045
 Neptune -119916-06-27 15:51 J -42077718.08 -42077717.84 -42077717.58 0.0089 0.0018
 Saturn -119915-01-11 21:37 J -42077519.83 -42077519.60 -42077519.36 0.0283 0.0077
 Neptune -119915-06-30 02:25 J -42077350.66 -42077350.40 -42077350.15 0.0089 0.0010
 Neptune -119914-07-02 12:29 J -42076983.19 -42076982.98 -42076982.73 0.0089 0.0038
 Neptune -119913-07-03 23:32 J -42076615.69 -42076615.52 -42076615.34 0.0089 0.0065
 Saturn -119902-07-07 02:10 J -42072595.44 -42072595.41 -42072595.35 0.0279 0.0274
 Uranus -119901-07-30 07:56 J -42072206.38 -42072206.17 -42072205.95 0.0146 0.0078
 Uranus -119900-08-04 14:10 J -42071836.12 -42071835.91 -42071835.68 0.0147 0.0074
 Saturn -119886-01-06 11:46 J -42066933.02 -42066933.01 -42066933.00 0.0281 0.0280
 Jupiter -119878-01-27 18:58 J -42063989.79 -42063989.71 -42063989.62 0.0518 0.0482
 Saturn -119873-07-01 01:13 J -42062008.69 -42062008.45 -42062008.21 0.0280 0.0066
 Jupiter -119866-02-01 09:37 J -42059602.33 -42059602.10 -42059601.87 0.0519 0.0032
 Uranus -119861-02-06 11:32 J -42057771.10 -42057771.02 -42057770.90 0.0133 0.0121
 Uranus -119860-02-09 15:08 J -42057402.12 -42057401.87 -42057401.62 0.0132 0.0013
 Uranus -119859-02-13 16:34 J -42057032.96 -42057032.81 -42057032.61 0.0132 0.0094
 Mars -119858-06-28 10:05 J -42056533.23 -42056533.08 -42056532.93 0.1745 0.1031
 Saturn -119856-01-13 13:27 J -42055968.12 -42055967.94 -42055967.76 0.0283 0.0191
 Jupiter -119854-02-06 04:34 J -42055214.43 -42055214.31 -42055214.19 0.0520 0.0437
 Jupiter -119849-07-19 01:56 J -42053224.52 -42053224.42 -42053224.31 0.0507 0.0450
 Jupiter -119837-07-23 17:03 J -42048837.03 -42048836.79 -42048836.56 0.0507 0.0018
 Neptune -119837-12-31 22:49 J -42048675.67 -42048675.55 -42048675.43 0.0089 0.0078
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 Uranus -119104-02-12 17:03 J -41781270.04 -41781269.79 -41781269.54 0.0133 0.0002
 Uranus -119103-02-16 19:41 J -41780900.82 -41780900.68 -41780900.52 0.0132 0.0106
 Neptune -119096-06-25 09:08 J -41778215.25 -41778215.12 -41778214.94 0.0089 0.0070
 Jupiter -119095-02-06 13:13 J -41777989.15 -41777988.95 -41777988.75 0.0519 0.0271
 Neptune -119095-06-27 18:58 J -41777847.92 -41777847.71 -41777847.48 0.0089 0.0042
 Neptune -119094-06-30 04:34 J -41777480.55 -41777480.31 -41777480.05 0.0089 0.0015
 Neptune -119093-07-01 14:39 J -41777113.13 -41777112.89 -41777112.63 0.0089 0.0014
 Neptune -119092-07-04 00:44 J -41776745.68 -41776745.47 -41776745.23 0.0089 0.0042
 Pluto -119091-05-22 00:44 J -41776423.67 -41776423.47 -41776423.25 0.0081 0.0043
 Neptune -119091-07-06 10:49 J -41776378.18 -41776378.05 -41776377.86 0.0089 0.0070
 Mars -119085-06-27 02:25 J -41774195.58 -41774195.40 -41774195.21 0.1727 0.0353
 Saturn -119078-06-30 21:22 J -41771635.75 -41771635.61 -41771635.44 0.0285 0.0217
 Jupiter -119078-07-25 00:01 J -41771611.72 -41771611.50 -41771611.28 0.0507 0.0166
 Jupiter -119066-07-29 15:08 J -41767224.06 -41767223.87 -41767223.67 0.0506 0.0271
 Saturn -119061-01-13 10:05 J -41765595.32 -41765595.08 -41765594.84 0.0279 0.0051
 Uranus -119061-08-02 03:22 J -41765393.58 -41765393.36 -41765393.14 0.0146 0.0072
 Uranus -119060-08-07 08:25 J -41765023.36 -41765023.15 -41765022.92 0.0147 0.0076
 Saturn -119048-07-07 18:15 J -41760670.85 -41760670.74 -41760670.62 0.0282 0.0248
 Jupiter -119024-01-31 16:05 J -41752062.02 -41752061.83 -41752061.64 0.0518 0.0303
 Uranus -119021-02-09 20:39 J -41750957.77 -41750957.64 -41750957.47 0.0133 0.0107
 Uranus -119020-02-13 00:58 J -41750588.71 -41750588.46 -41750588.21 0.0133 0.0002
 Uranus -119019-02-17 03:37 J -41750219.49 -41750219.35 -41750219.20 0.0132 0.0107
 Saturn -119019-07-02 13:41 J -41750084.15 -41750083.93 -41750083.70 0.0284 0.0102
 Neptune -119014-01-03 05:32 J -41748438.39 -41748438.27 -41748438.12 0.0089 0.0076
 Neptune -119013-01-05 19:27 J -41748070.91 -41748070.69 -41748070.46 0.0089 0.0047
 Neptune -119012-01-07 09:08 J -41747703.38 -41747703.12 -41747702.87 0.0089 0.0018

Jupiter -119012-02-05 07:13 J -41747674.42 -41747674.20 -41747673.98 0.0519 0.0151
 Neptune -119011-01-09 22:05 J -41747335.83 -41747335.58 -41747335.31 0.0089 0.0011
 Neptune -119010-01-12 11:03 J -41746968.25 -41746968.04 -41746967.79 0.0089 0.0040
 Neptune -119009-01-14 23:46 J -41746600.66 -41746600.51 -41746600.33 0.0089 0.0068
 Mars -119006-06-30 11:03 J -41745338.14 -41745338.04 -41745337.94 0.1730 0.1461
 Saturn -119002-01-15 04:05 J -41744043.53 -41744043.33 -41744043.13 0.0279 0.0166

119TH MILLENNIUM BCE

This is a list of transits of Earth in the 119th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-118995-07-23 20:39 J	-41741296.84	-41741296.64	-41741296.44	0.0507	0.0271		
Jupiter	-118983-07-28 10:05 J	-41736909.30	-41736909.08	-41736908.86	0.0506	0.0160		
Uranus	-118977-08-02 13:41 J	-41734712.14	-41734711.93	-41734711.69	0.0146	0.0067		
Uranus	-118976-08-07 18:58 J	-41734341.92	-41734341.71	-41734341.49	0.0147	0.0081		
Saturn	-118973-01-09 20:39 J	-41733456.83	-41733456.64	-41733456.44	0.0278	0.0174		
Saturn	-118960-07-04 07:27 J	-41728532.43	-41728532.19	-41728531.95	0.0283	0.0017		
Mars	-118952-01-04 08:25 J	-41725791.31	-41725791.15	-41725790.99	0.1789	0.1083		
Saturn	-118943-01-16 20:39 J	-41722491.66	-41722491.64	-41722491.62	0.0280	0.0279		
Jupiter	-118941-01-31 11:46 J	-41721747.14	-41721747.01	-41721746.87	0.0518	0.0415		
Uranus	-118937-02-10 06:15 J	-41720276.38	-41720276.24	-41720276.06	0.0133	0.0103		
Uranus	-118936-02-13 10:34 J	-41719907.31	-41719907.06	-41719906.81	0.0133	0.0004		

Uranus -118935-02-17 12:58 J -41719538.07 -41719537.96 -41719537.80 0.0132 0.0110
 Pluto -118934-11-26 15:37 J -41718891.02 -41718890.85 -41718890.64 0.0063 0.0044
 Pluto -118933-11-27 05:03 J -41718524.51 -41718524.29 -41718524.04 0.0063 0.0031
 Neptune -118932-06-24 22:34 J -41718314.66 -41718314.56 -41718314.44 0.0089 0.0080
 Neptune -118931-06-27 07:41 J -41717947.36 -41717947.18 -41717946.96 0.0089 0.0053
 Neptune -118930-06-29 17:46 J -41717580.00 -41717579.76 -41717579.51 0.0089 0.0025
 Jupiter -118929-02-05 08:53 J -41717359.36 -41717359.13 -41717358.90 0.0519 0.0061
 Neptune -118929-07-01 03:37 J -41717212.60 -41717212.35 -41717212.10 0.0089 0.0003
 Neptune -118928-07-03 13:13 J -41716845.18 -41716844.95 -41716844.70 0.0089 0.0031
 Neptune -118927-07-05 23:03 J -41716477.71 -41716477.54 -41716477.33 0.0089 0.0059
 Neptune -118926-07-08 09:22 J -41716110.13 -41716110.11 -41716110.03 0.0089 0.0087
 Saturn -118914-01-11 11:32 J -41711905.26 -41711905.02 -41711904.78 0.0278 0.0067
 Jupiter -118912-07-22 18:44 J -41710981.88 -41710981.72 -41710981.56 0.0508 0.0372
 Saturn -118901-07-05 23:46 J -41706980.72 -41706980.51 -41706980.29 0.0283 0.0131
 Jupiter -118900-07-27 11:17 J -41706594.26 -41706594.03 -41706593.79 0.0507 0.0074
 Uranus -118893-08-03 00:44 J -41704030.70 -41704030.47 -41704030.23 0.0146 0.0061
 Uranus -118892-08-08 05:32 J -41703660.45 -41703660.27 -41703660.04 0.0147 0.0088
 Mars -118873-01-08 07:27 J -41696933.29 -41696933.19 -41696933.08 0.1785 0.1502
 Saturn -118872-06-30 18:29 J -41696393.88 -41696393.73 -41696393.57 0.0285 0.0217
 Jupiter -118858-01-30 14:10 J -41691431.96 -41691431.91 -41691431.86 0.0518 0.0504
 Saturn -118855-01-12 22:34 J -41690353.81 -41690353.56 -41690353.32 0.0279 0.0032
 Uranus -118853-02-10 16:20 J -41689594.97 -41689594.82 -41689594.63 0.0133 0.0099
 Uranus -118852-02-13 20:39 J -41689225.89 -41689225.64 -41689225.39 0.0132 0.0009
 Uranus -118851-02-17 23:17 J -41688856.64 -41688856.53 -41688856.39 0.0132 0.0114
 Neptune -118850-01-02 14:39 J -41688537.90 -41688537.89 -41688537.82 0.0089 0.0088
 Neptune -118849-01-05 04:34 J -41688170.49 -41688170.31 -41688170.09 0.0089 0.0059
 Neptune -118848-01-06 18:15 J -41687802.97 -41687802.74 -41687802.48 0.0089 0.0030
 Neptune -118847-01-09 08:10 J -41687435.42 -41687435.16 -41687434.90 0.0089 0.0001
 Neptune -118846-01-11 21:22 J -41687067.86 -41687067.61 -41687067.36 0.0089 0.0028
 Jupiter -118846-02-04 08:10 J -41687044.39 -41687044.16 -41687043.93 0.0518 0.0041

Neptune -118845-01-14 10:05 J -41686700.26 -41686700.08 -41686699.86 0.0089 0.0057
 Neptune -118844-01-15 22:34 J -41686332.60 -41686332.56 -41686332.46 0.0089 0.0086
 Pluto -118844-05-23 09:51 J -41686205.29 -41686205.09 -41686204.89 0.0081 0.0047
 Saturn -118842-07-08 13:13 J -41685429.07 -41685428.95 -41685428.81 0.0282 0.0239
 Jupiter -118834-02-09 00:01 J -41682656.64 -41682656.50 -41682656.37 0.0519 0.0415
 Jupiter -118829-07-21 22:49 J -41680666.65 -41680666.55 -41680666.44 0.0508 0.0448
 Jupiter -118817-07-26 10:20 J -41676279.30 -41676279.07 -41676278.84 0.0507 0.0027
 Saturn -118813-07-02 06:29 J -41674842.44 -41674842.23 -41674842.00 0.0285 0.0111
 Uranus -118809-08-03 10:05 J -41673349.31 -41673349.08 -41673348.83 0.0146 0.0057
 Uranus -118808-08-08 15:22 J -41672979.05 -41672978.86 -41672978.65 0.0147 0.0092
 Jupiter -118805-07-31 00:58 J -41671891.59 -41671891.46 -41671891.32 0.0506 0.0408
 Mars -118801-06-27 21:22 J -41670463.80 -41670463.61 -41670463.43 0.1722 0.0128
 Saturn -118796-01-14 04:34 J -41668802.52 -41668802.31 -41668802.08 0.0279 0.0119
 Uranus -118769-02-11 03:22 J -41658913.53 -41658913.36 -41658913.17 0.0133 0.0094
 Uranus -118768-02-14 07:27 J -41658544.44 -41658544.19 -41658543.94 0.0132 0.0013
 Saturn -118767-01-08 15:51 J -41658215.97 -41658215.84 -41658215.70 0.0277 0.0233
 Uranus -118767-02-18 10:20 J -41658175.18 -41658175.07 -41658174.96 0.0132 0.0118
 Neptune -118767-06-26 20:25 J -41658046.81 -41658046.65 -41658046.46 0.0089 0.0064
 Neptune -118766-06-29 05:46 J -41657679.47 -41657679.26 -41657679.01 0.0089 0.0037
 Neptune -118765-06-30 15:37 J -41657312.10 -41657311.85 -41657311.59 0.0089 0.0009
 Neptune -118764-07-03 01:13 J -41656944.69 -41656944.45 -41656944.19 0.0089 0.0020
 Jupiter -118763-02-03 10:34 J -41656729.29 -41656729.06 -41656728.84 0.0518 0.0128
 Neptune -118763-07-05 10:49 J -41656577.24 -41656577.05 -41656576.81 0.0089 0.0048
 Neptune -118762-07-07 20:53 J -41656209.74 -41656209.63 -41656209.47 0.0089 0.0076
 Saturn -118754-07-04 14:53 J -41653291.12 -41653290.88 -41653290.64 0.0285 0.0016
 Jupiter -118751-02-08 07:56 J -41652341.34 -41652341.17 -41652340.99 0.0520 0.0349
 Saturn -118737-01-16 06:58 J -41647251.37 -41647251.21 -41647251.02 0.0279 0.0197
 Jupiter -118734-07-26 14:53 J -41645964.11 -41645963.88 -41645963.65 0.0507 0.0103
 Uranus -118725-08-03 16:20 J -41642668.05 -41642667.82 -41642667.57 0.0146 0.0057
 Uranus -118724-08-08 21:51 J -41642297.78 -41642297.59 -41642297.38 0.0147 0.0092

Mars -118722-07-01 05:03 J -41641606.35 -41641606.29 -41641606.24 0.1725 0.1638
 Jupiter -118722-07-31 07:41 J -41641576.35 -41641576.18 -41641576.00 0.0506 0.0343
 Saturn -118708-01-09 15:37 J -41636665.04 -41636664.85 -41636664.64 0.0277 0.0162
 Saturn -118695-07-05 17:46 J -41631739.99 -41631739.76 -41631739.52 0.0284 0.0066
 Pluto -118687-11-27 18:44 J -41628672.81 -41628672.72 -41628672.56 0.0063 0.0056
 Pluto -118686-11-29 08:39 J -41628306.38 -41628306.14 -41628305.86 0.0063 0.0019
 Neptune -118685-01-04 12:44 J -41628270.11 -41628269.97 -41628269.80 0.0089 0.0071
 Uranus -118685-02-11 13:13 J -41628232.11 -41628231.95 -41628231.74 0.0133 0.0091
 Neptune -118684-01-06 02:39 J -41627902.61 -41627902.39 -41627902.14 0.0089 0.0042
 Uranus -118684-02-14 17:32 J -41627863.02 -41627862.77 -41627862.52 0.0132 0.0016
 Neptune -118683-01-08 16:20 J -41627535.07 -41627534.82 -41627534.55 0.0089 0.0013
 Uranus -118683-02-18 19:56 J -41627493.75 -41627493.67 -41627493.55 0.0132 0.0121
 Neptune -118682-01-11 06:01 J -41627167.51 -41627167.25 -41627166.99 0.0089 0.0016
 Neptune -118681-01-13 18:58 J -41626799.93 -41626799.71 -41626799.48 0.0089 0.0045
 Neptune -118680-01-15 07:41 J -41626432.30 -41626432.18 -41626432.01 0.0089 0.0074
 Jupiter -118680-02-02 20:39 J -41626413.85 -41626413.64 -41626413.42 0.0518 0.0186
 Saturn -118678-01-17 05:17 J -41625700.36 -41625700.28 -41625700.20 0.0279 0.0263
 Mars -118668-01-04 08:10 J -41622060.29 -41622060.16 -41622060.03 0.1795 0.1387
 Jupiter -118668-02-07 16:05 J -41622026.01 -41622025.83 -41622025.63 0.0519 0.0284
 Jupiter -118651-07-26 01:41 J -41615648.66 -41615648.43 -41615648.21 0.0507 0.0155
 Saturn -118649-01-11 12:58 J -41615114.19 -41615113.96 -41615113.72 0.0277 0.0097
 Uranus -118641-08-03 20:10 J -41611986.89 -41611986.66 -41611986.42 0.0146 0.0060
 Uranus -118640-08-09 01:27 J -41611616.63 -41611616.44 -41611616.22 0.0147 0.0089
 Jupiter -118639-07-30 14:53 J -41611261.07 -41611260.88 -41611260.68 0.0506 0.0274
 Saturn -118636-07-06 16:05 J -41610189.03 -41610188.83 -41610188.61 0.0284 0.0136
 Saturn -118607-06-30 22:20 J -41599602.68 -41599602.57 -41599602.45 0.0287 0.0252
 Neptune -118603-06-26 08:10 J -41598146.26 -41598146.16 -41598146.00 0.0089 0.0076
 Neptune -118602-06-28 17:46 J -41597778.95 -41597778.76 -41597778.53 0.0089 0.0048
 Uranus -118601-02-11 22:34 J -41597550.73 -41597550.56 -41597550.36 0.0133 0.0088
 Neptune -118601-06-30 03:37 J -41597411.59 -41597411.35 -41597411.10 0.0089 0.0020

Uranus -118600-02-15 02:53 J -41597181.63 -41597181.38 -41597181.13 0.0132 0.0019
 Neptune -118600-07-02 13:13 J -41597044.20 -41597043.95 -41597043.69 0.0089 0.0008
 Uranus -118599-02-19 05:46 J -41596812.34 -41596812.26 -41596812.17 0.0132 0.0123
 Neptune -118599-07-04 23:03 J -41596676.77 -41596676.54 -41596676.30 0.0089 0.0036
 Neptune -118598-07-07 08:53 J -41596309.30 -41596309.13 -41596308.95 0.0089 0.0064
 Jupiter -118597-02-03 05:03 J -41596098.50 -41596098.29 -41596098.09 0.0518 0.0251
 Pluto -118597-05-24 12:15 J -41595987.08 -41595986.99 -41595986.84 0.0082 0.0072
 Pluto -118596-05-26 14:53 J -41595619.92 -41595619.88 -41595619.76 0.0081 0.0077
 Mars -118596-06-26 08:53 J -41595589.19 -41595589.13 -41595589.07 0.1714 0.1612
 Saturn -118590-01-12 07:56 J -41593563.42 -41593563.17 -41593562.92 0.0277 0.0039
 Mars -118589-01-08 08:39 J -41593202.28 -41593202.14 -41593202.00 0.1791 0.1262
 Jupiter -118585-02-08 01:41 J -41591710.63 -41591710.43 -41591710.22 0.0519 0.0224
 Saturn -118577-07-07 11:17 J -41588638.20 -41588638.03 -41588637.85 0.0284 0.0195
 Jupiter -118568-07-25 11:03 J -41585333.25 -41585333.04 -41585332.82 0.0507 0.0213
 Uranus -118557-08-04 02:10 J -41581305.64 -41581305.41 -41581305.17 0.0146 0.0060
 Jupiter -118556-07-30 01:56 J -41580945.63 -41580945.42 -41580945.21 0.0506 0.0224
 Uranus -118556-08-09 07:27 J -41580935.39 -41580935.19 -41580934.97 0.0147 0.0087
 Saturn -118548-07-01 16:20 J -41578051.99 -41578051.82 -41578051.64 0.0287 0.0195
 Saturn -118531-01-13 02:39 J -41572012.64 -41572012.39 -41572012.14 0.0277 0.0018
 Neptune -118521-01-03 20:10 J -41568369.72 -41568369.66 -41568369.54 0.0089 0.0084
 Neptune -118520-01-05 10:05 J -41568002.26 -41568002.08 -41568001.85 0.0089 0.0055
 Neptune -118519-01-08 00:29 J -41567634.74 -41567634.48 -41567634.23 0.0089 0.0025
 Neptune -118518-01-10 13:41 J -41567267.19 -41567266.93 -41567266.66 0.0089 0.0004
 Saturn -118518-07-09 04:05 J -41567087.45 -41567087.33 -41567087.21 0.0285 0.0247
 Neptune -118517-01-13 02:53 J -41566899.61 -41566899.38 -41566899.13 0.0089 0.0033
 Uranus -118517-02-12 06:58 J -41566869.38 -41566869.21 -41566869.00 0.0133 0.0086
 Mars -118517-06-28 16:20 J -41566732.00 -41566731.82 -41566731.63 0.1717 0.0119
 Neptune -118516-01-14 15:51 J -41566532.00 -41566531.84 -41566531.63 0.0089 0.0062
 Uranus -118516-02-15 11:32 J -41566500.26 -41566500.02 -41566499.76 0.0132 0.0022
 Uranus -118515-02-19 14:10 J -41566130.96 -41566130.91 -41566130.81 0.0132 0.0126

Jupiter -118514-02-02 16:34 J -41565783.00 -41565782.81 -41565782.62 0.0519 0.0303
 Jupiter -118502-02-07 14:53 J -41561395.10 -41561394.88 -41561394.66 0.0520 0.0179
 Saturn -118489-07-02 08:24 J -41556501.36 -41556501.15 -41556500.94 0.0287 0.0144
 Jupiter -118485-07-24 22:34 J -41555017.76 -41555017.56 -41555017.36 0.0507 0.0260
 Jupiter -118473-07-29 15:08 J -41550630.09 -41550629.87 -41550629.65 0.0506 0.0183
 Uranus -118473-08-04 12:15 J -41550624.23 -41550623.99 -41550623.75 0.0146 0.0056
 Saturn -118472-01-13 21:51 J -41550461.83 -41550461.59 -41550461.35 0.0277 0.0075
 Uranus -118472-08-09 17:17 J -41550253.97 -41550253.78 -41550253.57 0.0147 0.0092
 Saturn -118443-01-08 08:24 J -41539875.16 -41539875.15 -41539875.13 0.0274 0.0273
 Neptune -118439-06-25 19:12 J -41538245.71 -41538245.70 -41538245.63 0.0088 0.0088
 Pluto -118439-11-30 07:27 J -41538088.45 -41538088.19 -41538087.91 0.0063 0.0006
 Neptune -118438-06-28 04:48 J -41537878.47 -41537878.30 -41537878.10 0.0089 0.0060
 Neptune -118437-06-29 13:56 J -41537511.13 -41537510.92 -41537510.66 0.0089 0.0033
 Neptune -118436-07-02 00:00 J -41537143.75 -41537143.50 -41537143.25 0.0089 0.0004
 Neptune -118435-07-04 09:36 J -41536776.34 -41536776.10 -41536775.85 0.0089 0.0024
 Neptune -118434-07-06 19:12 J -41536408.90 -41536408.70 -41536408.49 0.0089 0.0052
 Uranus -118433-02-12 17:46 J -41536187.94 -41536187.76 -41536187.54 0.0133 0.0081
 Neptune -118433-07-08 04:48 J -41536041.39 -41536041.30 -41536041.17 0.0089 0.0080
 Uranus -118432-02-15 22:20 J -41535818.81 -41535818.57 -41535818.32 0.0132 0.0026
 Jupiter -118431-02-02 05:03 J -41535467.46 -41535467.29 -41535467.11 0.0518 0.0348
 Uranus -118431-02-20 01:27 J -41535449.47 -41535449.44 -41535449.39 0.0132 0.0130
 Saturn -118430-07-04 01:12 J -41534950.68 -41534950.45 -41534950.22 0.0287 0.0091
 Jupiter -118419-02-07 00:00 J -41531079.72 -41531079.50 -41531079.27 0.0519 0.0119
 Saturn -118413-01-15 19:41 J -41528910.90 -41528910.68 -41528910.47 0.0277 0.0138
 Jupiter -118402-07-25 10:48 J -41524702.23 -41524702.05 -41524701.86 0.0507 0.0306
 Jupiter -118390-07-30 02:39 J -41520314.62 -41520314.39 -41520314.17 0.0506 0.0134
 Uranus -118389-08-05 01:27 J -41519942.68 -41519942.44 -41519942.20 0.0146 0.0047
 Uranus -118388-08-10 06:15 J -41519572.40 -41519572.24 -41519572.03 0.0147 0.0101
 Mars -118384-01-04 06:00 J -41518329.29 -41518329.25 -41518329.21 0.1801 0.1755
 Saturn -118384-01-09 07:41 J -41518324.34 -41518324.18 -41518324.01 0.0274 0.0207

Saturn -118371-07-04 20:53 J -41513399.87 -41513399.63 -41513399.39 0.0287 0.0031
 Neptune -118356-01-04 16:20 J -41508101.96 -41508101.82 -41508101.62 0.0089 0.0068
 Neptune -118355-01-07 06:15 J -41507734.46 -41507734.24 -41507733.99 0.0089 0.0039
 Neptune -118354-01-09 20:10 J -41507366.92 -41507366.66 -41507366.39 0.0089 0.0009
 Saturn -118354-01-16 20:39 J -41507359.79 -41507359.64 -41507359.47 0.0277 0.0209
 Neptune -118353-01-12 09:51 J -41506999.34 -41506999.09 -41506998.83 0.0089 0.0020
 Neptune -118352-01-13 22:48 J -41506631.75 -41506631.55 -41506631.32 0.0089 0.0049
 Neptune -118351-01-16 11:46 J -41506264.11 -41506264.01 -41506263.86 0.0089 0.0078
 Uranus -118349-02-13 06:00 J -41505506.45 -41505506.25 -41505506.03 0.0133 0.0074
 Pluto -118349-05-27 13:12 J -41505402.17 -41505401.95 -41505401.72 0.0081 0.0034
 Jupiter -118348-02-01 11:32 J -41505152.15 -41505152.02 -41505151.88 0.0518 0.0418
 Uranus -118348-02-16 10:34 J -41505137.30 -41505137.06 -41505136.81 0.0132 0.0033
 Jupiter -118336-02-06 05:46 J -41500764.50 -41500764.26 -41500764.03 0.0520 0.0046
 Saturn -118325-01-11 11:03 J -41496773.25 -41496773.04 -41496772.81 0.0274 0.0132
 Jupiter -118319-07-24 18:44 J -41494386.87 -41494386.72 -41494386.55 0.0507 0.0366
 Mars -118312-06-27 06:44 J -41491857.34 -41491857.22 -41491857.11 0.1710 0.1301
 Saturn -118312-07-05 19:56 J -41491848.91 -41491848.67 -41491848.43 0.0287 0.0038
 Jupiter -118307-07-29 08:53 J -41489999.36 -41489999.13 -41489998.90 0.0506 0.0068
 Mars -118305-01-08 08:24 J -41489471.32 -41489471.15 -41489470.98 0.1797 0.0982
 Uranus -118305-08-05 14:10 J -41489261.15 -41489260.91 -41489260.66 0.0146 0.0038
 Uranus -118304-08-10 19:27 J -41488890.85 -41488890.69 -41488890.51 0.0147 0.0109
 Jupiter -118295-08-03 00:15 J -41485611.49 -41485611.49 -41485611.49 0.0505 0.0505
 Neptune -118274-06-27 15:36 J -41477977.99 -41477977.85 -41477977.70 0.0088 0.0072
 Neptune -118273-06-29 00:29 J -41477610.68 -41477610.48 -41477610.24 0.0088 0.0045
 Neptune -118272-07-01 10:05 J -41477243.32 -41477243.08 -41477242.82 0.0089 0.0017
 Neptune -118271-07-03 19:41 J -41476875.93 -41476875.68 -41476875.42 0.0089 0.0012
 Neptune -118270-07-06 05:03 J -41476508.50 -41476508.29 -41476508.05 0.0089 0.0040
 Neptune -118269-07-07 14:53 J -41476141.03 -41476140.88 -41476140.70 0.0089 0.0068
 Saturn -118266-01-12 18:44 J -41475221.96 -41475221.72 -41475221.47 0.0275 0.0047
 Jupiter -118265-02-01 14:24 J -41474836.95 -41474836.90 -41474836.84 0.0518 0.0501

Uranus -118265-02-13 19:56 J -41474824.88 -41474824.67 -41474824.44 0.0133 0.0066
 Uranus -118264-02-17 00:15 J -41474455.72 -41474455.49 -41474455.24 0.0132 0.0040
 Jupiter -118253-02-06 12:15 J -41470449.22 -41470448.99 -41470448.75 0.0519 0.0023
 Saturn -118253-07-07 00:15 J -41470297.71 -41470297.49 -41470297.27 0.0287 0.0121
 Jupiter -118241-02-11 06:44 J -41466061.34 -41466061.22 -41466061.10 0.0520 0.0443
 Jupiter -118236-07-24 00:00 J -41464071.61 -41464071.50 -41464071.38 0.0508 0.0439
 Mars -118233-06-29 13:12 J -41463000.14 -41462999.95 -41462999.77 0.1713 0.0373
 Saturn -118224-07-01 13:12 J -41459711.07 -41459710.95 -41459710.83 0.0288 0.0250
 Jupiter -118224-07-28 15:51 J -41459684.07 -41459683.84 -41459683.60 0.0506 0.0005
 Uranus -118221-08-06 02:24 J -41458579.64 -41458579.40 -41458579.14 0.0146 0.0031
 Uranus -118220-08-11 07:41 J -41458209.33 -41458209.18 -41458209.02 0.0147 0.0116
 Jupiter -118212-08-02 06:29 J -41455296.34 -41455296.23 -41455296.11 0.0505 0.0439
 Saturn -118207-01-14 06:15 J -41453670.48 -41453670.24 -41453669.99 0.0275 0.0049
 Saturn -118194-07-09 09:22 J -41448746.25 -41448746.11 -41448745.94 0.0286 0.0217
 Neptune -118192-01-03 21:08 J -41448201.70 -41448201.62 -41448201.50 0.0089 0.0082
 Pluto -118192-12-01 03:08 J -41447870.57 -41447870.37 -41447870.13 0.0063 0.0036
 Neptune -118191-01-06 11:03 J -41447834.23 -41447834.04 -41447833.80 0.0089 0.0053
 Pluto -118191-12-02 16:34 J -41447504.00 -41447503.81 -41447503.57 0.0063 0.0039
 Neptune -118190-01-09 01:27 J -41447466.69 -41447466.44 -41447466.18 0.0089 0.0023
 Neptune -118189-01-11 15:08 J -41447099.13 -41447098.87 -41447098.61 0.0089 0.0006
 Neptune -118188-01-13 04:05 J -41446731.55 -41446731.33 -41446731.07 0.0089 0.0036
 Neptune -118187-01-15 17:46 J -41446363.94 -41446363.76 -41446363.58 0.0089 0.0064
 Uranus -118181-02-14 09:36 J -41444143.32 -41444143.10 -41444142.86 0.0133 0.0058
 Uranus -118180-02-17 14:10 J -41443774.14 -41443773.91 -41443773.67 0.0132 0.0048
 Jupiter -118170-02-05 10:48 J -41440134.28 -41440134.05 -41440133.82 0.0519 0.0125
 Saturn -118165-07-03 01:27 J -41438159.64 -41438159.44 -41438159.22 0.0288 0.0145
 Jupiter -118158-02-10 02:39 J -41435746.57 -41435746.39 -41435746.21 0.0520 0.0331
 Saturn -118148-01-15 21:36 J -41432118.79 -41432118.60 -41432118.38 0.0276 0.0155
 Jupiter -118141-07-27 15:22 J -41429369.08 -41429368.86 -41429368.63 0.0506 0.0091
 Uranus -118137-08-06 10:05 J -41427898.32 -41427898.08 -41427897.82 0.0146 0.0030

Uranus -118136-08-11 15:08 J -41427528.00 -41427527.87 -41427527.70 0.0147 0.0118
 Jupiter -118129-08-01 04:05 J -41424981.49 -41424981.33 -41424981.15 0.0506 0.0340
 Saturn -118119-01-10 16:34 J -41421532.00 -41421531.81 -41421531.61 0.0274 0.0169
 Neptune -118110-06-27 00:29 J -41418077.51 -41418077.48 -41418077.38 0.0088 0.0086
 Neptune -118109-06-28 09:51 J -41417710.26 -41417710.09 -41417709.88 0.0088 0.0058
 Neptune -118108-06-30 19:12 J -41417342.93 -41417342.70 -41417342.45 0.0088 0.0030
 Neptune -118107-07-03 04:48 J -41416975.56 -41416975.30 -41416975.05 0.0088 0.0002
 Neptune -118106-07-05 14:10 J -41416608.14 -41416607.91 -41416607.66 0.0089 0.0027
 Saturn -118106-07-05 18:00 J -41416607.99 -41416607.75 -41416607.51 0.0287 0.0030 *
 Neptune -118105-07-06 23:46 J -41416240.69 -41416240.51 -41416240.29 0.0089 0.0055
 Neptune -118104-07-09 09:36 J -41415873.17 -41415873.10 -41415872.99 0.0089 0.0083
 Pluto -118102-05-29 05:17 J -41415184.50 -41415184.28 -41415184.03 0.0081 0.0028
 Uranus -118097-02-14 23:17 J -41413461.75 -41413461.53 -41413461.29 0.0133 0.0051
 Uranus -118096-02-18 03:36 J -41413092.58 -41413092.35 -41413092.12 0.0132 0.0055
 Saturn -118089-01-18 14:24 J -41410566.95 -41410566.90 -41410566.81 0.0277 0.0265
 Jupiter -118087-02-04 06:00 J -41409819.45 -41409819.25 -41409819.04 0.0519 0.0239
 Jupiter -118075-02-09 03:51 J -41405431.54 -41405431.34 -41405431.13 0.0520 0.0241
 Saturn -118060-01-12 09:36 J -41399980.34 -41399980.10 -41399979.85 0.0275 0.0060
 Jupiter -118058-07-27 13:56 J -41399054.14 -41399053.92 -41399053.71 0.0507 0.0190
 Uranus -118053-08-06 17:32 J -41397217.01 -41397216.77 -41397216.51 0.0146 0.0029
 Uranus -118052-08-11 22:20 J -41396846.71 -41396846.57 -41396846.40 0.0147 0.0118
 Saturn -118047-07-07 12:29 J -41395056.21 -41395055.98 -41395055.75 0.0286 0.0091
 Jupiter -118046-08-01 05:32 J -41394666.47 -41394666.27 -41394666.07 0.0506 0.0252
 Mars -118028-06-28 04:34 J -41388125.46 -41388125.31 -41388125.16 0.1706 0.0985
 Neptune -118027-01-05 15:08 J -41387934.03 -41387933.87 -41387933.69 0.0089 0.0067
 Neptune -118026-01-08 05:03 J -41387566.51 -41387566.29 -41387566.03 0.0089 0.0038
 Neptune -118025-01-10 19:27 J -41387198.95 -41387198.69 -41387198.43 0.0089 0.0008
 Neptune -118024-01-12 08:39 J -41386831.38 -41386831.14 -41386830.87 0.0089 0.0022
 Neptune -118023-01-14 21:51 J -41386463.78 -41386463.59 -41386463.35 0.0089 0.0051
 Neptune -118022-01-17 11:03 J -41386096.12 -41386096.04 -41386095.90 0.0089 0.0080

Mars -118021-01-08 06:00 J -41385740.43 -41385740.25 -41385740.06 0.1803 0.0639

Saturn -118018-07-02 05:46 J -41384469.35 -41384469.26 -41384469.16 0.0289 0.0262

Uranus -118013-02-15 11:17 J -41382780.26 -41382780.03 -41382779.79 0.0133 0.0045

Uranus -118012-02-18 15:22 J -41382411.07 -41382410.86 -41382410.62 0.0132 0.0061

Jupiter -118004-02-03 05:46 J -41379504.43 -41379504.26 -41379504.08 0.0518 0.0337

Saturn -118001-01-15 01:12 J -41378428.69 -41378428.45 -41378428.20 0.0275 0.0047

118TH MILLENNIUM BCE

This is a list of transits of Earth in the 118th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-117992-02-08 00:29 J	-41375116.71	-41375116.48	-41375116.26	0.0519	0.0129		
Saturn	-117988-07-09 06:29 J	-41373504.39	-41373504.23	-41373504.07	0.0286	0.0210		
Jupiter	-117975-07-26 16:05 J	-41368739.02	-41368738.83	-41368738.63	0.0508	0.0274		
Uranus	-117969-08-07 01:56 J	-41366535.67	-41366535.42	-41366535.16	0.0146	0.0026		
Uranus	-117968-08-12 06:44 J	-41366165.36	-41366165.22	-41366165.06	0.0147	0.0120		
Jupiter	-117963-07-31 02:24 J	-41364351.62	-41364351.40	-41364351.18	0.0506	0.0145		
Saturn	-117959-07-03 23:46 J	-41362917.71	-41362917.51	-41362917.29	0.0288	0.0141		
Mars	-117949-06-30 10:48 J	-41359268.22	-41359268.05	-41359267.88	0.1708	0.0654		
Neptune	-117945-06-27 18:58 J	-41357809.84	-41357809.71	-41357809.54	0.0088	0.0071		
Neptune	-117944-06-30 04:05 J	-41357442.55	-41357442.33	-41357442.11	0.0088	0.0043		
Pluto	-117944-12-03 08:39 J	-41357286.41	-41357286.14	-41357285.87	0.0063	0.0004		

Neptune -117943-07-02 12:58 J -41357075.20 -41357074.96 -41357074.70 0.0089 0.0015
 Saturn -117942-01-16 14:10 J -41356877.11 -41356876.91 -41356876.69 0.0276 0.0148
 Neptune -117942-07-04 22:34 J -41356707.81 -41356707.56 -41356707.31 0.0089 0.0013
 Neptune -117941-07-06 07:56 J -41356340.39 -41356340.17 -41356339.94 0.0089 0.0041
 Neptune -117940-07-08 17:32 J -41355972.92 -41355972.77 -41355972.61 0.0089 0.0069
 Uranus -117929-02-15 23:32 J -41352098.75 -41352098.52 -41352098.27 0.0133 0.0039
 Uranus -117928-02-19 03:51 J -41351729.55 -41351729.34 -41351729.12 0.0132 0.0067
 Jupiter -117921-02-03 01:27 J -41349189.55 -41349189.44 -41349189.32 0.0517 0.0451
 Saturn -117913-01-11 06:58 J -41346290.38 -41346290.21 -41346290.01 0.0274 0.0180
 Jupiter -117909-02-07 22:05 J -41344801.81 -41344801.58 -41344801.35 0.0519 0.0024
 Saturn -117900-07-05 14:10 J -41341366.15 -41341365.91 -41341365.67 0.0288 0.0029
 Jupiter -117897-02-12 20:10 J -41340413.71 -41340413.66 -41340413.60 0.0520 0.0503
 Jupiter -117892-07-25 14:10 J -41338424.06 -41338423.91 -41338423.76 0.0507 0.0378
 Uranus -117885-08-07 16:20 J -41335854.07 -41335853.82 -41335853.56 0.0146 0.0016
 Uranus -117884-08-12 20:39 J -41335483.74 -41335483.64 -41335483.50 0.0147 0.0130
 Saturn -117883-01-17 22:34 J -41335325.68 -41335325.56 -41335325.43 0.0276 0.0237
 Jupiter -117880-07-30 03:22 J -41334036.59 -41334036.36 -41334036.13 0.0507 0.0056
 Jupiter -117868-08-03 18:58 J -41329648.74 -41329648.71 -41329648.66 0.0506 0.0498
 Neptune -117863-01-04 16:20 J -41328033.88 -41328033.82 -41328033.70 0.0089 0.0083
 Neptune -117862-01-07 07:27 J -41327666.40 -41327666.19 -41327665.98 0.0089 0.0053
 Neptune -117861-01-09 21:08 J -41327298.86 -41327298.62 -41327298.35 0.0089 0.0024
 Neptune -117860-01-11 11:17 J -41326931.29 -41326931.03 -41326930.76 0.0089 0.0006
 Neptune -117859-01-14 00:58 J -41326563.69 -41326563.46 -41326563.21 0.0089 0.0036
 Neptune -117858-01-16 14:10 J -41326196.07 -41326195.91 -41326195.71 0.0089 0.0065
 Saturn -117854-01-12 13:27 J -41324739.17 -41324738.94 -41324738.70 0.0274 0.0095
 Pluto -117854-05-31 18:58 J -41324599.90 -41324599.71 -41324599.48 0.0081 0.0043
 Uranus -117845-02-16 12:58 J -41321417.19 -41321416.96 -41321416.70 0.0133 0.0031
 Uranus -117844-02-19 17:17 J -41321047.97 -41321047.78 -41321047.56 0.0133 0.0075
 Saturn -117841-07-06 23:32 J -41319814.75 -41319814.52 -41319814.28 0.0288 0.0069
 Jupiter -117826-02-07 04:34 J -41314486.54 -41314486.31 -41314486.07 0.0519 0.0051

Jupiter -117814-02-12 00:15 J -41310098.62 -41310098.49 -41310098.35 0.0519 0.0423
 Jupiter -117809-07-24 19:27 J -41308108.79 -41308108.69 -41308108.58 0.0508 0.0451
 Uranus -117801-08-08 06:44 J -41305172.47 -41305172.22 -41305171.96 0.0146 0.0006
 Uranus -117800-08-13 11:17 J -41304802.09 -41304802.03 -41304801.94 0.0147 0.0140
 Jupiter -117797-07-29 11:03 J -41303721.27 -41303721.04 -41303720.81 0.0507 0.0009
 Saturn -117795-01-13 14:53 J -41303188.13 -41303187.88 -41303187.63 0.0274 0.0023
 Jupiter -117785-08-02 22:48 J -41299333.67 -41299333.55 -41299333.41 0.0506 0.0416
 Saturn -117782-07-09 04:05 J -41298263.52 -41298263.33 -41298263.12 0.0287 0.0154
 Neptune -117781-06-27 02:53 J -41297909.42 -41297909.38 -41297909.28 0.0088 0.0085
 Neptune -117780-06-29 12:00 J -41297542.18 -41297542.00 -41297541.80 0.0088 0.0057
 Neptune -117779-07-01 20:53 J -41297174.85 -41297174.63 -41297174.38 0.0088 0.0030
 Neptune -117778-07-04 06:15 J -41296807.49 -41296807.24 -41296806.98 0.0089 0.0002
 Neptune -117777-07-05 15:36 J -41296440.09 -41296439.85 -41296439.61 0.0089 0.0027
 Neptune -117776-07-08 00:29 J -41296072.66 -41296072.48 -41296072.26 0.0089 0.0056
 Neptune -117775-07-10 10:05 J -41295705.14 -41295705.08 -41295704.97 0.0089 0.0084
 Uranus -117762-02-12 23:03 J -41291104.60 -41291104.54 -41291104.45 0.0133 0.0128
 Uranus -117761-02-17 04:48 J -41290735.55 -41290735.30 -41290735.05 0.0133 0.0021
 Uranus -117760-02-20 08:53 J -41290366.31 -41290366.13 -41290365.92 0.0132 0.0085
 Saturn -117753-07-02 10:20 J -41287677.20 -41287677.07 -41287676.92 0.0290 0.0233
 Mars -117744-06-29 03:51 J -41284393.51 -41284393.34 -41284393.17 0.1701 0.0649
 Jupiter -117743-02-06 09:22 J -41284171.33 -41284171.11 -41284170.88 0.0518 0.0128
 Mars -117737-01-08 01:56 J -41282009.62 -41282009.42 -41282009.22 0.1809 0.0226
 Saturn -117736-01-14 12:44 J -41281637.22 -41281636.97 -41281636.72 0.0274 0.0041
 Jupiter -117731-02-11 06:44 J -41279783.39 -41279783.22 -41279783.05 0.0519 0.0350
 Saturn -117723-07-10 03:22 J -41276712.50 -41276712.36 -41276712.20 0.0287 0.0224
 Uranus -117718-08-04 19:41 J -41274860.75 -41274860.68 -41274860.56 0.0146 0.0136
 Uranus -117717-08-08 23:32 J -41274490.77 -41274490.52 -41274490.26 0.0146 0.0007
 Jupiter -117714-07-29 18:15 J -41273405.97 -41273405.74 -41273405.51 0.0507 0.0078
 Jupiter -117702-08-03 07:41 J -41269018.34 -41269018.18 -41269018.01 0.0506 0.0358
 Neptune -117698-01-06 08:24 J -41267766.31 -41267766.15 -41267765.98 0.0089 0.0069

Neptune -117697-01-08 22:20 J -41267398.79 -41267398.57 -41267398.31 0.0089 0.0040
 Pluto -117697-12-03 20:53 J -41267068.76 -41267068.63 -41267068.44 0.0063 0.0050
 Neptune -117696-01-10 12:58 J -41267031.22 -41267030.96 -41267030.69 0.0089 0.0010
 Pluto -117696-12-05 10:48 J -41266702.27 -41266702.05 -41266701.77 0.0063 0.0025
 Neptune -117695-01-13 02:53 J -41266663.63 -41266663.38 -41266663.12 0.0089 0.0020
 Neptune -117694-01-15 16:20 J -41266296.02 -41266295.82 -41266295.58 0.0089 0.0050
 Saturn -117694-07-04 07:41 J -41266126.37 -41266126.18 -41266125.98 0.0290 0.0167
 Neptune -117693-01-18 05:32 J -41265928.36 -41265928.27 -41265928.12 0.0089 0.0079
 Uranus -117678-02-13 14:53 J -41260422.97 -41260422.88 -41260422.73 0.0133 0.0118
 Saturn -117677-01-16 07:56 J -41260086.40 -41260086.17 -41260085.94 0.0274 0.0098
 Uranus -117677-02-17 20:53 J -41260053.88 -41260053.63 -41260053.38 0.0133 0.0010
 Uranus -117676-02-21 00:44 J -41259684.63 -41259684.47 -41259684.28 0.0132 0.0095
 Mars -117665-07-01 08:53 J -41255536.28 -41255536.13 -41255535.97 0.1704 0.0939
 Saturn -117664-07-10 23:17 J -41255161.56 -41255161.53 -41255161.50 0.0287 0.0285
 Jupiter -117660-02-05 20:10 J -41253855.88 -41253855.66 -41253855.44 0.0519 0.0182
 Saturn -117648-01-09 18:00 J -41249499.85 -41249499.75 -41249499.62 0.0271 0.0242
 Jupiter -117648-02-10 19:12 J -41249467.89 -41249467.70 -41249467.52 0.0520 0.0303
 Saturn -117635-07-05 01:41 J -41244575.64 -41244575.43 -41244575.20 0.0290 0.0110
 Uranus -117634-08-05 08:24 J -41244179.25 -41244179.15 -41244179.02 0.0146 0.0128
 Uranus -117633-08-09 12:00 J -41243809.25 -41243809.00 -41243808.75 0.0146 0.0015
 Jupiter -117631-07-29 05:03 J -41243090.52 -41243090.29 -41243090.06 0.0507 0.0128
 Jupiter -117619-08-02 21:08 J -41238702.80 -41238702.62 -41238702.44 0.0506 0.0315
 Saturn -117618-01-17 01:41 J -41238535.64 -41238535.43 -41238535.22 0.0274 0.0150
 Neptune -117616-06-28 18:58 J -41237641.83 -41237641.71 -41237641.54 0.0088 0.0072
 Neptune -117615-07-01 03:51 J -41237274.54 -41237274.34 -41237274.10 0.0088 0.0044
 Neptune -117614-07-03 12:58 J -41236907.20 -41236906.96 -41236906.70 0.0089 0.0016
 Neptune -117613-07-04 22:05 J -41236539.82 -41236539.58 -41236539.32 0.0089 0.0013
 Neptune -117612-07-07 07:12 J -41236172.41 -41236172.20 -41236171.96 0.0089 0.0041
 Neptune -117611-07-09 16:34 J -41235804.95 -41235804.81 -41235804.64 0.0089 0.0069
 Pluto -117607-06-01 01:41 J -41234382.62 -41234382.43 -41234382.23 0.0081 0.0051

Uranus -117594-02-14 07:27 J -41229741.33 -41229741.19 -41229741.03 0.0133 0.0106
 Uranus -117593-02-18 13:12 J -41229372.21 -41229371.95 -41229371.70 0.0133 0.0002
 Uranus -117592-02-21 17:03 J -41229002.93 -41229002.79 -41229002.63 0.0132 0.0105
 Saturn -117589-01-11 12:29 J -41227949.15 -41227948.98 -41227948.79 0.0271 0.0188
 Jupiter -117577-02-06 08:53 J -41223540.34 -41223540.13 -41223539.92 0.0518 0.0225
 Saturn -117576-07-05 18:44 J -41223024.95 -41223024.72 -41223024.48 0.0290 0.0057
 Jupiter -117565-02-11 05:03 J -41219152.49 -41219152.29 -41219152.08 0.0519 0.0246
 Saturn -117559-01-17 20:39 J -41216984.80 -41216984.64 -41216984.47 0.0274 0.0205
 Uranus -117550-08-05 19:12 J -41213497.81 -41213497.70 -41213497.54 0.0146 0.0123
 Uranus -117549-08-09 23:17 J -41213127.78 -41213127.53 -41213127.28 0.0146 0.0020
 Jupiter -117548-07-28 18:15 J -41212774.96 -41212774.74 -41212774.53 0.0507 0.0171
 Jupiter -117536-08-02 09:22 J -41208387.31 -41208387.11 -41208386.91 0.0506 0.0269
 Neptune -117534-01-05 08:10 J -41207866.20 -41207866.16 -41207866.07 0.0089 0.0086
 Neptune -117533-01-07 22:48 J -41207498.73 -41207498.55 -41207498.33 0.0089 0.0056
 Neptune -117532-01-09 13:27 J -41207131.19 -41207130.94 -41207130.68 0.0089 0.0026
 Neptune -117531-01-12 03:36 J -41206763.61 -41206763.35 -41206763.08 0.0089 0.0004
 Saturn -117530-01-12 08:24 J -41206398.36 -41206398.15 -41206397.92 0.0271 0.0131
 Neptune -117530-01-14 17:03 J -41206396.01 -41206395.79 -41206395.52 0.0089 0.0034
 Neptune -117529-01-17 06:58 J -41206028.38 -41206028.21 -41206028.01 0.0089 0.0063
 Saturn -117517-07-06 11:17 J -41201474.27 -41201474.03 -41201473.79 0.0290 0.0005
 Uranus -117510-02-14 22:34 J -41199059.73 -41199059.56 -41199059.39 0.0133 0.0098
 Uranus -117509-02-19 04:05 J -41198690.58 -41198690.33 -41198690.08 0.0133 0.0009
 Uranus -117508-02-22 07:41 J -41198321.28 -41198321.18 -41198321.02 0.0132 0.0114
 Saturn -117500-01-18 17:03 J -41195433.84 -41195433.79 -41195433.71 0.0274 0.0264
 Jupiter -117494-02-05 18:00 J -41193224.94 -41193224.75 -41193224.55 0.0518 0.0285
 Jupiter -117482-02-10 13:27 J -41188837.16 -41188836.94 -41188836.72 0.0520 0.0186
 Saturn -117471-01-13 07:27 J -41184847.43 -41184847.19 -41184846.95 0.0271 0.0069
 Uranus -117466-08-06 03:36 J -41182816.48 -41182816.35 -41182816.20 0.0146 0.0121
 Jupiter -117465-07-28 05:03 J -41182459.49 -41182459.29 -41182459.07 0.0507 0.0219
 Uranus -117465-08-10 06:58 J -41182446.45 -41182446.21 -41182445.95 0.0146 0.0022

Mars -117460-06-30 03:22 J -41180661.54 -41180661.36 -41180661.17 0.1697 0.0311
 Saturn -117458-07-08 06:15 J -41179923.48 -41179923.24 -41179923.00 0.0290 0.0053
 Mars -117453-01-07 20:24 J -41178278.85 -41178278.65 -41178278.45 0.1815 0.0234
 Jupiter -117453-08-01 18:58 J -41178071.92 -41178071.71 -41178071.50 0.0506 0.0216
 Neptune -117452-06-28 02:10 J -41177741.45 -41177741.41 -41177741.34 0.0088 0.0086
 Neptune -117451-06-30 11:17 J -41177374.22 -41177374.03 -41177373.84 0.0088 0.0058
 Neptune -117450-07-02 19:27 J -41177006.91 -41177006.69 -41177006.43 0.0089 0.0031
 Neptune -117449-07-04 04:48 J -41176639.55 -41176639.30 -41176639.04 0.0089 0.0002
 Pluto -117449-12-05 19:27 J -41176484.89 -41176484.69 -41176484.43 0.0063 0.0033
 Neptune -117448-07-06 13:41 J -41176272.15 -41176271.93 -41176271.67 0.0089 0.0027
 Pluto -117448-12-07 09:22 J -41176118.29 -41176118.11 -41176117.89 0.0063 0.0042
 Neptune -117447-07-08 22:48 J -41175904.73 -41175904.55 -41175904.33 0.0089 0.0055
 Neptune -117446-07-11 07:56 J -41175537.23 -41175537.17 -41175537.05 0.0089 0.0083
 Uranus -117426-02-15 11:17 J -41168378.20 -41168378.03 -41168377.83 0.0133 0.0091
 Uranus -117425-02-19 17:17 J -41168009.02 -41168008.78 -41168008.52 0.0133 0.0016
 Uranus -117424-02-22 21:22 J -41167639.69 -41167639.61 -41167639.49 0.0132 0.0121
 Saturn -117412-01-14 09:36 J -41163296.35 -41163296.10 -41163295.85 0.0272 0.0004
 Jupiter -117411-02-05 00:44 J -41162909.64 -41162909.47 -41162909.30 0.0519 0.0352
 Jupiter -117399-02-09 23:32 J -41158521.74 -41158521.52 -41158521.29 0.0519 0.0132
 Saturn -117399-07-09 04:05 J -41158372.55 -41158372.33 -41158372.11 0.0290 0.0118
 Jupiter -117382-07-28 14:10 J -41152144.10 -41152143.91 -41152143.71 0.0507 0.0277
 Uranus -117382-08-06 17:17 J -41152134.93 -41152134.78 -41152134.61 0.0146 0.0112
 Mars -117381-07-02 07:56 J -41151804.29 -41151804.17 -41151804.04 0.1699 0.1236
 Uranus -117381-08-10 20:39 J -41151764.89 -41151764.64 -41151764.39 0.0146 0.0030
 Saturn -117370-07-03 11:32 J -41147786.11 -41147786.02 -41147785.92 0.0292 0.0267
 Jupiter -117370-08-02 05:32 J -41147756.49 -41147756.27 -41147756.05 0.0506 0.0165
 Neptune -117369-01-06 23:32 J -41147598.67 -41147598.52 -41147598.37 0.0089 0.0072
 Neptune -117368-01-08 13:27 J -41147231.15 -41147230.94 -41147230.69 0.0089 0.0043
 Neptune -117367-01-11 03:51 J -41146863.59 -41146863.34 -41146863.07 0.0089 0.0013
 Neptune -117366-01-13 18:00 J -41146496.01 -41146495.75 -41146495.49 0.0089 0.0017

Neptune -117365-01-16 07:41 J -41146128.39 -41146128.18 -41146127.94 0.0089 0.0047
 Neptune -117364-01-17 21:36 J -41145760.73 -41145760.60 -41145760.46 0.0089 0.0076
 Pluto -117359-06-03 07:12 J -41143798.44 -41143798.20 -41143797.95 0.0081 0.0010
 Saturn -117353-01-16 15:36 J -41141745.08 -41141744.85 -41141744.60 0.0272 0.0081
 Uranus -117342-02-16 00:44 J -41137696.66 -41137696.47 -41137696.26 0.0133 0.0083
 Uranus -117341-02-20 06:44 J -41137327.46 -41137327.22 -41137326.96 0.0133 0.0024
 Uranus -117340-02-23 11:32 J -41136958.08 -41136958.02 -41136957.96 0.0133 0.0128
 Saturn -117340-07-10 06:15 J -41136821.42 -41136821.24 -41136821.06 0.0290 0.0194
 Jupiter -117328-02-04 05:32 J -41132594.39 -41132594.27 -41132594.13 0.0518 0.0427
 Saturn -117324-01-10 09:22 J -41131158.22 -41131158.11 -41131157.97 0.0271 0.0234
 Jupiter -117316-02-09 01:56 J -41128206.66 -41128206.42 -41128206.19 0.0519 0.0045
 Saturn -117311-07-04 16:20 J -41126234.99 -41126234.82 -41126234.62 0.0291 0.0183
 Jupiter -117304-02-13 18:44 J -41123818.76 -41123818.72 -41123818.66 0.0521 0.0506
 Jupiter -117299-07-27 23:03 J -41121828.72 -41121828.54 -41121828.37 0.0507 0.0333
 Uranus -117298-08-07 07:41 J -41121453.34 -41121453.18 -41121452.98 0.0146 0.0102
 Uranus -117297-08-11 10:48 J -41121083.28 -41121083.05 -41121082.79 0.0146 0.0040
 Saturn -117294-01-18 01:27 J -41120193.63 -41120193.44 -41120193.24 0.0272 0.0170
 Neptune -117287-06-29 16:48 J -41117473.92 -41117473.80 -41117473.65 0.0088 0.0074
 Jupiter -117287-08-01 09:36 J -41117441.33 -41117441.10 -41117440.87 0.0506 0.0089
 Neptune -117286-07-02 01:27 J -41117106.64 -41117106.44 -41117106.21 0.0088 0.0046
 Neptune -117285-07-03 10:34 J -41116739.30 -41116739.06 -41116738.80 0.0089 0.0018
 Neptune -117284-07-05 19:41 J -41116371.93 -41116371.68 -41116371.43 0.0089 0.0011
 Neptune -117283-07-08 04:20 J -41116004.52 -41116004.32 -41116004.07 0.0089 0.0040
 Neptune -117282-07-10 13:27 J -41115637.07 -41115636.94 -41115636.75 0.0089 0.0068
 Saturn -117281-07-11 13:56 J -41115269.96 -41115269.92 -41115269.88 0.0289 0.0285
 Saturn -117265-01-12 20:53 J -41109606.83 -41109606.63 -41109606.41 0.0271 0.0142
 Uranus -117258-02-16 15:22 J -41107015.06 -41107014.86 -41107014.63 0.0133 0.0074
 Uranus -117257-02-20 21:51 J -41106645.84 -41106645.59 -41106645.35 0.0133 0.0033
 Mars -117255-06-28 22:34 J -41105786.63 -41105786.56 -41105786.47 0.1691 0.1508
 Saturn -117252-07-06 02:53 J -41104683.61 -41104683.38 -41104683.15 0.0291 0.0084

Saturn -117235-01-19 15:08 J -41098641.92 -41098641.87 -41098641.82 0.0273 0.0267
 Jupiter -117233-02-08 23:03 J -41097891.77 -41097891.54 -41097891.30 0.0519 0.0059
 Jupiter -117221-02-13 21:51 J -41093503.72 -41093503.59 -41093503.45 0.0520 0.0424
 Jupiter -117216-07-26 22:05 J -41091513.70 -41091513.58 -41091513.46 0.0507 0.0430
 Uranus -117214-08-08 01:41 J -41090771.62 -41090771.43 -41090771.21 0.0146 0.0087
 Uranus -117213-08-12 04:48 J -41090401.52 -41090401.30 -41090401.05 0.0146 0.0055
 Saturn -117206-01-14 10:48 J -41088055.29 -41088055.05 -41088054.80 0.0272 0.0044
 Neptune -117205-01-05 23:46 J -41087698.51 -41087698.51 -41087698.48 0.0089 0.0089
 Neptune -117204-01-07 13:56 J -41087331.09 -41087330.92 -41087330.70 0.0089 0.0059
 Jupiter -117204-07-31 10:34 J -41087126.30 -41087126.06 -41087125.83 0.0507 0.0007
 Neptune -117203-01-10 04:34 J -41086963.55 -41086963.31 -41086963.05 0.0089 0.0029
 Neptune -117202-01-12 18:58 J -41086595.97 -41086595.71 -41086595.44 0.0089 0.0002
 Neptune -117201-01-15 08:39 J -41086228.37 -41086228.14 -41086227.88 0.0089 0.0031
 Pluto -117201-12-07 16:20 J -41085901.07 -41085900.82 -41085900.56 0.0063 0.0020
 Neptune -117200-01-16 22:20 J -41085860.74 -41085860.57 -41085860.35 0.0089 0.0061
 Pluto -117200-12-09 06:15 J -41085534.38 -41085534.24 -41085534.10 0.0064 0.0054
 Saturn -117193-07-07 17:46 J -41083132.00 -41083131.76 -41083131.52 0.0290 0.0027
 Jupiter -117192-08-05 01:12 J -41082738.56 -41082738.45 -41082738.33 0.0506 0.0439
 Mars -117176-07-01 03:08 J -41076929.55 -41076929.37 -41076929.18 0.1693 0.0037
 Uranus -117174-02-17 07:41 J -41076333.39 -41076333.18 -41076332.94 0.0133 0.0063
 Uranus -117173-02-21 13:56 J -41075964.15 -41075963.92 -41075963.67 0.0133 0.0044
 Mars -117169-01-07 12:44 J -41074548.16 -41074547.97 -41074547.79 0.1821 0.0774
 Jupiter -117150-02-07 22:48 J -41067576.77 -41067576.55 -41067576.32 0.0518 0.0157
 Saturn -117147-01-16 02:24 J -41066503.64 -41066503.40 -41066503.15 0.0272 0.0059
 Jupiter -117138-02-12 18:00 J -41063188.94 -41063188.75 -41063188.56 0.0519 0.0311
 Saturn -117134-07-10 11:03 J -41061580.23 -41061580.04 -41061579.82 0.0289 0.0146
 Uranus -117130-08-08 17:32 J -41060089.98 -41060089.77 -41060089.55 0.0146 0.0076
 Uranus -117129-08-12 20:24 J -41059719.87 -41059719.65 -41059719.41 0.0146 0.0065
 Neptune -117122-07-01 07:56 J -41057206.35 -41057206.17 -41057205.99 0.0089 0.0061
 Neptune -117121-07-02 16:34 J -41056839.03 -41056838.81 -41056838.57 0.0089 0.0033

Jupiter -117121-07-30 13:12 J -41056811.18 -41056810.95 -41056810.72 0.0507 0.0083
 Neptune -117120-07-05 01:41 J -41056471.68 -41056471.43 -41056471.18 0.0089 0.0005
 Neptune -117119-07-07 10:34 J -41056104.30 -41056104.06 -41056103.81 0.0089 0.0024
 Saturn -117118-01-11 00:44 J -41055916.56 -41055916.47 -41055916.35 0.0270 0.0244
 Neptune -117118-07-09 19:12 J -41055736.88 -41055736.70 -41055736.47 0.0089 0.0053
 Neptune -117117-07-11 04:34 J -41055369.39 -41055369.31 -41055369.18 0.0089 0.0081
 Pluto -117111-06-05 06:44 J -41053214.45 -41053214.22 -41053213.96 0.0081 0.0014
 Jupiter -117109-08-03 22:48 J -41052423.72 -41052423.55 -41052423.38 0.0506 0.0334
 Saturn -117105-07-04 02:53 J -41050993.53 -41050993.38 -41050993.21 0.0292 0.0211
 Mars -117097-07-03 07:41 J -41048072.25 -41048072.18 -41048072.10 0.1695 0.1546
 Uranus -117090-02-18 00:00 J -41045651.73 -41045651.50 -41045651.26 0.0133 0.0052
 Uranus -117089-02-22 06:00 J -41045282.48 -41045282.25 -41045282.01 0.0133 0.0054
 Saturn -117088-01-17 17:17 J -41044951.97 -41044951.78 -41044951.57 0.0273 0.0161
 Saturn -117075-07-12 06:15 J -41040028.33 -41040028.24 -41040028.15 0.0289 0.0266
 Jupiter -117067-02-06 15:22 J -41037262.05 -41037261.86 -41037261.66 0.0518 0.0282
 Saturn -117059-01-12 15:08 J -41034365.08 -41034364.87 -41034364.65 0.0271 0.0144
 Jupiter -117055-02-11 12:44 J -41032874.19 -41032873.97 -41032873.76 0.0519 0.0194
 Saturn -117046-07-06 22:05 J -41029441.80 -41029441.58 -41029441.35 0.0291 0.0087
 Uranus -117046-08-09 07:41 J -41029408.40 -41029408.18 -41029407.94 0.0146 0.0067
 Uranus -117045-08-13 10:34 J -41029038.27 -41029038.06 -41029037.84 0.0146 0.0075
 Neptune -117040-01-06 14:53 J -41027431.00 -41027430.88 -41027430.73 0.0089 0.0075
 Neptune -117039-01-09 05:32 J -41027063.49 -41027063.27 -41027063.03 0.0089 0.0045
 Neptune -117038-01-11 19:41 J -41026695.93 -41026695.68 -41026695.41 0.0089 0.0016
 Jupiter -117038-07-30 09:22 J -41026496.32 -41026496.11 -41026495.89 0.0507 0.0194
 Neptune -117037-01-14 10:05 J -41026328.34 -41026328.08 -41026327.82 0.0089 0.0015
 Neptune -117036-01-15 23:32 J -41025960.73 -41025960.52 -41025960.27 0.0089 0.0045
 Neptune -117035-01-18 13:27 J -41025593.07 -41025592.94 -41025592.78 0.0089 0.0074
 Saturn -117029-01-20 06:44 J -41023400.30 -41023400.22 -41023400.14 0.0273 0.0259
 Jupiter -117026-08-03 21:08 J -41022108.82 -41022108.62 -41022108.41 0.0506 0.0235
 Uranus -117006-02-18 16:05 J -41014970.07 -41014969.83 -41014969.59 0.0133 0.0042

Uranus -117005-02-22 21:51 J -41014600.80 -41014600.59 -41014600.36 0.0133 0.0064

117TH MILLENNIUM BCE

This is a list of transits of Earth in the 117th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-117000-01-14 02:39 J		-41012813.64	-41012813.39	-41012813.14	0.0271	0.0050	
Saturn	-116987-07-08 15:22 J		-41007890.09	-41007889.86	-41007889.62	0.0291	0.0032	
Jupiter	-116984-02-05 17:17 J		-41006946.93	-41006946.78	-41006946.61	0.0518	0.0372	
Jupiter	-116972-02-10 15:08 J		-41002559.10	-41002558.87	-41002558.64	0.0519	0.0106	
Mars	-116971-06-29 23:32 J		-41002054.65	-41002054.52	-41002054.38	0.1687	0.1140	
Uranus	-116962-08-09 17:17 J		-40998727.00	-40998726.78	-40998726.55	0.0145	0.0063	
Uranus	-116961-08-13 19:41 J		-40998356.89	-40998356.68	-40998356.45	0.0146	0.0078	
Neptune	-116958-06-30 13:27 J		-40997306.04	-40997305.94	-40997305.79	0.0089	0.0077	
Neptune	-116957-07-01 22:20 J		-40996938.76	-40996938.57	-40996938.34	0.0089	0.0049	
Neptune	-116956-07-04 07:12 J		-40996571.43	-40996571.20	-40996570.94	0.0089	0.0021	
Neptune	-116955-07-06 16:34 J		-40996204.06	-40996203.81	-40996203.56	0.0089	0.0008	
Jupiter	-116955-07-29 11:17 J		-40996181.22	-40996181.03	-40996180.83	0.0508	0.0281	
Neptune	-116954-07-09 01:41 J		-40995836.65	-40995836.43	-40995836.20	0.0089	0.0037	
Neptune	-116953-07-10 11:03 J		-40995469.21	-40995469.04	-40995468.87	0.0089	0.0065	
Pluto	-116953-12-09 08:10 J		-40995317.40	-40995317.16	-40995316.88	0.0063	0.0018	
Pluto	-116952-12-10 21:51 J		-40994950.68	-40994950.59	-40994950.44	0.0064	0.0057	

Jupiter -116943-08-03 01:27 J -40991793.65 -40991793.44 -40991793.21 0.0507 0.0157
 Saturn -116941-01-16 10:48 J -40991262.30 -40991262.05 -40991261.80 0.0272 0.0036
 Saturn -116928-07-10 03:51 J -40986338.55 -40986338.34 -40986338.12 0.0290 0.0138
 Uranus -116922-02-19 05:17 J -40984288.52 -40984288.28 -40984288.03 0.0134 0.0035
 Uranus -116921-02-23 11:03 J -40983919.24 -40983919.04 -40983918.81 0.0133 0.0071
 Jupiter -116901-02-05 20:10 J -40976631.76 -40976631.66 -40976631.55 0.0517 0.0455
 Saturn -116899-07-04 12:29 J -40975752.10 -40975751.98 -40975751.83 0.0293 0.0242
 Mars -116892-07-02 03:36 J -40973197.53 -40973197.35 -40973197.17 0.1689 0.0362
 Jupiter -116889-02-10 15:08 J -40972244.10 -40972243.87 -40972243.63 0.0518 0.0010
 Mars -116885-01-07 02:24 J -40970817.53 -40970817.40 -40970817.27 0.1826 0.1409
 Saturn -116882-01-17 15:08 J -40969711.09 -40969710.87 -40969710.63 0.0272 0.0114
 Uranus -116878-08-10 03:08 J -40968045.59 -40968045.37 -40968045.12 0.0145 0.0059
 Jupiter -116877-02-15 12:29 J -40967856.05 -40967855.98 -40967855.89 0.0520 0.0487
 Uranus -116877-08-14 05:17 J -40967675.48 -40967675.28 -40967675.06 0.0146 0.0081
 Neptune -116875-01-08 07:27 J -40967163.36 -40967163.19 -40967162.98 0.0089 0.0061
 Neptune -116874-01-10 22:05 J -40966795.82 -40966795.58 -40966795.32 0.0089 0.0031
 Neptune -116873-01-13 12:29 J -40966428.24 -40966427.98 -40966427.72 0.0089 0.0001
 Neptune -116872-01-15 02:24 J -40966060.65 -40966060.40 -40966060.15 0.0089 0.0029
 Jupiter -116872-07-28 15:08 J -40965866.02 -40965865.87 -40965865.70 0.0508 0.0364
 Neptune -116871-01-17 16:05 J -40965693.01 -40965692.83 -40965692.62 0.0089 0.0059
 Neptune -116870-01-20 06:00 J -40965325.27 -40965325.25 -40965325.22 0.0089 0.0088
 Saturn -116869-07-11 11:32 J -40964787.16 -40964787.02 -40964786.87 0.0290 0.0230
 Pluto -116863-06-07 03:51 J -40962630.57 -40962630.34 -40962630.10 0.0081 0.0026
 Jupiter -116860-08-02 04:48 J -40961478.53 -40961478.30 -40961478.07 0.0506 0.0072
 Saturn -116853-01-12 05:31 J -40959124.42 -40959124.27 -40959124.10 0.0269 0.0206
 Jupiter -116848-08-06 17:17 J -40957090.78 -40957090.78 -40957090.76 0.0506 0.0505
 Saturn -116840-07-05 16:48 J -40954201.00 -40954200.80 -40954200.60 0.0293 0.0158
 Uranus -116838-02-19 17:03 J -40953607.03 -40953606.79 -40953606.53 0.0134 0.0029
 Uranus -116837-02-23 23:03 J -40953237.73 -40953237.54 -40953237.32 0.0133 0.0077
 Saturn -116823-01-18 15:22 J -40948160.04 -40948159.86 -40948159.66 0.0272 0.0181

Mars -116806-01-10 10:34 J -40941959.15 -40941959.06 -40941958.97 0.1822 0.1626
 Jupiter -116806-02-09 23:03 J -40941928.78 -40941928.54 -40941928.31 0.0519 0.0057
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 Neptune -116793-07-01 05:03 J -40937038.44 -40937038.29 -40937038.10 0.0089 0.0064
 Uranus -116793-08-14 17:17 J -40936993.97 -40936993.78 -40936993.56 0.0146 0.0088
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 Neptune -116791-07-05 22:48 J -40936303.80 -40936303.55 -40936303.29 0.0089 0.0007
 Neptune -116790-07-08 07:41 J -40935936.41 -40935936.18 -40935935.93 0.0089 0.0022
 Neptune -116789-07-09 16:48 J -40935569.00 -40935568.80 -40935568.58 0.0089 0.0050
 Jupiter -116789-07-27 23:17 J -40935550.65 -40935550.53 -40935550.40 0.0508 0.0425
 Neptune -116788-07-12 01:41 J -40935201.52 -40935201.43 -40935201.29 0.0089 0.0079
 Saturn -116781-07-06 16:19 J -40932650.04 -40932649.82 -40932649.59 0.0293 0.0087
 Jupiter -116777-08-01 13:27 J -40931163.17 -40931162.94 -40931162.71 0.0507 0.0013
 Jupiter -116765-08-06 04:05 J -40926775.42 -40926775.33 -40926775.22 0.0506 0.0454
 Saturn -116764-01-19 12:43 J -40926609.08 -40926608.97 -40926608.85 0.0272 0.0240
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 Uranus -116754-02-20 04:19 J -40922925.57 -40922925.32 -40922925.07 0.0134 0.0023
 Uranus -116753-02-24 10:34 J -40922556.26 -40922556.06 -40922555.86 0.0133 0.0083
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 Neptune -116711-01-07 09:22 J -40907263.22 -40907263.11 -40907262.95 0.0089 0.0077
 Jupiter -116711-02-14 06:58 J -40907225.37 -40907225.21 -40907225.04 0.0519 0.0367
 Neptune -116710-01-10 00:15 J -40906895.70 -40906895.49 -40906895.25 0.0089 0.0047
 Uranus -116710-08-11 06:58 J -40906682.44 -40906682.21 -40906681.95 0.0145 0.0040
 Neptune -116709-01-12 14:53 J -40906528.13 -40906527.88 -40906527.61 0.0089 0.0017
 Uranus -116709-08-15 08:53 J -40906312.31 -40906312.13 -40906311.94 0.0146 0.0099
 Neptune -116708-01-14 05:31 J -40906160.53 -40906160.27 -40906160.01 0.0089 0.0014

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 Pluto -116705-12-10 21:36 J -40904733.83 -40904733.60 -40904733.33 0.0063 0.0023
 Pluto -116704-12-12 11:17 J -40904367.15 -40904367.03 -40904366.84 0.0064 0.0053
 Jupiter -116694-08-02 01:27 J -40900847.67 -40900847.44 -40900847.21 0.0507 0.0036
 Mars -116687-07-01 01:12 J -40898322.61 -40898322.45 -40898322.29 0.1684 0.0768
 Jupiter -116682-08-06 15:36 J -40896459.98 -40896459.85 -40896459.70 0.0505 0.0405
 Saturn -116676-01-14 20:39 J -40894471.89 -40894471.64 -40894471.39 0.0269 0.0032
 Uranus -116671-02-16 09:36 J -40892613.18 -40892613.10 -40892612.98 0.0134 0.0123
 Uranus -116670-02-20 17:46 J -40892244.01 -40892243.76 -40892243.51 0.0134 0.0015
 Uranus -116669-02-24 23:46 J -40891874.68 -40891874.51 -40891874.31 0.0133 0.0091
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 Jupiter -116640-02-08 19:41 J -40881297.90 -40881297.68 -40881297.46 0.0518 0.0163
 Neptune -116629-06-30 12:58 J -40877138.05 -40877137.96 -40877137.82 0.0089 0.0079
 Jupiter -116628-02-13 16:19 J -40876910.00 -40876909.82 -40876909.63 0.0520 0.0312
 Neptune -116628-07-02 21:36 J -40876770.78 -40876770.60 -40876770.37 0.0089 0.0051
 Neptune -116627-07-05 06:29 J -40876403.47 -40876403.23 -40876402.98 0.0089 0.0022
 Neptune -116626-07-07 15:22 J -40876036.11 -40876035.86 -40876035.61 0.0089 0.0007
 Uranus -116626-08-11 22:48 J -40876000.79 -40876000.55 -40876000.29 0.0145 0.0028
 Neptune -116625-07-08 23:46 J -40875668.72 -40875668.51 -40875668.26 0.0089 0.0036
 Uranus -116625-08-16 00:43 J -40875630.62 -40875630.47 -40875630.30 0.0146 0.0111
 Neptune -116624-07-11 09:07 J -40875301.28 -40875301.12 -40875300.93 0.0089 0.0064
 Saturn -116617-01-16 15:22 J -40872921.11 -40872920.86 -40872920.60 0.0269 0.0021
 Pluto -116615-06-08 18:29 J -40872046.97 -40872046.73 -40872046.49 0.0081 0.0018
 Jupiter -116611-08-01 13:55 J -40870532.15 -40870531.92 -40870531.69 0.0507 0.0079
 Mars -116608-07-03 04:48 J -40869465.47 -40869465.30 -40869465.14 0.1685 0.0706
 Saturn -116604-07-09 19:27 J -40867997.92 -40867997.69 -40867997.46 0.0293 0.0071
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 Uranus -116587-02-16 22:34 J -40861931.67 -40861931.56 -40861931.41 0.0134 0.0116

Uranus -116586-02-21 06:58 J -40861562.47 -40861562.21 -40861561.96 0.0134 0.0008
 Uranus -116585-02-25 13:12 J -40861193.12 -40861192.95 -40861192.77 0.0133 0.0098
 Saturn -116558-01-17 12:15 J -40851370.23 -40851369.99 -40851369.74 0.0269 0.0076
 Jupiter -116557-02-09 04:48 J -40850982.51 -40850982.30 -40850982.08 0.0519 0.0219
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 Neptune -116545-01-11 18:29 J -40846627.96 -40846627.73 -40846627.47 0.0089 0.0032
 Jupiter -116545-02-14 05:03 J -40846594.48 -40846594.29 -40846594.09 0.0520 0.0270
 Saturn -116545-07-10 12:00 J -40846447.21 -40846447.00 -40846446.78 0.0293 0.0122
 Neptune -116544-01-13 09:22 J -40846260.37 -40846260.11 -40846259.84 0.0089 0.0001
 Neptune -116543-01-15 23:46 J -40845892.76 -40845892.51 -40845892.26 0.0089 0.0029
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 Uranus -116541-08-16 15:36 J -40844948.98 -40844948.85 -40844948.70 0.0146 0.0121
 Saturn -116529-01-12 02:39 J -40840783.49 -40840783.39 -40840783.25 0.0268 0.0236
 Jupiter -116528-08-01 01:55 J -40840216.65 -40840216.42 -40840216.20 0.0507 0.0125
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 Saturn -116516-07-04 15:22 J -40835860.94 -40835860.86 -40835860.77 0.0295 0.0273
 Jupiter -116516-08-05 16:19 J -40835828.99 -40835828.82 -40835828.63 0.0506 0.0317
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 Uranus -116502-02-21 21:07 J -40830880.88 -40830880.62 -40830880.37 0.0134 0.0001
 Uranus -116501-02-26 03:22 J -40830511.51 -40830511.36 -40830511.20 0.0133 0.0106
 Saturn -116499-01-18 11:31 J -40829819.22 -40829819.02 -40829818.79 0.0269 0.0139
 Saturn -116486-07-12 08:24 J -40824896.33 -40824896.15 -40824895.96 0.0293 0.0183
 Jupiter -116474-02-08 13:12 J -40820667.14 -40820666.95 -40820666.75 0.0518 0.0280
 Saturn -116470-01-13 04:19 J -40819232.51 -40819232.32 -40819232.12 0.0268 0.0169
 Neptune -116464-07-02 06:15 J -40816870.39 -40816870.24 -40816870.05 0.0089 0.0065
 Neptune -116463-07-04 15:22 J -40816503.09 -40816502.86 -40816502.63 0.0089 0.0036
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 Neptune -116462-07-06 23:46 J -40816135.76 -40816135.51 -40816135.26 0.0089 0.0008
 Neptune -116461-07-08 08:24 J -40815768.39 -40815768.15 -40815767.90 0.0089 0.0021

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 Neptune -116459-07-13 02:10 J -40815033.51 -40815033.41 -40815033.27 0.0089 0.0078
 Uranus -116458-08-13 01:27 J -40814637.69 -40814637.44 -40814637.19 0.0145 0.0011
 Saturn -116457-07-05 13:27 J -40814310.10 -40814309.94 -40814309.77 0.0294 0.0207
 Uranus -116457-08-17 03:22 J -40814267.48 -40814267.36 -40814267.24 0.0146 0.0127
 Pluto -116457-12-12 06:15 J -40814150.44 -40814150.24 -40814150.00 0.0063 0.0037
 Pluto -116456-12-13 20:39 J -40813783.85 -40813783.64 -40813783.41 0.0064 0.0037
 Jupiter -116445-07-31 14:10 J -40809901.13 -40809900.91 -40809900.69 0.0507 0.0167
 Saturn -116440-01-19 14:53 J -40808268.03 -40808267.88 -40808267.72 0.0270 0.0209
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 Saturn -116427-07-13 09:07 J -40803345.24 -40803345.12 -40803345.00 0.0292 0.0254
 Uranus -116419-02-18 01:12 J -40800568.62 -40800568.45 -40800568.28 0.0134 0.0101
 Uranus -116418-02-22 09:07 J -40800199.37 -40800199.12 -40800198.87 0.0134 0.0006
 Uranus -116417-02-26 15:22 J -40799829.99 -40799829.86 -40799829.71 0.0133 0.0112
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 Mars -116403-07-02 04:05 J -40794590.51 -40794590.33 -40794590.15 0.1680 0.0377
 Saturn -116398-07-07 17:03 J -40792759.00 -40792758.79 -40792758.57 0.0294 0.0127
 Jupiter -116391-02-07 12:29 J -40790352.14 -40790351.98 -40790351.81 0.0518 0.0375
 Neptune -116382-01-08 08:10 J -40787095.29 -40787095.16 -40787095.02 0.0089 0.0076
 Neptune -116381-01-10 22:48 J -40786727.76 -40786727.55 -40786727.31 0.0089 0.0046
 Neptune -116380-01-12 13:41 J -40786360.18 -40786359.93 -40786359.66 0.0089 0.0016
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 Neptune -116378-01-17 18:43 J -40785624.94 -40785624.72 -40785624.49 0.0089 0.0045
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 Uranus -116374-08-13 09:36 J -40783956.35 -40783956.10 -40783955.85 0.0145 0.0010
 Uranus -116373-08-17 11:17 J -40783586.14 -40783586.03 -40783585.91 0.0146 0.0128
 Pluto -116367-06-10 05:17 J -40781463.53 -40781463.28 -40781463.03 0.0081 0.0002
 Jupiter -116362-07-31 17:46 J -40779585.96 -40779585.76 -40779585.55 0.0507 0.0246
 Saturn -116352-01-15 18:43 J -40776129.97 -40776129.72 -40776129.47 0.0269 0.0011

Jupiter -116350-08-05 05:31 J -40775198.48 -40775198.27 -40775198.05 0.0506 0.0184
 Saturn -116339-07-09 01:41 J -40771207.67 -40771207.43 -40771207.19 0.0293 0.0033
 Uranus -116335-02-18 11:46 J -40769887.18 -40769887.01 -40769886.82 0.0134 0.0096
 Uranus -116334-02-22 20:10 J -40769517.92 -40769517.66 -40769517.41 0.0134 0.0011
 Uranus -116333-02-27 02:10 J -40769148.51 -40769148.41 -40769148.27 0.0133 0.0116
 Mars -116324-07-04 06:43 J -40765733.37 -40765733.22 -40765733.08 0.1682 0.1056
 Jupiter -116308-02-06 16:34 J -40760036.92 -40760036.81 -40760036.70 0.0518 0.0452
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 Neptune -116299-07-04 01:12 J -40756602.64 -40756602.45 -40756602.23 0.0089 0.0050
 Neptune -116298-07-06 09:36 J -40756235.33 -40756235.10 -40756234.85 0.0089 0.0022
 Neptune -116297-07-07 18:29 J -40755867.98 -40755867.73 -40755867.48 0.0089 0.0007
 Jupiter -116296-02-11 13:55 J -40755649.15 -40755648.92 -40755648.68 0.0519 0.0024
 Neptune -116296-07-10 02:53 J -40755500.60 -40755500.38 -40755500.14 0.0089 0.0036
 Neptune -116295-07-12 11:31 J -40755133.17 -40755133.02 -40755132.83 0.0089 0.0065
 Saturn -116293-01-18 07:27 J -40754578.43 -40754578.19 -40754577.95 0.0269 0.0082
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 Uranus -116289-08-17 19:27 J -40752904.78 -40752904.69 -40752904.56 0.0145 0.0131
 Jupiter -116284-02-16 10:19 J -40751261.13 -40751261.07 -40751261.00 0.0520 0.0496
 Saturn -116280-07-10 15:36 J -40749656.08 -40749655.85 -40749655.61 0.0293 0.0075
 Jupiter -116279-07-30 22:05 J -40749270.75 -40749270.58 -40749270.40 0.0508 0.0322
 Jupiter -116267-08-04 11:17 J -40744883.25 -40744883.03 -40744882.80 0.0507 0.0113
 Saturn -116264-01-12 07:55 J -40743991.32 -40743991.17 -40743991.00 0.0268 0.0207
 Uranus -116251-02-18 19:12 J -40739205.86 -40739205.70 -40739205.50 0.0134 0.0095
 Saturn -116251-07-05 02:24 J -40739069.40 -40739069.40 -40739069.37 0.0295 0.0295
 Uranus -116250-02-23 03:51 J -40738836.59 -40738836.34 -40738836.08 0.0134 0.0013
 Uranus -116249-02-27 10:34 J -40738467.16 -40738467.06 -40738466.93 0.0133 0.0119
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 Saturn -116234-01-19 22:05 J -40733026.76 -40733026.58 -40733026.39 0.0270 0.0180
 Saturn -116221-07-12 08:24 J -40728104.32 -40728104.15 -40728103.96 0.0292 0.0190

Neptune -116217-01-10 04:05 J -40726827.51 -40726827.33 -40726827.12 0.0089 0.0060
 Neptune -116216-01-11 18:43 J -40726459.95 -40726459.72 -40726459.45 0.0089 0.0030
 Neptune -116215-01-14 09:51 J -40726092.36 -40726092.09 -40726091.83 0.0089 0.0001
 Neptune -116214-01-17 00:29 J -40725724.73 -40725724.48 -40725724.23 0.0089 0.0031
 Neptune -116213-01-19 14:24 J -40725357.07 -40725356.90 -40725356.69 0.0089 0.0062
 Jupiter -116213-02-11 06:29 J -40725334.46 -40725334.23 -40725334.00 0.0518 0.0101
 Pluto -116209-12-13 10:48 J -40723567.08 -40723567.05 -40723566.95 0.0063 0.0062
 Pluto -116208-12-15 00:58 J -40723200.71 -40723200.46 -40723200.18 0.0063 0.0013
 Uranus -116207-08-09 05:17 J -40722963.34 -40722963.28 -40722963.17 0.0144 0.0136
 Uranus -116206-08-14 05:31 J -40722593.53 -40722593.27 -40722593.02 0.0145 0.0002
 Saturn -116205-01-14 23:03 J -40722439.77 -40722439.54 -40722439.31 0.0268 0.0108
 Uranus -116205-08-18 06:15 J -40722223.31 -40722223.24 -40722223.13 0.0145 0.0136
 Jupiter -116201-02-16 04:19 J -40720946.47 -40720946.32 -40720946.15 0.0520 0.0379
 Mars -116198-07-01 04:05 J -40719715.43 -40719715.33 -40719715.23 0.1675 0.1387
 Jupiter -116196-07-29 21:22 J -40718955.74 -40718955.61 -40718955.48 0.0508 0.0422
 Saturn -116192-07-06 22:05 J -40717517.77 -40717517.58 -40717517.38 0.0295 0.0170
 Jupiter -116184-08-03 08:10 J -40714568.39 -40714568.16 -40714567.92 0.0507 0.0009
 Jupiter -116172-08-07 19:12 J -40710180.82 -40710180.70 -40710180.58 0.0506 0.0431
 Uranus -116167-02-19 04:48 J -40708524.48 -40708524.30 -40708524.10 0.0134 0.0091
 Uranus -116166-02-23 13:27 J -40708155.18 -40708154.94 -40708154.68 0.0134 0.0017
 Uranus -116165-02-27 20:24 J -40707785.74 -40707785.65 -40707785.53 0.0134 0.0122
 Saturn -116146-01-16 13:27 J -40700888.19 -40700887.94 -40700887.68 0.0269 0.0012
 Neptune -116135-07-03 12:15 J -40696702.15 -40696701.99 -40696701.80 0.0089 0.0063
 Neptune -116134-07-05 20:39 J -40696334.85 -40696334.64 -40696334.39 0.0089 0.0035
 Neptune -116133-07-07 05:31 J -40695967.52 -40695967.27 -40695967.02 0.0089 0.0006
 Saturn -116133-07-08 17:31 J -40695966.00 -40695965.77 -40695965.53 0.0294 0.0046
 Neptune -116132-07-09 13:55 J -40695600.16 -40695599.92 -40695599.67 0.0089 0.0023
 Neptune -116131-07-11 22:19 J -40695232.75 -40695232.57 -40695232.35 0.0089 0.0052
 Jupiter -116130-02-10 06:29 J -40695019.44 -40695019.23 -40695019.00 0.0518 0.0198
 Neptune -116130-07-14 07:41 J -40694865.28 -40694865.18 -40694865.07 0.0089 0.0080

Uranus -116123-08-09 18:43 J -40692281.82 -40692281.72 -40692281.58 0.0144 0.0127
 Uranus -116122-08-14 18:43 J -40691911.97 -40691911.72 -40691911.46 0.0145 0.0007
 Uranus -116121-08-18 19:55 J -40691541.70 -40691541.67 -40691541.64 0.0145 0.0144
 Pluto -116119-06-11 07:41 J -40690880.37 -40690880.18 -40690879.97 0.0081 0.0048
 Mars -116119-07-03 06:43 J -40690858.40 -40690858.22 -40690858.03 0.1677 0.0027
 Jupiter -116118-02-15 04:48 J -40690631.50 -40690631.30 -40690631.11 0.0519 0.0283
 Jupiter -116101-08-02 08:53 J -40684253.36 -40684253.13 -40684252.90 0.0508 0.0088
 Jupiter -116089-08-06 21:51 J -40679865.76 -40679865.59 -40679865.42 0.0506 0.0347
 Saturn -116087-01-18 01:41 J -40679336.67 -40679336.43 -40679336.19 0.0269 0.0083
 Uranus -116083-02-19 14:24 J -40677843.08 -40677842.90 -40677842.69 0.0134 0.0087
 Uranus -116082-02-23 23:03 J -40677473.78 -40677473.54 -40677473.28 0.0134 0.0021
 Uranus -116081-02-28 06:29 J -40677104.30 -40677104.23 -40677104.14 0.0134 0.0126
 Saturn -116074-07-11 11:31 J -40674414.25 -40674414.02 -40674413.78 0.0293 0.0074
 Saturn -116058-01-12 21:22 J -40668749.75 -40668749.61 -40668749.45 0.0267 0.0215
 Neptune -116053-01-09 10:34 J -40666927.20 -40666927.06 -40666926.90 0.0089 0.0073
 Neptune -116052-01-11 01:27 J -40666559.66 -40666559.44 -40666559.19 0.0089 0.0043
 Neptune -116051-01-13 16:34 J -40666192.07 -40666191.81 -40666191.54 0.0089 0.0012
 Neptune -116050-01-16 06:58 J -40665824.45 -40665824.21 -40665823.94 0.0089 0.0019
 Neptune -116049-01-18 21:22 J -40665456.81 -40665456.61 -40665456.37 0.0089 0.0049
 Neptune -116048-01-20 11:31 J -40665089.12 -40665089.02 -40665088.88 0.0089 0.0079
 Jupiter -116047-02-09 05:17 J -40664704.46 -40664704.28 -40664704.08 0.0518 0.0297
 Mars -116040-07-05 09:07 J -40662001.21 -40662001.12 -40662001.02 0.1678 0.1420
 Uranus -116039-08-10 07:55 J -40661600.30 -40661600.17 -40661600.01 0.0144 0.0118
 Uranus -116038-08-15 07:41 J -40661230.43 -40661230.18 -40661229.93 0.0145 0.0015
 Jupiter -116035-02-14 00:00 J -40660316.72 -40660316.50 -40660316.27 0.0519 0.0168
 Saturn -116028-01-19 10:19 J -40657785.25 -40657785.07 -40657784.86 0.0270 0.0169
 Jupiter -116018-08-02 09:07 J -40653938.33 -40653938.12 -40653937.90 0.0507 0.0185
 Saturn -116015-07-13 01:55 J -40652862.59 -40652862.42 -40652862.22 0.0293 0.0184
 Jupiter -116006-08-06 21:22 J -40649550.80 -40649550.61 -40649550.40 0.0506 0.0249

116TH MILLENNIUM BCE

This is a list of transits of Earth in the 116th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-115999-01-14 04:48 J	-40647198.51	-40647198.30	-40647198.08	0.0267	0.0134		
Uranus	-115999-02-20 01:41 J	-40647161.61	-40647161.43	-40647161.21	0.0134	0.0082		
Uranus	-115998-02-24 10:48 J	-40646792.30	-40646792.05	-40646791.80	0.0134	0.0026		
Uranus	-115997-02-28 17:46 J	-40646422.80	-40646422.76	-40646422.70	0.0133	0.0131		
Saturn	-115986-07-07 09:36 J	-40642276.27	-40642276.10	-40642275.91	0.0295	0.0196		
Neptune	-115971-07-03 00:15 J	-40636801.59	-40636801.49	-40636801.33	0.0089	0.0076		
Neptune	-115970-07-05 08:53 J	-40636434.33	-40636434.13	-40636433.91	0.0089	0.0047		
Saturn	-115969-01-21 16:05 J	-40636233.92	-40636233.83	-40636233.72	0.0270	0.0246		
Neptune	-115969-07-06 17:17 J	-40636067.02	-40636066.78	-40636066.53	0.0089	0.0019		
Neptune	-115968-07-09 01:41 J	-40635699.67	-40635699.43	-40635699.17	0.0089	0.0011		
Neptune	-115967-07-11 10:19 J	-40635332.29	-40635332.07	-40635331.84	0.0089	0.0039		
Neptune	-115966-07-13 18:58 J	-40634964.85	-40634964.71	-40634964.53	0.0089	0.0068		
Jupiter	-115964-02-08 04:48 J	-40634389.44	-40634389.30	-40634389.14	0.0517	0.0395		
Pluto	-115960-12-16 01:27 J	-40632617.68	-40632617.44	-40632617.18	0.0063	0.0023		
Pluto	-115959-12-17 15:07 J	-40632251.00	-40632250.87	-40632250.68	0.0064	0.0052		
Saturn	-115956-07-14 11:17 J	-40631311.09	-40631311.03	-40631310.95	0.0293	0.0279		
Uranus	-115955-08-10 19:27 J	-40630918.83	-40630918.69	-40630918.51	0.0144	0.0112		
Mars	-115954-01-08 21:36 J	-40630767.80	-40630767.60	-40630767.40	0.1838	0.0426		

Uranus -115954-08-15 19:12 J -40630548.95 -40630548.70 -40630548.44 0.0145 0.0021
 Jupiter -115952-02-13 04:05 J -40630001.56 -40630001.33 -40630001.09 0.0519 0.0088
 Saturn -115940-01-15 08:24 J -40625647.39 -40625647.15 -40625646.90 0.0267 0.0061
 Jupiter -115935-08-01 13:41 J -40623623.13 -40623622.93 -40623622.73 0.0508 0.0261
 Saturn -115927-07-08 16:34 J -40620725.03 -40620724.81 -40620724.58 0.0295 0.0106
 Jupiter -115923-08-06 02:39 J -40619235.61 -40619235.39 -40619235.17 0.0507 0.0175
 Uranus -115915-02-20 12:15 J -40616480.18 -40616479.99 -40616479.76 0.0134 0.0077
 Uranus -115914-02-24 20:53 J -40616110.87 -40616110.63 -40616110.37 0.0134 0.0030
 Mars -115914-07-02 08:10 J -40615983.31 -40615983.16 -40615983.01 0.1672 0.0967
 Neptune -115889-01-08 16:48 J -40607026.82 -40607026.80 -40607026.71 0.0089 0.0087
 Neptune -115888-01-10 08:10 J -40606659.34 -40606659.16 -40606658.93 0.0089 0.0056
 Neptune -115887-01-12 23:46 J -40606291.77 -40606291.51 -40606291.26 0.0089 0.0025
 Neptune -115886-01-15 14:24 J -40605924.16 -40605923.90 -40605923.63 0.0089 0.0005
 Neptune -115885-01-18 04:48 J -40605556.53 -40605556.30 -40605556.05 0.0089 0.0036
 Neptune -115884-01-19 19:12 J -40605188.86 -40605188.70 -40605188.51 0.0089 0.0066
 Saturn -115881-01-17 09:22 J -40604096.36 -40604096.11 -40604095.86 0.0267 0.0004
 Jupiter -115881-02-08 12:15 J -40604074.09 -40604073.99 -40604073.88 0.0518 0.0460
 Uranus -115871-08-11 03:36 J -40600237.50 -40600237.35 -40600237.18 0.0144 0.0111
 Pluto -115870-06-14 08:24 J -40599930.36 -40599930.15 -40599929.91 0.0081 0.0035
 Uranus -115870-08-16 02:53 J -40599867.62 -40599867.38 -40599867.12 0.0145 0.0023
 Jupiter -115869-02-13 11:46 J -40599686.24 -40599686.01 -40599685.77 0.0519 0.0026
 Saturn -115868-07-09 18:15 J -40599173.98 -40599173.74 -40599173.50 0.0295 0.0031
 Jupiter -115857-02-18 08:39 J -40595298.21 -40595298.14 -40595298.07 0.0519 0.0496
 Jupiter -115852-07-31 23:17 J -40593307.71 -40593307.53 -40593307.35 0.0508 0.0320
 Jupiter -115840-08-05 11:17 J -40588920.25 -40588920.03 -40588919.80 0.0507 0.0114
 Mars -115835-07-04 10:19 J -40587126.25 -40587126.07 -40587125.89 0.1674 0.0411
 Uranus -115831-02-20 22:34 J -40585798.76 -40585798.56 -40585798.34 0.0134 0.0074
 Uranus -115830-02-25 07:12 J -40585429.44 -40585429.20 -40585428.95 0.0134 0.0033
 Saturn -115822-01-18 07:12 J -40582545.44 -40582545.20 -40582544.95 0.0267 0.0063
 Saturn -115809-07-10 15:36 J -40577623.08 -40577622.85 -40577622.61 0.0295 0.0034

Neptune -115807-07-02 13:12 J -40576900.96 -40576900.95 -40576900.88 0.0089 0.0088
 Neptune -115806-07-04 21:51 J -40576533.76 -40576533.59 -40576533.39 0.0089 0.0059
 Neptune -115805-07-06 06:15 J -40576166.46 -40576166.24 -40576165.99 0.0089 0.0031
 Neptune -115804-07-08 14:53 J -40575799.13 -40575798.88 -40575798.63 0.0089 0.0002
 Neptune -115803-07-10 23:31 J -40575431.75 -40575431.52 -40575431.28 0.0089 0.0027
 Neptune -115802-07-13 07:55 J -40575064.35 -40575064.17 -40575063.96 0.0089 0.0056
 Neptune -115801-07-14 16:34 J -40574696.86 -40574696.81 -40574696.72 0.0089 0.0085
 Saturn -115793-01-12 23:17 J -40571958.64 -40571958.53 -40571958.41 0.0266 0.0237
 Uranus -115787-08-11 09:07 J -40569556.26 -40569556.12 -40569555.95 0.0144 0.0112
 Jupiter -115786-02-12 19:12 J -40569370.94 -40569370.70 -40569370.47 0.0518 0.0042
 Uranus -115786-08-16 08:24 J -40569186.40 -40569186.15 -40569185.90 0.0145 0.0020
 Jupiter -115774-02-17 17:03 J -40564982.91 -40564982.79 -40564982.66 0.0520 0.0437
 Jupiter -115769-07-31 11:31 J -40562992.18 -40562992.02 -40562991.86 0.0508 0.0364
 Saturn -115763-01-19 03:51 J -40560994.55 -40560994.34 -40560994.10 0.0267 0.0117
 Jupiter -115757-08-04 23:03 J -40558604.77 -40558604.54 -40558604.31 0.0507 0.0066
 Saturn -115750-07-12 09:22 J -40556072.33 -40556072.11 -40556071.88 0.0295 0.0089
 Uranus -115747-02-21 05:03 J -40555117.48 -40555117.29 -40555117.06 0.0135 0.0074
 Uranus -115746-02-25 13:55 J -40554748.17 -40554747.92 -40554747.67 0.0134 0.0033
 Jupiter -115745-08-09 11:31 J -40554217.04 -40554217.02 -40554216.97 0.0506 0.0500
 Saturn -115734-01-13 19:27 J -40550407.86 -40550407.69 -40550407.50 0.0266 0.0184
 Neptune -115724-01-09 16:05 J -40546758.97 -40546758.83 -40546758.63 0.0089 0.0069
 Neptune -115723-01-12 07:27 J -40546391.41 -40546391.19 -40546390.93 0.0089 0.0038
 Neptune -115722-01-14 22:34 J -40546023.82 -40546023.56 -40546023.29 0.0089 0.0007
 Neptune -115721-01-17 12:58 J -40545656.20 -40545655.96 -40545655.69 0.0089 0.0024
 Neptune -115720-01-19 03:36 J -40545288.54 -40545288.35 -40545288.12 0.0089 0.0054
 Neptune -115719-01-21 18:00 J -40544920.82 -40544920.75 -40544920.65 0.0089 0.0084
 Pluto -115711-12-18 11:46 J -40541668.28 -40541668.01 -40541667.74 0.0063 0.0008
 Saturn -115704-01-20 00:15 J -40539443.67 -40539443.49 -40539443.28 0.0267 0.0171
 Jupiter -115703-02-12 05:03 J -40539055.52 -40539055.29 -40539055.05 0.0519 0.0094
 Uranus -115703-08-11 15:22 J -40538875.00 -40538874.86 -40538874.69 0.0144 0.0112

Uranus -115702-08-16 13:55 J -40538505.16 -40538504.92 -40538504.66 0.0145 0.0020
 Jupiter -115691-02-17 06:00 J -40534667.40 -40534667.25 -40534667.10 0.0520 0.0396
 Saturn -115691-07-13 02:39 J -40534521.60 -40534521.39 -40534521.18 0.0295 0.0140
 Jupiter -115686-07-31 22:48 J -40532676.68 -40532676.55 -40532676.41 0.0508 0.0412
 Saturn -115675-01-14 16:05 J -40528857.03 -40528856.83 -40528856.59 0.0266 0.0131
 Jupiter -115674-08-05 11:46 J -40528289.24 -40528289.01 -40528288.77 0.0507 0.0025
 Mars -115670-01-08 05:03 J -40527037.44 -40527037.29 -40527037.14 0.1843 0.1277
 Uranus -115663-02-21 11:03 J -40524436.24 -40524436.04 -40524435.81 0.0135 0.0074
 Uranus -115662-02-25 20:10 J -40524066.90 -40524066.66 -40524066.41 0.0134 0.0033
 Saturn -115662-07-07 02:53 J -40523935.49 -40523935.38 -40523935.27 0.0297 0.0261
 Jupiter -115662-08-10 01:41 J -40523901.52 -40523901.43 -40523901.34 0.0506 0.0460
 Saturn -115645-01-21 21:36 J -40517892.73 -40517892.60 -40517892.46 0.0267 0.0225
 Neptune -115642-07-04 11:31 J -40516633.15 -40516633.02 -40516632.85 0.0089 0.0071
 Neptune -115641-07-05 19:27 J -40516265.89 -40516265.69 -40516265.45 0.0089 0.0043
 Neptune -115640-07-08 04:19 J -40515898.57 -40515898.32 -40515898.07 0.0089 0.0014
 Neptune -115639-07-10 12:29 J -40515531.21 -40515530.98 -40515530.72 0.0089 0.0016
 Neptune -115638-07-12 21:22 J -40515163.82 -40515163.61 -40515163.39 0.0089 0.0044
 Neptune -115637-07-14 05:46 J -40514796.39 -40514796.26 -40514796.10 0.0089 0.0073
 Saturn -115632-07-13 19:12 J -40512970.88 -40512970.70 -40512970.52 0.0295 0.0189
 Mars -115630-07-03 12:00 J -40512251.18 -40512251.00 -40512250.83 0.1669 0.0561
 Pluto -115622-06-14 22:34 J -40509347.73 -40509347.56 -40509347.35 0.0081 0.0052
 Jupiter -115620-02-11 15:07 J -40508740.09 -40508739.87 -40508739.64 0.0518 0.0147
 Uranus -115619-08-12 00:43 J -40508193.63 -40508193.47 -40508193.30 0.0144 0.0108
 Uranus -115618-08-16 23:17 J -40507823.78 -40507823.53 -40507823.28 0.0145 0.0023
 Saturn -115616-01-15 13:55 J -40507306.16 -40507305.92 -40507305.67 0.0266 0.0075
 Jupiter -115608-02-16 14:10 J -40504352.08 -40504351.91 -40504351.73 0.0519 0.0335
 Saturn -115603-07-07 20:53 J -40502384.80 -40502384.63 -40502384.46 0.0297 0.0207
 Jupiter -115603-07-31 12:43 J -40502361.07 -40502360.97 -40502360.86 0.0508 0.0450
 Jupiter -115591-08-05 02:39 J -40497973.62 -40497973.39 -40497973.16 0.0507 0.0011
 Uranus -115579-02-21 17:46 J -40493754.97 -40493754.76 -40493754.55 0.0135 0.0073

Jupiter -115579-08-09 13:12 J -40493586.08 -40493585.95 -40493585.82 0.0506 0.0414
 Uranus -115578-02-26 02:39 J -40493385.64 -40493385.39 -40493385.14 0.0134 0.0034
 Saturn -115573-07-14 13:41 J -40491420.05 -40491419.93 -40491419.79 0.0295 0.0245
 Neptune -115560-01-09 00:29 J -40486858.58 -40486858.48 -40486858.37 0.0089 0.0081
 Neptune -115559-01-11 15:22 J -40486491.06 -40486490.86 -40486490.62 0.0089 0.0051
 Neptune -115558-01-14 06:43 J -40486123.47 -40486123.22 -40486122.95 0.0089 0.0020
 Neptune -115557-01-16 21:51 J -40485755.85 -40485755.59 -40485755.32 0.0089 0.0012
 Saturn -115557-01-17 14:10 J -40485755.17 -40485754.91 -40485754.66 0.0266 0.0014
 Neptune -115556-01-18 12:43 J -40485388.20 -40485387.97 -40485387.73 0.0089 0.0042
 Neptune -115555-01-21 02:39 J -40485020.51 -40485020.39 -40485020.21 0.0089 0.0073
 Mars -115551-07-05 14:10 J -40483394.07 -40483393.91 -40483393.75 0.1671 0.0808
 Saturn -115544-07-08 17:17 J -40480833.99 -40480833.78 -40480833.58 0.0296 0.0147
 Jupiter -115537-02-11 17:46 J -40478424.97 -40478424.76 -40478424.54 0.0518 0.0227
 Uranus -115535-08-12 11:03 J -40477512.20 -40477512.04 -40477511.85 0.0144 0.0103
 Uranus -115534-08-17 09:51 J -40477142.34 -40477142.09 -40477141.84 0.0145 0.0028
 Jupiter -115525-02-16 18:43 J -40474036.92 -40474036.72 -40474036.51 0.0520 0.0263
 Jupiter -115520-07-30 22:48 J -40472045.57 -40472045.55 -40472045.51 0.0508 0.0504
 Jupiter -115508-08-04 10:05 J -40467658.31 -40467658.08 -40467657.85 0.0507 0.0075
 Saturn -115498-01-18 17:17 J -40464204.03 -40464203.78 -40464203.54 0.0266 0.0055
 Jupiter -115496-08-08 21:36 J -40463270.75 -40463270.60 -40463270.43 0.0506 0.0356
 Uranus -115495-02-22 01:41 J -40463073.63 -40463073.43 -40463073.20 0.0135 0.0071
 Uranus -115494-02-26 11:03 J -40462704.28 -40462704.04 -40462703.79 0.0134 0.0036
 Saturn -115485-07-09 18:29 J -40459282.96 -40459282.73 -40459282.50 0.0296 0.0073
 Neptune -115478-07-04 02:24 J -40456732.48 -40456732.40 -40456732.29 0.0089 0.0082
 Neptune -115477-07-05 10:19 J -40456365.25 -40456365.07 -40456364.85 0.0089 0.0054
 Neptune -115476-07-07 18:43 J -40455997.96 -40455997.72 -40455997.48 0.0089 0.0025
 Neptune -115475-07-10 03:07 J -40455630.62 -40455630.37 -40455630.12 0.0089 0.0004
 Neptune -115474-07-12 11:17 J -40455263.25 -40455263.03 -40455262.79 0.0089 0.0033
 Neptune -115473-07-13 19:41 J -40454895.84 -40454895.68 -40454895.48 0.0089 0.0062
 Saturn -115469-01-13 15:51 J -40453616.95 -40453616.84 -40453616.71 0.0265 0.0230

Pluto -115463-12-19 05:46 J -40451085.44 -40451085.26 -40451085.02 0.0063 0.0041
 Pluto -115462-12-20 20:10 J -40450718.87 -40450718.66 -40450718.41 0.0064 0.0034
 Jupiter -115454-02-11 00:58 J -40448109.65 -40448109.46 -40448109.26 0.0518 0.0291
 Uranus -115451-08-12 21:36 J -40446830.76 -40446830.60 -40446830.40 0.0144 0.0098
 Uranus -115450-08-17 20:39 J -40446460.88 -40446460.64 -40446460.39 0.0145 0.0033
 Jupiter -115442-02-16 00:00 J -40443721.72 -40443721.50 -40443721.28 0.0519 0.0190
 Saturn -115439-01-19 23:31 J -40442652.73 -40442652.52 -40442652.29 0.0267 0.0131
 Saturn -115426-07-12 01:12 J -40437731.69 -40437731.45 -40437731.21 0.0296 0.0015
 Mars -115425-07-01 16:05 J -40437375.92 -40437375.83 -40437375.74 0.1665 0.1444
 Jupiter -115425-08-03 18:15 J -40437342.96 -40437342.74 -40437342.52 0.0507 0.0135
 Jupiter -115413-08-08 06:58 J -40432955.39 -40432955.21 -40432955.02 0.0506 0.0299
 Uranus -115411-02-22 10:48 J -40432392.26 -40432392.05 -40432391.82 0.0135 0.0068
 Saturn -115410-01-14 23:46 J -40432065.71 -40432065.51 -40432065.29 0.0265 0.0151
 Uranus -115410-02-26 20:10 J -40432022.90 -40432022.66 -40432022.42 0.0134 0.0039
 Neptune -115395-01-10 23:46 J -40426590.67 -40426590.51 -40426590.30 0.0089 0.0063
 Neptune -115394-01-13 15:22 J -40426223.10 -40426222.86 -40426222.60 0.0089 0.0032
 Neptune -115393-01-16 06:58 J -40425855.48 -40425855.21 -40425854.94 0.0089 0.0001
 Neptune -115392-01-17 21:36 J -40425487.84 -40425487.60 -40425487.34 0.0089 0.0030
 Neptune -115391-01-20 12:00 J -40425120.17 -40425120.00 -40425119.78 0.0089 0.0061
 Saturn -115380-01-21 09:51 J -40421101.23 -40421101.09 -40421100.93 0.0267 0.0215
 Pluto -115373-06-16 15:07 J -40418398.12 -40418397.87 -40418397.62 0.0081 0.0003
 Jupiter -115371-02-10 00:29 J -40417794.63 -40417794.48 -40417794.32 0.0517 0.0386
 Saturn -115367-07-13 12:29 J -40416180.19 -40416179.98 -40416179.75 0.0295 0.0116
 Uranus -115367-08-13 07:27 J -40416149.38 -40416149.19 -40416149.00 0.0144 0.0095
 Uranus -115366-08-18 06:00 J -40415779.49 -40415779.25 -40415779.00 0.0145 0.0036
 Jupiter -115359-02-14 18:15 J -40413406.97 -40413406.74 -40413406.50 0.0519 0.0074
 Saturn -115351-01-16 10:48 J -40410514.29 -40410514.05 -40410513.80 0.0266 0.0064
 Mars -115346-07-04 16:19 J -40408519.00 -40408518.82 -40408518.63 0.1666 0.0155
 Jupiter -115342-08-03 20:24 J -40407027.86 -40407027.65 -40407027.45 0.0508 0.0223
 Saturn -115338-07-07 21:36 J -40405593.70 -40405593.60 -40405593.46 0.0297 0.0255

Jupiter -115330-08-08 06:43 J -40402640.43 -40402640.22 -40402640.01 0.0506 0.0202
 Uranus -115327-02-22 20:24 J -40401710.86 -40401710.65 -40401710.42 0.0135 0.0065
 Uranus -115326-02-27 05:31 J -40401341.50 -40401341.27 -40401341.01 0.0134 0.0042
 Neptune -115313-07-05 01:12 J -40396464.60 -40396464.45 -40396464.27 0.0089 0.0065
 Neptune -115312-07-07 09:36 J -40396097.33 -40396097.10 -40396096.87 0.0089 0.0036
 Neptune -115311-07-09 17:31 J -40395730.01 -40395729.77 -40395729.51 0.0089 0.0008
 Neptune -115310-07-12 01:27 J -40395362.67 -40395362.44 -40395362.18 0.0089 0.0022
 Neptune -115309-07-13 09:51 J -40394995.27 -40394995.09 -40394994.86 0.0089 0.0051
 Saturn -115308-07-15 04:48 J -40394628.44 -40394628.30 -40394628.14 0.0295 0.0229
 Neptune -115308-07-15 18:15 J -40394627.82 -40394627.74 -40394627.60 0.0089 0.0080
 Mars -115307-01-11 00:00 J -40394448.66 -40394448.50 -40394448.33 0.1845 0.1140
 Saturn -115292-01-18 00:29 J -40388962.73 -40388962.48 -40388962.22 0.0266 0.0030
 Jupiter -115288-02-08 18:00 J -40387479.79 -40387479.75 -40387479.70 0.0517 0.0504
 Uranus -115283-08-13 13:41 J -40385468.12 -40385467.93 -40385467.74 0.0144 0.0095
 Uranus -115282-08-18 12:15 J -40385098.23 -40385097.99 -40385097.74 0.0145 0.0036
 Saturn -115279-07-09 16:34 J -40384042.01 -40384041.81 -40384041.59 0.0297 0.0133
 Jupiter -115276-02-13 18:58 J -40383091.95 -40383091.71 -40383091.47 0.0519 0.0019
 Mars -115267-07-06 18:00 J -40379661.87 -40379661.75 -40379661.62 0.1668 0.1192
 Jupiter -115264-02-18 17:31 J -40378703.87 -40378703.77 -40378703.66 0.0520 0.0462
 Saturn -115263-01-12 23:17 J -40378375.60 -40378375.53 -40378375.44 0.0265 0.0251
 Jupiter -115259-08-02 19:12 J -40376712.87 -40376712.70 -40376712.51 0.0508 0.0323
 Jupiter -115247-08-07 07:55 J -40372325.40 -40372325.17 -40372324.95 0.0507 0.0113
 Uranus -115243-02-23 04:48 J -40371029.53 -40371029.30 -40371029.08 0.0135 0.0063
 Uranus -115242-02-27 13:55 J -40370660.15 -40370659.92 -40370659.67 0.0134 0.0043
 Saturn -115233-01-20 14:39 J -40367411.11 -40367410.89 -40367410.66 0.0267 0.0124
 Neptune -115231-01-10 08:24 J -40366690.27 -40366690.15 -40366689.99 0.0089 0.0075
 Neptune -115230-01-13 00:15 J -40366322.71 -40366322.49 -40366322.25 0.0089 0.0044
 Neptune -115229-01-15 15:51 J -40365955.10 -40365954.84 -40365954.58 0.0089 0.0013
 Neptune -115228-01-17 06:43 J -40365587.47 -40365587.22 -40365586.95 0.0089 0.0018
 Neptune -115227-01-19 21:36 J -40365219.80 -40365219.60 -40365219.36 0.0089 0.0049

Neptune -115226-01-22 12:15 J -40364852.08 -40364851.99 -40364851.85 0.0089 0.0080
 Saturn -115220-07-11 13:27 J -40362490.18 -40362489.94 -40362489.70 0.0296 0.0007
 Pluto -115214-12-21 13:55 J -40360136.18 -40360135.92 -40360135.66 0.0063 0.0017
 Pluto -115213-12-22 02:53 J -40359769.46 -40359769.38 -40359769.22 0.0064 0.0058
 Saturn -115204-01-14 12:58 J -40356824.15 -40356823.96 -40356823.74 0.0265 0.0159
 Uranus -115199-08-13 18:00 J -40354786.91 -40354786.75 -40354786.54 0.0144 0.0098
 Uranus -115198-08-18 16:48 J -40354417.04 -40354416.80 -40354416.55 0.0145 0.0033
 Jupiter -115193-02-13 15:36 J -40352777.08 -40352776.85 -40352776.62 0.0518 0.0126
 Jupiter -115181-02-18 10:19 J -40348389.25 -40348389.07 -40348388.89 0.0519 0.0336
 Jupiter -115176-08-01 21:36 J -40346397.72 -40346397.60 -40346397.45 0.0509 0.0410
 Saturn -115174-01-22 04:05 J -40345859.47 -40345859.33 -40345859.18 0.0267 0.0217
 Jupiter -115164-08-06 06:58 J -40342010.44 -40342010.21 -40342009.98 0.0507 0.0011
 Saturn -115161-07-13 08:24 J -40340938.36 -40340938.15 -40340937.92 0.0296 0.0115
 Uranus -115159-02-23 11:03 J -40340348.25 -40340348.04 -40340347.80 0.0135 0.0063
 Uranus -115158-02-27 20:39 J -40339978.87 -40339978.64 -40339978.39 0.0134 0.0044
 Jupiter -115152-08-10 17:46 J -40337622.87 -40337622.76 -40337622.64 0.0506 0.0438
 Neptune -115149-07-04 16:34 J -40336563.92 -40336563.81 -40336563.66 0.0089 0.0076
 Neptune -115148-07-07 00:43 J -40336196.67 -40336196.47 -40336196.25 0.0089 0.0047
 Neptune -115147-07-09 08:39 J -40335829.38 -40335829.14 -40335828.89 0.0089 0.0018
 Neptune -115146-07-11 16:48 J -40335462.04 -40335461.80 -40335461.54 0.0089 0.0011
 Saturn -115145-01-17 01:26 J -40335272.68 -40335272.44 -40335272.19 0.0266 0.0069
 Neptune -115145-07-13 01:12 J -40335094.68 -40335094.45 -40335094.23 0.0089 0.0039
 Neptune -115144-07-15 09:22 J -40334727.26 -40334727.11 -40334726.95 0.0089 0.0068
 Mars -115141-07-02 20:38 J -40333643.78 -40333643.64 -40333643.49 0.1662 0.1025
 Saturn -115132-07-07 18:29 J -40330351.84 -40330351.73 -40330351.60 0.0297 0.0257
 Pluto -115124-06-19 03:07 J -40327448.55 -40327448.37 -40327448.14 0.0081 0.0045
 Uranus -115115-08-14 00:14 J -40324105.65 -40324105.49 -40324105.29 0.0144 0.0098
 Uranus -115114-08-18 23:02 J -40323735.79 -40323735.54 -40323735.30 0.0144 0.0032
 Jupiter -115110-02-12 11:17 J -40322462.24 -40322462.03 -40322461.82 0.0517 0.0239
 Saturn -115102-07-16 01:26 J -40319386.59 -40319386.44 -40319386.29 0.0295 0.0229

Jupiter -115098-02-17 11:02 J -40318074.24 -40318074.04 -40318073.83 0.0519 0.0244
 Jupiter -115093-07-31 22:05 J -40316082.59 -40316082.58 -40316082.55 0.0509 0.0506
 Saturn -115086-01-18 11:17 J -40313721.29 -40313721.03 -40313720.78 0.0266 0.0015
 Jupiter -115081-08-05 07:55 J -40311695.39 -40311695.17 -40311694.94 0.0508 0.0082
 Uranus -115075-02-23 16:48 J -40309667.02 -40309666.80 -40309666.57 0.0135 0.0063
 Uranus -115074-02-28 02:38 J -40309297.63 -40309297.39 -40309297.14 0.0134 0.0043
 Saturn -115073-07-09 07:55 J -40308800.36 -40308800.17 -40308799.95 0.0297 0.0151
 Jupiter -115069-08-09 19:55 J -40307307.83 -40307307.67 -40307307.50 0.0507 0.0353
 Neptune -115067-01-09 16:34 J -40306789.82 -40306789.81 -40306789.75 0.0089 0.0088
 Neptune -115066-01-12 08:10 J -40306422.34 -40306422.16 -40306421.93 0.0089 0.0057
 Neptune -115065-01-14 23:46 J -40306054.75 -40306054.51 -40306054.24 0.0089 0.0026
 Neptune -115064-01-16 15:22 J -40305687.12 -40305686.86 -40305686.59 0.0089 0.0006
 Neptune -115063-01-19 06:29 J -40305319.46 -40305319.23 -40305318.98 0.0089 0.0037
 Neptune -115062-01-21 21:22 J -40304951.76 -40304951.61 -40304951.42 0.0089 0.0068
 Mars -115062-07-05 21:22 J -40304786.79 -40304786.61 -40304786.43 0.1664 0.0266
 Saturn -115057-01-13 09:36 J -40303134.12 -40303134.10 -40303134.05 0.0265 0.0262
 Uranus -115031-08-14 09:36 J -40293424.28 -40293424.10 -40293423.90 0.0144 0.0094
 Uranus -115030-08-19 07:55 J -40293054.42 -40293054.17 -40293053.93 0.0144 0.0035
 Saturn -115027-01-19 17:02 J -40292170.03 -40292169.79 -40292169.55 0.0266 0.0089
 Jupiter -115027-02-11 15:07 J -40292147.05 -40292146.87 -40292146.68 0.0518 0.0317
 Mars -115023-01-10 05:31 J -40290718.48 -40290718.27 -40290718.06 0.1850 0.0235
 Jupiter -115015-02-16 14:38 J -40287759.11 -40287758.89 -40287758.67 0.0519 0.0164
 Saturn -115014-07-11 17:02 J -40287249.02 -40287248.79 -40287248.55 0.0297 0.0056

115TH MILLENNIUM BCE

This is a list of transits of Earth in the 115th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
	TRANSIT							
	TIME							
Saturn	-114998-01-14 13:41 J		-40281583.09	-40281582.93	-40281582.74	0.0265	0.0192	
Jupiter	-114998-08-05 14:24 J		-40281380.12	-40281379.90	-40281379.68	0.0508	0.0153	
Uranus	-114991-02-24 00:00 J		-40278985.71	-40278985.50	-40278985.26	0.0135	0.0062	
Uranus	-114990-02-28 10:05 J		-40278616.32	-40278616.08	-40278615.83	0.0134	0.0045	
Jupiter	-114986-08-10 01:26 J		-40276992.63	-40276992.44	-40276992.25	0.0507	0.0276	
Neptune	-114985-07-04 08:10 J		-40276663.19	-40276663.16	-40276663.10	0.0088	0.0087	
Neptune	-114984-07-06 15:36 J		-40276296.02	-40276295.85	-40276295.65	0.0088	0.0059	
Mars	-114983-07-07 22:19 J		-40275929.62	-40275929.57	-40275929.51	0.1665	0.1572	
Neptune	-114983-07-08 23:46 J		-40275928.73	-40275928.51	-40275928.26	0.0089	0.0030	
Neptune	-114982-07-11 07:55 J		-40275561.42	-40275561.17	-40275560.92	0.0089	0.0002	
Neptune	-114981-07-12 15:50 J		-40275194.06	-40275193.84	-40275193.59	0.0089	0.0028	
Neptune	-114980-07-15 00:14 J		-40274826.67	-40274826.49	-40274826.29	0.0089	0.0057	
Neptune	-114979-07-17 08:24 J		-40274459.19	-40274459.15	-40274459.08	0.0089	0.0086	
Saturn	-114968-01-20 19:26 J		-40270618.90	-40270618.69	-40270618.49	0.0266	0.0155	
Pluto	-114966-12-22 08:53 J		-40269553.13	-40269553.13	-40269553.07	0.0063	0.0063	
Pluto	-114965-12-22 23:02 J		-40269186.79	-40269186.54	-40269186.26	0.0063	0.0011	
Saturn	-114955-07-12 20:10 J		-40265697.90	-40265697.66	-40265697.43	0.0297	0.0023	
Uranus	-114947-08-14 19:41 J		-40262742.86	-40262742.68	-40262742.47	0.0144	0.0090	
Uranus	-114946-08-19 18:00 J		-40262372.99	-40262372.75	-40262372.50	0.0144	0.0040	
Jupiter	-114944-02-10 18:58 J		-40261831.86	-40261831.71	-40261831.56	0.0517	0.0396	
Saturn	-114939-01-15 14:10 J		-40260032.13	-40260031.91	-40260031.69	0.0265	0.0130	
Jupiter	-114932-02-15 18:29 J		-40257443.96	-40257443.73	-40257443.49	0.0518	0.0085	

Jupiter -114915-08-04 23:46 J -40251064.72 -40251064.51 -40251064.30 0.0508 0.0210
 Saturn -114909-01-22 18:00 J -40249067.88 -40249067.75 -40249067.58 0.0266 0.0214
 Uranus -114907-02-24 08:53 J -40248304.35 -40248304.13 -40248303.89 0.0135 0.0059
 Uranus -114906-02-28 18:58 J -40247934.94 -40247934.71 -40247934.47 0.0134 0.0047
 Jupiter -114903-08-09 10:19 J -40246677.28 -40246677.07 -40246676.86 0.0507 0.0218
 Neptune -114902-01-11 17:02 J -40246521.94 -40246521.79 -40246521.60 0.0089 0.0069
 Neptune -114901-01-14 08:38 J -40246154.36 -40246154.14 -40246153.88 0.0089 0.0038
 Neptune -114900-01-16 00:14 J -40245786.75 -40245786.49 -40245786.22 0.0089 0.0007
 Neptune -114899-01-18 15:22 J -40245419.10 -40245418.86 -40245418.59 0.0089 0.0025
 Neptune -114898-01-21 06:14 J -40245051.42 -40245051.24 -40245051.01 0.0089 0.0056
 Neptune -114897-01-23 20:53 J -40244683.65 -40244683.63 -40244683.53 0.0089 0.0087
 Saturn -114896-07-13 18:14 J -40244146.96 -40244146.74 -40244146.50 0.0297 0.0088
 Saturn -114880-01-16 12:00 J -40238481.24 -40238481.00 -40238480.76 0.0265 0.0075
 Pluto -114876-06-19 18:29 J -40236865.93 -40236865.73 -40236865.49 0.0081 0.0039
 Uranus -114863-08-15 06:14 J -40232061.43 -40232061.24 -40232061.02 0.0144 0.0085
 Uranus -114862-08-20 04:34 J -40231691.55 -40231691.31 -40231691.07 0.0145 0.0044
 Jupiter -114861-02-11 00:43 J -40231516.57 -40231516.47 -40231516.36 0.0517 0.0464
 Mars -114857-07-04 01:55 J -40229911.59 -40229911.42 -40229911.25 0.1660 0.0601
 Jupiter -114849-02-16 03:07 J -40227128.60 -40227128.37 -40227128.13 0.0519 0.0030
 Saturn -114837-07-14 13:12 J -40222596.15 -40222595.95 -40222595.74 0.0297 0.0143
 Jupiter -114832-08-04 09:50 J -40220749.28 -40220749.09 -40220748.89 0.0508 0.0263
 Uranus -114823-02-24 19:12 J -40217622.92 -40217622.70 -40217622.45 0.0135 0.0055
 Uranus -114822-03-01 04:48 J -40217253.52 -40217253.30 -40217253.05 0.0134 0.0052
 Saturn -114821-01-18 07:41 J -40216930.43 -40216930.18 -40216929.92 0.0264 0.0025
 Neptune -114820-07-06 06:58 J -40216395.36 -40216395.21 -40216395.06 0.0088 0.0070
 Jupiter -114820-08-08 22:19 J -40216361.79 -40216361.57 -40216361.35 0.0507 0.0171
 Neptune -114819-07-08 14:24 J -40216028.10 -40216027.90 -40216027.66 0.0088 0.0042
 Neptune -114818-07-10 22:34 J -40215660.80 -40215660.56 -40215660.30 0.0089 0.0013
 Neptune -114817-07-12 06:43 J -40215293.46 -40215293.22 -40215292.97 0.0089 0.0017
 Neptune -114816-07-14 14:24 J -40214926.10 -40214925.90 -40214925.67 0.0089 0.0046

Neptune -114815-07-16 22:48 J -40214558.66 -40214558.55 -40214558.40 0.0089 0.0075
 Saturn -114808-07-08 13:41 J -40212010.05 -40212009.93 -40212009.81 0.0298 0.0253
 Uranus -114779-08-15 14:53 J -40201380.07 -40201379.88 -40201379.66 0.0144 0.0083
 Jupiter -114778-02-10 13:12 J -40201200.99 -40201200.95 -40201200.89 0.0517 0.0505
 Mars -114778-07-07 02:24 J -40201054.56 -40201054.40 -40201054.23 0.1661 0.0677
 Saturn -114778-07-16 05:46 J -40201045.44 -40201045.26 -40201045.08 0.0297 0.0192
 Uranus -114778-08-20 12:58 J -40201010.19 -40201009.96 -40201009.71 0.0145 0.0046
 Jupiter -114766-02-15 13:26 J -40196813.18 -40196812.94 -40196812.70 0.0518 0.0022
 Saturn -114762-01-19 03:22 J -40195379.61 -40195379.36 -40195379.11 0.0264 0.0026
 Jupiter -114754-02-20 13:12 J -40192425.05 -40192424.95 -40192424.84 0.0519 0.0461
 Saturn -114749-07-09 05:46 J -40190459.42 -40190459.26 -40190459.08 0.0298 0.0205
 Jupiter -114749-08-04 00:14 J -40190433.68 -40190433.49 -40190433.31 0.0508 0.0299
 Mars -114739-01-09 08:10 J -40186988.36 -40186988.16 -40186987.97 0.1854 0.0769
 Uranus -114739-02-25 05:31 J -40186941.50 -40186941.27 -40186941.03 0.0135 0.0051
 Neptune -114738-01-11 00:58 J -40186621.54 -40186621.46 -40186621.34 0.0089 0.0082
 Uranus -114738-03-01 14:53 J -40186572.10 -40186571.88 -40186571.63 0.0134 0.0055
 Neptune -114737-01-13 16:19 J -40186254.01 -40186253.82 -40186253.58 0.0089 0.0051
 Jupiter -114737-08-08 13:26 J -40186046.16 -40186045.94 -40186045.72 0.0507 0.0140
 Neptune -114736-01-15 08:38 J -40185886.40 -40185886.14 -40185885.88 0.0089 0.0019
 Neptune -114735-01-17 23:46 J -40185518.77 -40185518.51 -40185518.24 0.0089 0.0012
 Neptune -114734-01-20 14:53 J -40185151.10 -40185150.88 -40185150.64 0.0089 0.0043
 Saturn -114733-01-13 22:19 J -40184792.60 -40184792.57 -40184792.52 0.0263 0.0259
 Neptune -114733-01-23 05:46 J -40184783.39 -40184783.26 -40184783.10 0.0089 0.0074
 Saturn -114719-07-16 22:48 J -40179494.69 -40179494.55 -40179494.42 0.0297 0.0242
 Pluto -114717-12-23 17:31 J -40178603.95 -40178603.77 -40178603.52 0.0063 0.0038
 Pluto -114716-12-25 07:55 J -40178237.37 -40178237.17 -40178236.92 0.0064 0.0037
 Saturn -114703-01-20 00:14 J -40173828.73 -40173828.49 -40173828.24 0.0264 0.0079
 Uranus -114695-08-15 20:53 J -40170698.82 -40170698.63 -40170698.41 0.0144 0.0084
 Uranus -114694-08-20 18:58 J -40170328.95 -40170328.71 -40170328.47 0.0145 0.0045
 Saturn -114690-07-10 23:17 J -40168908.73 -40168908.53 -40168908.33 0.0298 0.0152

Jupiter -114683-02-14 18:14 J -40166497.97 -40166497.74 -40166497.51 0.0518 0.0093
 Saturn -114674-01-14 20:10 J -40163241.81 -40163241.66 -40163241.50 0.0263 0.0204
 Jupiter -114671-02-19 20:24 J -40162109.79 -40162109.65 -40162109.49 0.0520 0.0403
 Jupiter -114666-08-04 12:58 J -40160118.13 -40160117.96 -40160117.79 0.0508 0.0342
 Saturn -114660-07-17 16:48 J -40157943.82 -40157943.80 -40157943.78 0.0297 0.0295
 Neptune -114656-07-05 21:07 J -40156494.69 -40156494.62 -40156494.50 0.0088 0.0082
 Uranus -114655-02-25 14:38 J -40156260.12 -40156259.89 -40156259.64 0.0135 0.0048
 Neptune -114655-07-08 05:17 J -40156127.46 -40156127.28 -40156127.07 0.0088 0.0053
 Uranus -114654-03-02 00:14 J -40155890.71 -40155890.49 -40155890.25 0.0134 0.0057
 Neptune -114654-07-10 13:41 J -40155760.17 -40155759.93 -40155759.69 0.0088 0.0024
 Jupiter -114654-08-09 00:00 J -40155730.72 -40155730.50 -40155730.27 0.0507 0.0088
 Neptune -114653-07-11 21:22 J -40155392.86 -40155392.61 -40155392.36 0.0088 0.0005
 Mars -114652-07-03 07:26 J -40155036.28 -40155036.19 -40155036.10 0.1657 0.1426
 Neptune -114652-07-14 05:31 J -40155025.50 -40155025.27 -40155025.03 0.0089 0.0034
 Neptune -114651-07-16 13:41 J -40154658.10 -40154657.93 -40154657.75 0.0089 0.0063
 Saturn -114644-01-20 23:02 J -40152277.75 -40152277.54 -40152277.31 0.0265 0.0136
 Saturn -114631-07-11 18:58 J -40147357.93 -40147357.71 -40147357.48 0.0298 0.0094
 Pluto -114627-06-22 11:02 J -40145916.28 -40145916.04 -40145915.79 0.0081 0.0013
 Saturn -114615-01-15 20:53 J -40141690.84 -40141690.63 -40141690.41 0.0263 0.0143
 Uranus -114611-08-16 01:41 J -40140017.61 -40140017.43 -40140017.21 0.0144 0.0086
 Uranus -114610-08-20 23:17 J -40139647.76 -40139647.53 -40139647.28 0.0145 0.0042
 Jupiter -114600-02-14 04:48 J -40136182.52 -40136182.30 -40136182.07 0.0518 0.0142
 Jupiter -114588-02-19 04:48 J -40131794.47 -40131794.30 -40131794.11 0.0519 0.0344
 Saturn -114585-01-23 01:12 J -40130726.61 -40130726.45 -40130726.28 0.0265 0.0199
 Jupiter -114583-08-03 22:19 J -40129802.71 -40129802.57 -40129802.43 0.0509 0.0399
 Neptune -114573-01-13 00:14 J -40126353.65 -40126353.49 -40126353.28 0.0089 0.0064
 Mars -114573-07-05 07:41 J -40126179.36 -40126179.18 -40126179.00 0.1658 0.0172
 Neptune -114572-01-14 16:19 J -40125986.07 -40125985.82 -40125985.57 0.0089 0.0032
 Saturn -114572-07-12 18:29 J -40125806.96 -40125806.73 -40125806.49 0.0298 0.0027
 Neptune -114571-01-17 07:41 J -40125618.45 -40125618.18 -40125617.91 0.0089 0.0001

Uranus -114571-02-25 21:36 J -40125578.83 -40125578.60 -40125578.35 0.0135 0.0047
 Jupiter -114571-08-08 11:46 J -40125415.24 -40125415.01 -40125414.78 0.0507 0.0043
 Neptune -114570-01-19 23:02 J -40125250.79 -40125250.54 -40125250.29 0.0089 0.0030
 Uranus -114570-03-02 07:26 J -40125209.42 -40125209.19 -40125208.96 0.0134 0.0058
 Neptune -114569-01-22 13:26 J -40124883.10 -40124882.94 -40124882.72 0.0089 0.0062
 Jupiter -114559-08-13 00:14 J -40121027.56 -40121027.49 -40121027.41 0.0506 0.0477
 Saturn -114556-01-17 00:29 J -40120139.72 -40120139.48 -40120139.23 0.0263 0.0076
 Uranus -114527-08-16 08:38 J -40109336.33 -40109336.14 -40109335.92 0.0144 0.0085
 Uranus -114526-08-21 06:14 J -40108966.47 -40108966.24 -40108965.99 0.0144 0.0043
 Jupiter -114517-02-14 07:41 J -40105867.39 -40105867.18 -40105866.96 0.0518 0.0222
 Saturn -114513-07-13 23:31 J -40104255.75 -40104255.52 -40104255.28 0.0298 0.0056
 Jupiter -114505-02-19 02:38 J -40101479.59 -40101479.39 -40101479.18 0.0519 0.0242
 Jupiter -114500-08-03 09:07 J -40099487.22 -40099487.12 -40099487.01 0.0509 0.0450
 Saturn -114497-01-19 07:41 J -40098588.44 -40098588.18 -40098587.93 0.0264 0.0003
 Mars -114494-07-08 08:10 J -40097322.29 -40097322.16 -40097322.02 0.1659 0.1092
 Neptune -114491-07-07 19:41 J -40096226.85 -40096226.68 -40096226.51 0.0088 0.0065
 Neptune -114490-07-10 02:53 J -40095859.59 -40095859.38 -40095859.14 0.0088 0.0036
 Neptune -114489-07-11 11:02 J -40095492.28 -40095492.04 -40095491.78 0.0088 0.0008
 Neptune -114488-07-13 19:12 J -40095124.94 -40095124.70 -40095124.46 0.0088 0.0022
 Jupiter -114488-08-07 18:14 J -40095099.97 -40095099.74 -40095099.51 0.0507 0.0028
 Uranus -114487-02-26 05:02 J -40094897.53 -40094897.29 -40094897.04 0.0135 0.0045
 Neptune -114487-07-16 03:07 J -40094757.56 -40094757.37 -40094757.16 0.0088 0.0051
 Uranus -114486-03-02 14:53 J -40094528.10 -40094527.88 -40094527.65 0.0134 0.0060
 Neptune -114486-07-18 11:31 J -40094390.12 -40094390.02 -40094389.91 0.0089 0.0080
 Jupiter -114476-08-12 04:05 J -40090712.46 -40090712.33 -40090712.18 0.0506 0.0398
 Pluto -114468-12-26 06:00 J -40087654.52 -40087654.25 -40087653.98 0.0064 0.0006
 Mars -114455-01-08 08:38 J -40083258.15 -40083258.14 -40083258.12 0.1857 0.1850
 Saturn -114454-07-16 08:53 J -40082704.33 -40082704.13 -40082703.92 0.0297 0.0151
 Uranus -114443-08-16 18:43 J -40078654.92 -40078654.72 -40078654.50 0.0144 0.0080
 Uranus -114442-08-21 16:05 J -40078285.06 -40078284.83 -40078284.58 0.0144 0.0047

Saturn -114438-01-20 17:02 J -40077037.02 -40077036.79 -40077036.54 0.0264 0.0082
 Jupiter -114434-02-13 03:50 J -40075552.52 -40075552.34 -40075552.16 0.0517 0.0330
 Saturn -114425-07-09 15:50 J -40072117.98 -40072117.84 -40072117.67 0.0299 0.0220
 Jupiter -114422-02-18 05:46 J -40071164.48 -40071164.26 -40071164.03 0.0519 0.0161
 Neptune -114409-01-12 07:26 J -40066453.32 -40066453.19 -40066453.06 0.0089 0.0077
 Saturn -114409-01-15 15:50 J -40066450.00 -40066449.84 -40066449.65 0.0263 0.0192
 Neptune -114408-01-13 22:34 J -40066085.77 -40066085.56 -40066085.31 0.0089 0.0046
 Neptune -114407-01-16 14:38 J -40065718.15 -40065717.89 -40065717.62 0.0089 0.0014
 Neptune -114406-01-19 06:00 J -40065350.51 -40065350.25 -40065349.98 0.0089 0.0017
 Neptune -114405-01-21 20:53 J -40064982.83 -40064982.63 -40064982.38 0.0089 0.0049
 Jupiter -114405-08-06 19:55 J -40064784.90 -40064784.67 -40064784.45 0.0508 0.0117
 Neptune -114404-01-23 11:46 J -40064615.09 -40064615.01 -40064614.86 0.0089 0.0080
 Uranus -114403-02-26 13:41 J -40064216.17 -40064215.93 -40064215.68 0.0135 0.0042
 Uranus -114402-03-02 23:46 J -40063846.74 -40063846.51 -40063846.28 0.0134 0.0063
 Saturn -114395-07-17 23:17 J -40061152.65 -40061152.53 -40061152.41 0.0297 0.0256
 Jupiter -114393-08-11 08:10 J -40060397.34 -40060397.16 -40060396.98 0.0507 0.0319
 Saturn -114379-01-22 05:02 J -40055485.48 -40055485.29 -40055485.09 0.0265 0.0169
 Pluto -114379-06-23 06:00 J -40055333.40 -40055333.25 -40055333.05 0.0081 0.0058
 Mars -114376-01-12 02:10 J -40054399.50 -40054399.41 -40054399.31 0.1855 0.1645
 Mars -114368-07-04 14:10 J -40051304.05 -40051303.91 -40051303.76 0.1655 0.0971
 Saturn -114366-07-12 09:07 J -40050566.34 -40050566.12 -40050565.90 0.0298 0.0105
 Uranus -114359-08-17 05:31 J -40047973.47 -40047973.27 -40047973.04 0.0144 0.0075
 Uranus -114358-08-22 03:07 J -40047603.59 -40047603.37 -40047603.12 0.0144 0.0053
 Jupiter -114351-02-12 04:05 J -40045237.45 -40045237.33 -40045237.18 0.0517 0.0421
 Saturn -114350-01-17 04:19 J -40044898.55 -40044898.32 -40044898.08 0.0264 0.0104
 Jupiter -114339-02-17 02:53 J -40040849.62 -40040849.38 -40040849.15 0.0518 0.0056
 Jupiter -114327-02-21 21:22 J -40036461.63 -40036461.61 -40036461.59 0.0519 0.0517
 Neptune -114327-07-07 08:53 J -40036326.22 -40036326.13 -40036325.98 0.0088 0.0078
 Neptune -114326-07-09 16:48 J -40035958.99 -40035958.80 -40035958.58 0.0088 0.0049
 Neptune -114325-07-11 00:43 J -40035591.71 -40035591.47 -40035591.22 0.0088 0.0020

Neptune -114324-07-13 08:38 J -40035224.39 -40035224.14 -40035223.89 0.0088 0.0010
 Neptune -114323-07-15 16:19 J -40034857.03 -40034856.82 -40034856.58 0.0088 0.0039
 Neptune -114322-07-18 00:29 J -40034489.63 -40034489.48 -40034489.31 0.0088 0.0068
 Jupiter -114322-08-06 23:31 J -40034469.73 -40034469.52 -40034469.31 0.0509 0.0199
 Saturn -114320-01-23 18:00 J -40033933.79 -40033933.75 -40033933.68 0.0265 0.0258
 Uranus -114319-02-27 00:43 J -40033534.72 -40033534.47 -40033534.22 0.0135 0.0037
 Uranus -114318-03-03 10:34 J -40033165.27 -40033165.06 -40033164.83 0.0134 0.0068
 Jupiter -114310-08-11 07:55 J -40030082.37 -40030082.17 -40030081.96 0.0507 0.0220
 Saturn -114307-07-14 04:48 J -40029014.53 -40029014.30 -40029014.06 0.0298 0.0018
 Saturn -114291-01-18 17:17 J -40023347.04 -40023346.78 -40023346.53 0.0264 0.0015
 Mars -114289-07-06 13:55 J -40022447.10 -40022446.92 -40022446.74 0.1655 0.0255
 Uranus -114275-08-17 17:17 J -40017291.99 -40017291.78 -40017291.55 0.0144 0.0069
 Uranus -114274-08-22 15:07 J -40016922.09 -40016921.87 -40016921.63 0.0144 0.0059
 Jupiter -114256-02-15 19:55 J -40010534.91 -40010534.67 -40010534.44 0.0517 0.0067
 Saturn -114248-07-16 00:58 J -40007462.67 -40007462.46 -40007462.25 0.0297 0.0139
 Neptune -114244-01-13 04:19 J -40006185.51 -40006185.32 -40006185.12 0.0089 0.0060
 Jupiter -114244-02-20 20:38 J -40006146.77 -40006146.64 -40006146.50 0.0519 0.0420
 Neptune -114243-01-15 19:41 J -40005817.91 -40005817.68 -40005817.41 0.0089 0.0029
 Neptune -114242-01-18 12:00 J -40005450.27 -40005450.00 -40005449.73 0.0089 0.0003
 Neptune -114241-01-21 03:07 J -40005082.60 -40005082.37 -40005082.11 0.0089 0.0035
 Neptune -114240-01-22 18:00 J -40004714.90 -40004714.75 -40004714.55 0.0089 0.0066
 Jupiter -114239-08-05 22:19 J -40004154.76 -40004154.57 -40004154.39 0.0509 0.0303
 Uranus -114235-02-27 12:29 J -40002853.22 -40002852.98 -40002852.72 0.0135 0.0031
 Uranus -114234-03-03 22:34 J -40002483.77 -40002483.56 -40002483.34 0.0134 0.0073
 Saturn -114232-01-20 05:02 J -40001795.53 -40001795.29 -40001795.04 0.0264 0.0071
 Jupiter -114227-08-10 06:58 J -39999767.43 -39999767.21 -39999766.98 0.0508 0.0122
 Pluto -114220-12-27 01:41 J -39997071.57 -39997071.43 -39997071.24 0.0063 0.0051
 Saturn -114219-07-10 10:05 J -39996876.22 -39996876.08 -39996875.92 0.0299 0.0229
 Pluto -114219-12-28 16:34 J -39996705.06 -39996704.81 -39996704.56 0.0064 0.0023
 Mars -114210-07-09 14:24 J -39993589.97 -39993589.90 -39993589.83 0.1657 0.1514

Saturn -114203-01-15 07:26 J -39991208.36 -39991208.19 -39991208.01 0.0264 0.0190
 Uranus -114191-08-18 02:38 J -39986610.60 -39986610.39 -39986610.15 0.0144 0.0066
 Uranus -114190-08-23 00:43 J -39986240.69 -39986240.47 -39986240.24 0.0145 0.0062
 Saturn -114189-07-17 18:43 J -39985910.84 -39985910.72 -39985910.59 0.0297 0.0253
 Saturn -114173-01-22 15:22 J -39980244.06 -39980243.86 -39980243.65 0.0264 0.0153
 Jupiter -114173-02-15 20:38 J -39980219.86 -39980219.64 -39980219.41 0.0518 0.0157
 Neptune -114162-07-09 05:46 J -39976058.42 -39976058.26 -39976058.06 0.0088 0.0061
 Jupiter -114161-02-20 20:24 J -39975831.84 -39975831.65 -39975831.47 0.0519 0.0325
 Neptune -114161-07-10 13:26 J -39975691.16 -39975690.94 -39975690.69 0.0088 0.0033
 Saturn -114160-07-12 02:10 J -39975324.63 -39975324.41 -39975324.20 0.0299 0.0118
 Neptune -114160-07-12 21:36 J -39975323.85 -39975323.60 -39975323.35 0.0088 0.0004
 Neptune -114159-07-15 05:02 J -39974956.52 -39974956.29 -39974956.05 0.0088 0.0026
 Neptune -114158-07-17 12:58 J -39974589.14 -39974588.96 -39974588.75 0.0088 0.0055
 Neptune -114157-07-18 21:07 J -39974221.68 -39974221.62 -39974221.53 0.0088 0.0084
 Jupiter -114156-08-04 23:17 J -39973839.67 -39973839.53 -39973839.39 0.0509 0.0394
 Uranus -114152-02-23 13:41 J -39972540.99 -39972540.93 -39972540.86 0.0135 0.0131
 Uranus -114151-02-28 01:12 J -39972171.70 -39972171.45 -39972171.20 0.0135 0.0025
 Uranus -114150-03-04 11:02 J -39971802.24 -39971802.04 -39971801.83 0.0134 0.0079
 Saturn -114144-01-16 16:19 J -39969657.05 -39969656.82 -39969656.59 0.0264 0.0111
 Jupiter -114144-08-09 10:34 J -39969452.29 -39969452.06 -39969451.83 0.0508 0.0038
 Jupiter -114132-08-13 20:10 J -39965064.75 -39965064.66 -39965064.56 0.0507 0.0460
 Pluto -114130-06-26 00:58 J -39964383.70 -39964383.46 -39964383.21 0.0080 0.0002
 Saturn -114114-01-23 23:02 J -39958692.65 -39958692.54 -39958692.40 0.0264 0.0229
 Uranus -114107-08-18 10:34 J -39955929.27 -39955929.06 -39955928.83 0.0144 0.0065
 Uranus -114106-08-23 07:55 J -39955559.38 -39955559.17 -39955558.93 0.0145 0.0063
 Saturn -114101-07-13 13:26 J -39953773.17 -39953772.94 -39953772.70 0.0299 0.0020
 Mars -114092-01-11 02:53 J -39950669.58 -39950669.38 -39950669.18 0.1859 0.0584
 Jupiter -114090-02-14 19:55 J -39949904.87 -39949904.67 -39949904.46 0.0517 0.0253
 Saturn -114085-01-18 22:05 J -39948105.83 -39948105.58 -39948105.32 0.0264 0.0039
 Mars -114084-07-05 21:07 J -39947571.79 -39947571.62 -39947571.45 0.1653 0.0521

Neptune -114080-01-12 08:10 J -39946285.29 -39946285.16 -39946285.00 0.0089 0.0075
 Neptune -114079-01-15 00:14 J -39945917.70 -39945917.49 -39945917.24 0.0089 0.0044
 Neptune -114078-01-17 16:19 J -39945550.07 -39945549.82 -39945549.54 0.0089 0.0012
 Jupiter -114078-02-19 19:41 J -39945516.89 -39945516.68 -39945516.47 0.0518 0.0227
 Neptune -114077-01-20 07:55 J -39945182.42 -39945182.17 -39945181.90 0.0089 0.0020
 Neptune -114076-01-21 23:17 J -39944814.73 -39944814.53 -39944814.30 0.0089 0.0052
 Neptune -114075-01-24 14:24 J -39944446.96 -39944446.90 -39944446.78 0.0089 0.0083
 Jupiter -114073-08-04 04:19 J -39943524.40 -39943524.32 -39943524.24 0.0509 0.0471
 Uranus -114068-02-24 00:29 J -39941859.56 -39941859.48 -39941859.37 0.0135 0.0126
 Uranus -114067-02-28 12:14 J -39941490.24 -39941489.99 -39941489.73 0.0135 0.0020
 Uranus -114066-03-04 22:19 J -39941120.76 -39941120.57 -39941120.37 0.0134 0.0084
 Jupiter -114061-08-08 16:05 J -39939137.06 -39939136.83 -39939136.60 0.0508 0.0037
 Jupiter -114049-08-13 01:41 J -39934749.57 -39934749.43 -39934749.28 0.0507 0.0388
 Saturn -114042-07-15 19:26 J -39932221.91 -39932221.69 -39932221.45 0.0299 0.0066
 Saturn -114026-01-20 01:12 J -39926554.70 -39926554.45 -39926554.20 0.0264 0.0026
 Uranus -114023-08-18 17:02 J -39925248.00 -39925247.79 -39925247.55 0.0144 0.0065
 Uranus -114022-08-23 14:38 J -39924878.11 -39924877.89 -39924877.66 0.0145 0.0062
 Jupiter -114007-02-13 22:48 J -39919589.72 -39919589.55 -39919589.36 0.0517 0.0332
 Mars -114005-07-07 20:38 J -39918714.80 -39918714.64 -39918714.47 0.1654 0.0692

114TH MILLENNIUM BCE

This is a list of transits of Earth in the 114th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
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TRANSIT

TIME

Neptune -113998-07-08 18:14 J -39916157.85 -39916157.74 -39916157.58 0.0088 0.0075
Saturn -113997-01-14 21:22 J -39915967.68 -39915967.61 -39915967.53 0.0262 0.0250
Neptune -113997-07-10 01:55 J -39915790.62 -39915790.42 -39915790.19 0.0088 0.0046
Neptune -113996-07-12 09:36 J -39915423.34 -39915423.10 -39915422.85 0.0088 0.0017
Jupiter -113995-02-19 01:41 J -39915201.65 -39915201.43 -39915201.20 0.0519 0.0161
Neptune -113995-07-14 17:17 J -39915056.02 -39915055.78 -39915055.53 0.0088 0.0012
Neptune -113994-07-17 00:43 J -39914688.68 -39914688.47 -39914688.24 0.0088 0.0042
Neptune -113993-07-18 08:24 J -39914321.28 -39914321.15 -39914320.98 0.0088 0.0071
Uranus -113984-02-24 10:05 J -39911178.17 -39911178.08 -39911177.94 0.0135 0.0122
Uranus -113983-02-28 22:34 J -39910808.82 -39910808.56 -39910808.31 0.0135 0.0015
Saturn -113983-07-16 20:10 J -39910670.87 -39910670.66 -39910670.45 0.0299 0.0135
Uranus -113982-03-05 08:38 J -39910439.32 -39910439.14 -39910438.94 0.0134 0.0088
Jupiter -113978-08-08 23:31 J -39908821.74 -39908821.52 -39908821.29 0.0508 0.0103
Pluto -113971-12-29 14:24 J -39906122.14 -39906121.90 -39906121.62 0.0064 0.0018
Pluto -113970-12-31 05:02 J -39905755.39 -39905755.29 -39905755.16 0.0064 0.0057
Saturn -113967-01-21 01:12 J -39905003.69 -39905003.45 -39905003.20 0.0263 0.0084
Jupiter -113966-08-13 11:02 J -39904434.21 -39904434.04 -39904433.86 0.0507 0.0330
Saturn -113954-07-10 23:02 J -39900084.67 -39900084.54 -39900084.41 0.0300 0.0250
Uranus -113939-08-19 03:36 J -39894566.57 -39894566.35 -39894566.11 0.0144 0.0060
Saturn -113938-01-15 20:38 J -39894416.79 -39894416.64 -39894416.45 0.0262 0.0194
Uranus -113938-08-24 00:29 J -39894196.69 -39894196.48 -39894196.24 0.0144 0.0067
Jupiter -113924-02-13 09:07 J -39889274.27 -39889274.12 -39889273.96 0.0517 0.0381
Saturn -113924-07-17 17:02 J -39889119.96 -39889119.79 -39889119.60 0.0299 0.0195
Neptune -113915-01-14 02:53 J -39886017.56 -39886017.38 -39886017.17 0.0089 0.0059
Neptune -113914-01-16 18:43 J -39885649.95 -39885649.72 -39885649.45 0.0089 0.0028
Neptune -113913-01-19 10:48 J -39885282.31 -39885282.05 -39885281.78 0.0089 0.0005
Neptune -113912-01-21 02:38 J -39884914.63 -39884914.39 -39884914.14 0.0089 0.0036
Jupiter -113912-02-18 09:36 J -39884886.33 -39884886.10 -39884885.86 0.0518 0.0101

Neptune -113911-01-23 17:46 J -39884546.90 -39884546.76 -39884546.56 0.0089 0.0068
 Saturn -113908-01-21 23:17 J -39883452.75 -39883452.53 -39883452.31 0.0263 0.0137
 Uranus -113900-02-24 20:10 J -39880496.77 -39880496.66 -39880496.51 0.0135 0.0117
 Uranus -113899-03-01 08:38 J -39880127.40 -39880127.14 -39880126.88 0.0135 0.0011
 Uranus -113898-03-05 18:29 J -39879757.89 -39879757.73 -39879757.53 0.0134 0.0094
 Saturn -113895-07-11 17:17 J -39878533.94 -39878533.78 -39878533.59 0.0300 0.0197
 Jupiter -113895-08-08 12:00 J -39878506.22 -39878506.00 -39878505.78 0.0508 0.0146
 Jupiter -113883-08-13 00:58 J -39874118.65 -39874118.46 -39874118.27 0.0507 0.0292
 Pluto -113882-06-26 21:36 J -39873800.73 -39873800.60 -39873800.44 0.0081 0.0065
 Pluto -113881-06-27 23:02 J -39873433.62 -39873433.54 -39873433.41 0.0080 0.0073
 Saturn -113879-01-16 18:29 J -39872865.93 -39872865.73 -39872865.50 0.0262 0.0141
 Mars -113879-07-05 04:34 J -39872696.42 -39872696.31 -39872696.20 0.1651 0.1276
 Saturn -113865-07-18 10:19 J -39867569.19 -39867569.07 -39867568.92 0.0299 0.0246
 Uranus -113855-08-19 15:07 J -39863885.09 -39863884.87 -39863884.63 0.0144 0.0054
 Uranus -113854-08-24 12:14 J -39863515.21 -39863514.99 -39863514.77 0.0145 0.0072
 Saturn -113849-01-23 19:26 J -39861901.86 -39861901.69 -39861901.50 0.0263 0.0187
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 Neptune -113834-07-08 06:14 J -39856257.25 -39856257.24 -39856257.20 0.0088 0.0088
 Neptune -113833-07-09 13:12 J -39855890.11 -39855889.95 -39855889.74 0.0088 0.0060
 Neptune -113832-07-11 20:53 J -39855522.85 -39855522.63 -39855522.38 0.0088 0.0031
 Neptune -113831-07-14 04:48 J -39855155.55 -39855155.30 -39855155.05 0.0088 0.0001
 Neptune -113830-07-16 12:00 J -39854788.22 -39854788.00 -39854787.74 0.0088 0.0029
 Jupiter -113829-02-18 14:38 J -39854571.12 -39854570.89 -39854570.65 0.0518 0.0033
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 Neptune -113828-07-20 03:22 J -39854053.38 -39854053.36 -39854053.27 0.0088 0.0087
 Saturn -113820-01-17 15:36 J -39851315.09 -39851314.85 -39851314.61 0.0262 0.0089
 Uranus -113816-02-25 09:07 J -39849815.27 -39849815.12 -39849814.97 0.0135 0.0110
 Uranus -113815-03-01 21:07 J -39849445.87 -39849445.62 -39849445.36 0.0135 0.0004
 Uranus -113814-03-06 07:12 J -39849076.35 -39849076.20 -39849076.01 0.0134 0.0100

Jupiter -113812-08-08 01:26 J -39848190.65 -39848190.44 -39848190.23 0.0508 0.0186
 Mars -113808-01-10 02:10 J -39846939.62 -39846939.41 -39846939.21 0.1862 0.0525
 Saturn -113806-07-20 02:53 J -39846018.40 -39846018.38 -39846018.32 0.0299 0.0294
 Mars -113800-07-07 04:05 J -39843839.51 -39843839.33 -39843839.14 0.1651 0.0092
 Jupiter -113800-08-12 12:14 J -39843803.19 -39843802.99 -39843802.79 0.0507 0.0243
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 Saturn -113761-01-19 12:29 J -39829764.23 -39829763.98 -39829763.72 0.0262 0.0038
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 Neptune -113746-01-25 11:46 J -39824279.09 -39824279.01 -39824278.91 0.0089 0.0083
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 Jupiter -113729-08-07 12:43 J -39817875.17 -39817874.97 -39817874.77 0.0509 0.0235
 Pluto -113723-12-30 10:05 J -39815539.09 -39815539.08 -39815538.98 0.0063 0.0063
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 Saturn -113718-07-14 21:50 J -39813881.82 -39813881.59 -39813881.35 0.0299 0.0043
 Jupiter -113717-08-12 01:41 J -39813487.63 -39813487.43 -39813487.21 0.0507 0.0207
 Saturn -113702-01-20 11:31 J -39808213.27 -39808213.02 -39808212.77 0.0262 0.0018
 Uranus -113687-08-20 18:29 J -39802521.96 -39802521.73 -39802521.48 0.0144 0.0038

Uranus -113686-08-25 15:22 J -39802152.05 -39802151.86 -39802151.65 0.0145 0.0088
 Saturn -113673-01-15 05:46 J -39797626.30 -39797626.26 -39797626.18 0.0261 0.0255
 Neptune -113669-07-08 23:46 J -39795989.63 -39795989.51 -39795989.35 0.0088 0.0074
 Neptune -113668-07-11 07:26 J -39795622.40 -39795622.19 -39795621.97 0.0088 0.0045
 Neptune -113667-07-13 14:53 J -39795255.12 -39795254.88 -39795254.63 0.0088 0.0016
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 Neptune -113665-07-17 06:00 J -39794520.46 -39794520.25 -39794520.02 0.0088 0.0043
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 Jupiter -113663-02-17 09:07 J -39793940.36 -39793940.12 -39793939.89 0.0517 0.0075
 Saturn -113659-07-15 19:55 J -39792330.90 -39792330.67 -39792330.43 0.0299 0.0022
 Jupiter -113651-02-22 04:48 J -39789552.45 -39789552.30 -39789552.14 0.0519 0.0392
 Uranus -113648-02-26 14:53 J -39788452.06 -39788451.88 -39788451.68 0.0135 0.0092
 Uranus -113647-03-03 02:38 J -39788082.65 -39788082.39 -39788082.13 0.0135 0.0014
 Uranus -113646-03-07 12:14 J -39787713.09 -39787712.99 -39787712.84 0.0134 0.0117
 Jupiter -113646-08-08 03:07 J -39787559.56 -39787559.37 -39787559.18 0.0509 0.0271
 Saturn -113643-01-21 12:43 J -39786662.21 -39786661.97 -39786661.72 0.0262 0.0080
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 Pluto -113633-06-28 16:34 J -39782851.05 -39782850.81 -39782850.56 0.0080 0.0005
 Saturn -113614-01-16 08:24 J -39776075.31 -39776075.15 -39776074.96 0.0262 0.0191
 Uranus -113603-08-21 06:58 J -39771840.45 -39771840.21 -39771839.96 0.0144 0.0032
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 Mars -113595-07-06 11:46 J -39768964.16 -39768964.01 -39768963.85 0.1649 0.0826
 Neptune -113586-01-14 20:53 J -39765849.80 -39765849.63 -39765849.41 0.0089 0.0061
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 Neptune -113584-01-19 05:31 J -39765114.54 -39765114.27 -39765114.00 0.0089 0.0003
 Saturn -113584-01-22 17:17 J -39765110.99 -39765110.78 -39765110.57 0.0263 0.0148
 Neptune -113583-01-21 20:53 J -39764746.87 -39764746.63 -39764746.38 0.0089 0.0035
 Neptune -113582-01-24 12:14 J -39764379.14 -39764378.99 -39764378.79 0.0089 0.0067
 Jupiter -113580-02-16 08:24 J -39763625.37 -39763625.15 -39763624.92 0.0517 0.0168

Saturn -113571-07-11 00:00 J -39760193.56 -39760193.50 -39760193.40 0.0300 0.0283
 Jupiter -113568-02-21 11:46 J -39759237.19 -39759237.01 -39759236.83 0.0519 0.0326
 Uranus -113564-02-27 06:00 J -39757770.44 -39757770.25 -39757770.04 0.0135 0.0082
 Uranus -113563-03-03 17:46 J -39757401.01 -39757400.76 -39757400.50 0.0135 0.0022
 Jupiter -113563-08-07 08:38 J -39757244.31 -39757244.14 -39757243.97 0.0509 0.0346
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 Saturn -113555-01-17 14:24 J -39754524.12 -39754523.90 -39754523.67 0.0262 0.0120
 Jupiter -113551-08-11 17:46 J -39752856.99 -39752856.76 -39752856.53 0.0508 0.0078
 Saturn -113541-07-18 06:43 J -39749228.41 -39749228.22 -39749228.04 0.0299 0.0185
 Saturn -113525-01-25 01:12 J -39743559.57 -39743559.45 -39743559.31 0.0263 0.0225
 Mars -113524-01-08 22:34 J -39743209.64 -39743209.56 -39743209.48 0.1864 0.1729
 Uranus -113519-08-21 15:50 J -39741159.08 -39741158.84 -39741158.59 0.0144 0.0030
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 Mars -113516-07-08 11:31 J -39740107.20 -39740107.02 -39740106.85 0.1650 0.0361
 Saturn -113512-07-12 11:46 J -39738642.18 -39738642.01 -39738641.81 0.0300 0.0183
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 Jupiter -113497-02-16 12:00 J -39733310.21 -39733310.00 -39733309.79 0.0517 0.0246
 Saturn -113496-01-18 23:46 J -39732972.76 -39732972.51 -39732972.26 0.0262 0.0042
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 Uranus -113479-03-04 07:26 J -39726719.43 -39726719.19 -39726718.93 0.0135 0.0030
 Uranus -113478-03-08 18:00 J -39726349.80 -39726349.75 -39726349.71 0.0134 0.0132

Pluto -113473-01-01 23:17 J -39724589.75 -39724589.53 -39724589.27 0.0064 0.0029
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 Saturn -113394-07-16 22:48 J -39695538.79 -39695538.55 -39695538.32 0.0299 0.0044
 Mars -113390-07-05 20:10 J -39694088.72 -39694088.66 -39694088.60 0.1647 0.1554
 Pluto -113385-06-29 13:26 J -39692268.04 -39692267.94 -39692267.83 0.0081 0.0072
 Jupiter -113385-08-10 00:00 J -39692226.72 -39692226.50 -39692226.27 0.0509 0.0092
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 Uranus -113312-02-28 20:10 J -39665725.87 -39665725.66 -39665725.41 0.0136 0.0062
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 Saturn -113306-07-13 03:36 J -39663400.52 -39663400.35 -39663400.17 0.0300 0.0199
 Jupiter -113302-08-10 00:00 J -39661911.71 -39661911.50 -39661911.29 0.0510 0.0188
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 Jupiter -113290-08-14 10:34 J -39657524.26 -39657524.06 -39657523.85 0.0508 0.0241
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 Neptune -113253-01-25 03:50 J -39644211.52 -39644211.34 -39644211.15 0.0089 0.0064
 Saturn -113247-07-14 20:24 J -39641848.87 -39641848.65 -39641848.42 0.0300 0.0088
 Jupiter -113236-02-17 23:31 J -39637977.76 -39637977.52 -39637977.29 0.0516 0.0093

Mars -113232-07-09 18:14 J -39636374.89 -39636374.74 -39636374.58 0.1648 0.0791
 Saturn -113231-01-21 02:10 J -39636179.66 -39636179.41 -39636179.16 0.0263 0.0040
 Uranus -113228-03-01 11:02 J -39635044.27 -39635044.04 -39635043.80 0.0136 0.0052
 Uranus -113227-03-05 23:31 J -39634674.76 -39634674.52 -39634674.28 0.0135 0.0052
 Pluto -113224-01-03 10:34 J -39633640.33 -39633640.06 -39633639.79 0.0064 0.0000
 Jupiter -113224-02-22 23:02 J -39633589.70 -39633589.54 -39633589.38 0.0518 0.0384
 Jupiter -113219-08-09 01:55 J -39631596.60 -39631596.42 -39631596.22 0.0510 0.0278
 Jupiter -113207-08-13 12:43 J -39627209.19 -39627208.97 -39627208.75 0.0508 0.0153
 Saturn -113202-01-16 00:14 J -39625592.61 -39625592.49 -39625592.35 0.0261 0.0225
 Saturn -113188-07-16 08:53 J -39620297.36 -39620297.13 -39620296.89 0.0300 0.0012
 Uranus -113184-08-19 03:07 J -39618802.49 -39618802.37 -39618802.21 0.0143 0.0118
 Uranus -113183-08-23 22:48 J -39618432.80 -39618432.55 -39618432.30 0.0144 0.0003
 Uranus -113182-08-28 19:12 J -39618062.80 -39618062.70 -39618062.56 0.0144 0.0127
 Neptune -113175-07-11 16:34 J -39615553.96 -39615553.81 -39615553.61 0.0088 0.0063
 Neptune -113174-07-14 00:14 J -39615186.71 -39615186.49 -39615186.25 0.0088 0.0033
 Neptune -113173-07-15 07:55 J -39614819.41 -39614819.17 -39614818.91 0.0088 0.0005
 Saturn -113172-01-22 08:38 J -39614628.36 -39614628.14 -39614627.90 0.0263 0.0111
 Neptune -113172-07-17 15:36 J -39614452.08 -39614451.85 -39614451.61 0.0088 0.0026
 Neptune -113171-07-19 23:02 J -39614084.72 -39614084.54 -39614084.33 0.0088 0.0055
 Neptune -113170-07-22 06:29 J -39613717.28 -39613717.23 -39613717.13 0.0088 0.0085
 Mars -113161-01-12 15:22 J -39610621.06 -39610620.86 -39610620.66 0.1866 0.0679
 Jupiter -113153-02-17 23:02 J -39607662.76 -39607662.54 -39607662.31 0.0517 0.0185
 Uranus -113144-03-02 03:07 J -39604362.61 -39604362.37 -39604362.12 0.0136 0.0042
 Saturn -113143-01-17 06:14 J -39604041.44 -39604041.24 -39604041.03 0.0261 0.0155
 Uranus -113143-03-06 15:36 J -39603993.08 -39603992.85 -39603992.62 0.0135 0.0062
 Jupiter -113141-02-23 01:55 J -39603274.61 -39603274.42 -39603274.23 0.0518 0.0307
 Pluto -113136-07-02 07:55 J -39601318.40 -39601318.17 -39601317.91 0.0080 0.0013
 Jupiter -113136-08-08 06:43 J -39601281.38 -39601281.22 -39601281.05 0.0510 0.0354
 Saturn -113129-07-17 16:48 J -39598746.02 -39598745.80 -39598745.57 0.0300 0.0099
 Jupiter -113124-08-12 17:02 J -39596894.02 -39596893.79 -39596893.56 0.0509 0.0075

Saturn -113113-01-24 12:29 J -39593077.16 -39593076.98 -39593076.78 0.0263 0.0176
 Jupiter -113112-08-17 03:22 J -39592506.38 -39592506.36 -39592506.32 0.0508 0.0504
 Mars -113106-07-07 03:36 J -39590356.48 -39590356.35 -39590356.21 0.1646 0.1104
 Saturn -113100-07-11 22:34 J -39588159.65 -39588159.56 -39588159.46 0.0300 0.0271
 Uranus -113100-08-19 19:55 J -39588120.82 -39588120.67 -39588120.49 0.0143 0.0107
 Uranus -113099-08-24 15:36 J -39587751.10 -39587750.85 -39587750.60 0.0144 0.0014
 Uranus -113098-08-29 12:14 J -39587381.06 -39587380.99 -39587380.91 0.0144 0.0138
 Neptune -113093-01-14 10:34 J -39585782.14 -39585782.06 -39585781.94 0.0089 0.0082
 Neptune -113092-01-16 02:53 J -39585414.58 -39585414.38 -39585414.14 0.0089 0.0050
 Neptune -113091-01-18 18:58 J -39585046.96 -39585046.71 -39585046.43 0.0089 0.0018
 Neptune -113090-01-21 11:02 J -39584679.29 -39584679.04 -39584678.76 0.0089 0.0015
 Neptune -113089-01-24 02:24 J -39584311.61 -39584311.40 -39584311.15 0.0089 0.0047
 Neptune -113088-01-25 18:14 J -39583943.85 -39583943.74 -39583943.60 0.0089 0.0078
 Saturn -113084-01-18 09:22 J -39582490.35 -39582490.11 -39582489.87 0.0261 0.0092
 Jupiter -113070-02-17 06:00 J -39577347.45 -39577347.25 -39577347.04 0.0516 0.0247
 Saturn -113070-07-19 19:41 J -39577194.87 -39577194.68 -39577194.49 0.0300 0.0173
 Uranus -113060-03-02 20:10 J -39573680.91 -39573680.66 -39573680.40 0.0135 0.0031
 Uranus -113059-03-07 08:10 J -39573311.36 -39573311.16 -39573310.93 0.0135 0.0073
 Jupiter -113058-02-22 06:29 J -39572959.44 -39572959.23 -39572959.02 0.0517 0.0233
 Saturn -113054-01-25 13:41 J -39571526.04 -39571525.93 -39571525.82 0.0263 0.0233
 Jupiter -113053-08-07 14:38 J -39570966.01 -39570965.89 -39570965.76 0.0511 0.0419
 Saturn -113041-07-12 23:31 J -39566608.69 -39566608.52 -39566608.34 0.0300 0.0203
 Jupiter -113041-08-12 02:24 J -39566578.62 -39566578.40 -39566578.17 0.0509 0.0020
 Jupiter -113029-08-16 14:24 J -39562190.99 -39562190.90 -39562190.79 0.0507 0.0454
 Mars -113027-07-09 02:53 J -39561499.57 -39561499.38 -39561499.20 0.1647 0.0078
 Saturn -113025-01-20 10:05 J -39560939.33 -39560939.08 -39560938.83 0.0261 0.0035
 Uranus -113016-08-20 08:53 J -39557439.30 -39557439.13 -39557438.95 0.0143 0.0101
 Uranus -113015-08-25 04:05 J -39557069.58 -39557069.33 -39557069.08 0.0144 0.0020
 Uranus -113014-08-30 00:14 J -39556699.50 -39556699.49 -39556699.45 0.0144 0.0144
 Neptune -113011-07-11 00:29 J -39555653.57 -39555653.48 -39555653.35 0.0088 0.0079

Saturn -113011-07-20 18:14 J -39555643.89 -39555643.74 -39555643.60 0.0300 0.0235

Neptune -113010-07-13 07:55 J -39555286.36 -39555286.17 -39555285.95 0.0088 0.0050

Neptune -113009-07-14 15:22 J -39554919.09 -39554918.86 -39554918.61 0.0088 0.0020

Neptune -113008-07-16 22:48 J -39554551.79 -39554551.55 -39554551.29 0.0088 0.0010

Neptune -113007-07-19 06:14 J -39554184.45 -39554184.24 -39554184.00 0.0088 0.0039

Neptune -113006-07-21 14:10 J -39553817.05 -39553816.91 -39553816.74 0.0088 0.0068

113TH MILLENNIUM BCE

This is a list of transits of Earth in the 113th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-112987-02-16 11:46 J	-39547032.20	-39547032.01	-39547031.82	0.0516	0.0313		
Saturn	-112982-07-14 19:41 J	-39545057.87	-39545057.68	-39545057.46	0.0300	0.0146		
Uranus	-112977-02-27 21:50 J	-39543368.66	-39543368.59	-39543368.49	0.0136	0.0127		
Pluto	-112976-01-04 08:24 J	-39543057.34	-39543057.15	-39543056.91	0.0064	0.0040		
Uranus	-112976-03-03 11:46 J	-39542999.25	-39542999.01	-39542998.75	0.0136	0.0022		
Pluto	-112975-01-05 23:02 J	-39542690.74	-39542690.54	-39542690.28	0.0064	0.0035		
Jupiter	-112975-02-21 10:05 J	-39542644.31	-39542644.08	-39542643.85	0.0518	0.0159		
Uranus	-112975-03-08 00:14 J	-39542629.69	-39542629.49	-39542629.28	0.0135	0.0082		
Jupiter	-112970-08-08 05:02 J	-39540650.39	-39540650.29	-39540650.19	0.0510	0.0455		
Saturn	-112966-01-21 08:38 J	-39539388.40	-39539388.14	-39539387.89	0.0261	0.0019		
Jupiter	-112958-08-12 14:38 J	-39536263.12	-39536262.89	-39536262.66	0.0509	0.0029		

Saturn -112952-07-21 13:41 J -39534092.99 -39534092.93 -39534092.87 0.0300 0.0290
 Mars -112948-07-11 01:26 J -39532642.56 -39532642.44 -39532642.32 0.1647 0.1213
 Jupiter -112946-08-17 00:43 J -39531875.60 -39531875.47 -39531875.33 0.0508 0.0401
 Saturn -112937-01-16 03:07 J -39528801.44 -39528801.37 -39528801.28 0.0261 0.0247
 Uranus -112932-08-20 20:38 J -39526757.81 -39526757.64 -39526757.44 0.0143 0.0095
 Uranus -112931-08-25 15:36 J -39526388.09 -39526387.85 -39526387.59 0.0144 0.0026
 Neptune -112928-01-15 01:41 J -39525514.58 -39525514.43 -39525514.23 0.0089 0.0068
 Neptune -112927-01-17 18:14 J -39525146.97 -39525146.74 -39525146.48 0.0089 0.0036
 Neptune -112926-01-20 10:34 J -39524779.33 -39524779.06 -39524778.79 0.0089 0.0003
 Neptune -112925-01-23 02:10 J -39524411.65 -39524411.41 -39524411.15 0.0089 0.0029
 Neptune -112924-01-24 17:46 J -39524043.94 -39524043.76 -39524043.55 0.0089 0.0061
 Saturn -112923-07-15 14:24 J -39523507.12 -39523506.90 -39523506.67 0.0300 0.0092
 Saturn -112907-01-22 06:43 J -39517837.47 -39517837.22 -39517836.98 0.0261 0.0071
 Jupiter -112904-02-15 17:46 J -39516716.92 -39516716.76 -39516716.60 0.0516 0.0377
 Uranus -112893-02-28 11:31 J -39512687.13 -39512687.02 -39512686.89 0.0136 0.0119
 Jupiter -112892-02-20 22:05 J -39512328.81 -39512328.58 -39512328.35 0.0518 0.0118
 Uranus -112892-03-04 01:41 J -39512317.68 -39512317.43 -39512317.17 0.0136 0.0014
 Uranus -112891-03-08 13:55 J -39511948.10 -39511947.92 -39511947.72 0.0135 0.0090
 Pluto -112888-07-03 05:17 J -39510735.33 -39510735.28 -39510735.21 0.0081 0.0078
 Pluto -112887-07-05 06:29 J -39510368.37 -39510368.23 -39510368.03 0.0080 0.0059
 Jupiter -112887-08-07 16:05 J -39510334.85 -39510334.83 -39510334.80 0.0510 0.0506
 Saturn -112878-01-17 00:43 J -39507250.63 -39507250.47 -39507250.29 0.0261 0.0196
 Mars -112877-01-11 10:05 J -39506891.29 -39506891.08 -39506890.88 0.1867 0.0566
 Jupiter -112875-08-12 02:10 J -39505947.64 -39505947.41 -39505947.18 0.0509 0.0076
 Saturn -112864-07-16 07:55 J -39501956.40 -39501956.17 -39501955.94 0.0300 0.0042
 Jupiter -112863-08-16 14:38 J -39501560.05 -39501559.89 -39501559.73 0.0508 0.0364
 Saturn -112848-01-23 04:48 J -39496286.53 -39496286.30 -39496286.08 0.0261 0.0123
 Uranus -112848-08-21 08:10 J -39496076.33 -39496076.16 -39496075.94 0.0143 0.0089
 Uranus -112847-08-26 03:07 J -39495706.62 -39495706.37 -39495706.13 0.0144 0.0031
 Neptune -112846-07-12 15:07 J -39495386.01 -39495385.87 -39495385.68 0.0088 0.0067

Neptune -112845-07-13 22:48 J -39495018.77 -39495018.55 -39495018.32 0.0088 0.0037
 Neptune -112844-07-16 06:14 J -39494651.49 -39494651.24 -39494650.99 0.0088 0.0008
 Neptune -112843-07-18 13:41 J -39494284.17 -39494283.93 -39494283.69 0.0088 0.0022
 Neptune -112842-07-20 20:38 J -39493916.82 -39493916.64 -39493916.42 0.0088 0.0052
 Neptune -112841-07-22 04:34 J -39493549.39 -39493549.31 -39493549.19 0.0088 0.0081
 Mars -112822-07-08 11:31 J -39486624.18 -39486624.02 -39486623.85 0.1646 0.0649
 Jupiter -112821-02-16 04:34 J -39486401.44 -39486401.31 -39486401.17 0.0516 0.0423
 Saturn -112819-01-17 22:48 J -39485699.75 -39485699.55 -39485699.33 0.0261 0.0144
 Jupiter -112809-02-21 05:46 J -39482013.50 -39482013.26 -39482013.03 0.0517 0.0059
 Uranus -112809-02-28 22:19 J -39482005.69 -39482005.57 -39482005.41 0.0136 0.0114
 Uranus -112808-03-04 13:12 J -39481636.21 -39481635.95 -39481635.69 0.0136 0.0007
 Uranus -112807-03-09 01:41 J -39481266.60 -39481266.43 -39481266.24 0.0135 0.0097
 Saturn -112805-07-17 02:10 J -39480405.65 -39480405.41 -39480405.18 0.0300 0.0011
 Jupiter -112792-08-11 18:14 J -39475631.96 -39475631.74 -39475631.51 0.0509 0.0105
 Saturn -112789-01-25 03:36 J -39474735.53 -39474735.35 -39474735.16 0.0261 0.0177
 Jupiter -112780-08-16 03:50 J -39471244.52 -39471244.34 -39471244.16 0.0508 0.0320
 Neptune -112764-01-14 00:43 J -39465614.51 -39465614.47 -39465614.38 0.0089 0.0086
 Uranus -112764-08-21 23:17 J -39465394.73 -39465394.53 -39465394.32 0.0143 0.0079
 Neptune -112763-01-16 17:02 J -39465246.98 -39465246.79 -39465246.55 0.0089 0.0054
 Uranus -112763-08-26 17:46 J -39465025.00 -39465024.76 -39465024.52 0.0143 0.0040
 Neptune -112762-01-19 09:50 J -39464879.35 -39464879.09 -39464878.83 0.0089 0.0021
 Neptune -112761-01-22 01:55 J -39464511.68 -39464511.42 -39464511.15 0.0089 0.0011
 Saturn -112760-01-18 22:19 J -39464148.81 -39464148.57 -39464148.33 0.0261 0.0088
 Neptune -112760-01-23 17:46 J -39464143.99 -39464143.76 -39464143.52 0.0089 0.0043
 Neptune -112759-01-26 09:36 J -39463776.23 -39463776.10 -39463775.95 0.0089 0.0075
 Saturn -112746-07-18 23:17 J -39458854.76 -39458854.53 -39458854.30 0.0300 0.0070
 Mars -112743-07-10 10:34 J -39457767.23 -39457767.06 -39457766.89 0.1646 0.0511
 Jupiter -112738-02-15 05:17 J -39456086.31 -39456086.28 -39456086.25 0.0515 0.0509
 Saturn -112730-01-26 04:19 J -39453184.42 -39453184.32 -39453184.20 0.0262 0.0236
 Pluto -112727-01-06 20:38 J -39452107.90 -39452107.64 -39452107.36 0.0064 0.0009

Jupiter -112726-02-20 07:55 J -39451698.40 -39451698.17 -39451697.93 0.0517 0.0023
 Uranus -112725-02-29 11:02 J -39451324.18 -39451324.04 -39451323.85 0.0136 0.0107
 Uranus -112724-03-05 02:10 J -39450954.67 -39450954.41 -39450954.15 0.0136 0.0000
 Uranus -112723-03-09 14:24 J -39450585.05 -39450584.90 -39450584.72 0.0135 0.0103
 Jupiter -112714-02-25 12:00 J -39447310.09 -39447310.00 -39447309.90 0.0519 0.0475
 Jupiter -112709-08-11 03:07 J -39445316.58 -39445316.37 -39445316.15 0.0509 0.0166
 Saturn -112701-01-20 23:46 J -39442597.76 -39442597.51 -39442597.25 0.0261 0.0028
 Jupiter -112697-08-15 12:00 J -39440929.19 -39440929.00 -39440928.80 0.0508 0.0259
 Saturn -112687-07-19 23:46 J -39437303.71 -39437303.51 -39437303.29 0.0300 0.0140
 Neptune -112682-07-11 23:02 J -39435485.60 -39435485.54 -39435485.42 0.0088 0.0083
 Neptune -112681-07-13 06:14 J -39435118.41 -39435118.24 -39435118.02 0.0088 0.0054
 Neptune -112680-07-15 14:10 J -39434751.15 -39434750.91 -39434750.67 0.0088 0.0024
 Uranus -112680-08-22 14:24 J -39434713.10 -39434712.90 -39434712.67 0.0143 0.0069
 Neptune -112679-07-17 21:36 J -39434383.85 -39434383.60 -39434383.35 0.0088 0.0006
 Uranus -112679-08-27 08:53 J -39434343.37 -39434343.13 -39434342.90 0.0143 0.0050
 Neptune -112678-07-20 04:48 J -39434016.52 -39434016.30 -39434016.07 0.0089 0.0035
 Neptune -112677-07-21 11:46 J -39433649.15 -39433649.01 -39433648.81 0.0089 0.0065
 Saturn -112658-07-14 00:43 J -39426717.61 -39426717.47 -39426717.31 0.0301 0.0233
 Jupiter -112643-02-19 14:24 J -39421383.13 -39421382.90 -39421382.66 0.0517 0.0086
 Saturn -112642-01-22 03:50 J -39421046.59 -39421046.34 -39421046.08 0.0261 0.0038
 Uranus -112641-03-01 00:29 J -39420642.64 -39420642.48 -39420642.29 0.0136 0.0099
 Uranus -112640-03-05 15:22 J -39420273.12 -39420272.86 -39420272.61 0.0136 0.0008
 Uranus -112639-03-10 04:05 J -39419903.48 -39419903.33 -39419903.19 0.0135 0.0111
 Pluto -112639-07-06 01:26 J -39419785.68 -39419785.44 -39419785.19 0.0080 0.0014
 Jupiter -112631-02-24 14:53 J -39416995.03 -39416994.88 -39416994.72 0.0518 0.0395
 Saturn -112628-07-21 05:46 J -39415752.41 -39415752.26 -39415752.10 0.0300 0.0221
 Jupiter -112626-08-11 10:48 J -39415001.24 -39415001.05 -39415000.84 0.0510 0.0231
 Mars -112617-07-06 20:24 J -39411748.75 -39411748.65 -39411748.55 0.1645 0.1335
 Jupiter -112614-08-15 22:34 J -39410613.76 -39410613.56 -39410613.35 0.0509 0.0205
 Saturn -112613-01-17 05:46 J -39410459.40 -39410459.26 -39410459.09 0.0261 0.0209

Neptune -112599-01-15 17:17 J -39405346.93 -39405346.78 -39405346.61 0.0089 0.0071
 Saturn -112599-07-15 09:36 J -39405166.29 -39405166.10 -39405165.88 0.0300 0.0143
 Neptune -112598-01-18 09:22 J -39404979.33 -39404979.11 -39404978.85 0.0089 0.0039
 Neptune -112597-01-21 01:55 J -39404611.68 -39404611.42 -39404611.15 0.0089 0.0007
 Neptune -112596-01-22 18:00 J -39404244.00 -39404243.75 -39404243.49 0.0089 0.0026
 Uranus -112596-08-23 06:43 J -39404031.43 -39404031.22 -39404030.98 0.0143 0.0059
 Neptune -112595-01-25 09:36 J -39403876.29 -39403876.10 -39403875.88 0.0089 0.0058
 Uranus -112595-08-28 00:43 J -39403661.68 -39403661.47 -39403661.23 0.0143 0.0061
 Mars -112593-01-10 03:50 J -39403161.38 -39403161.34 -39403161.30 0.1868 0.1828
 Saturn -112583-01-23 10:48 J -39399495.28 -39399495.05 -39399494.82 0.0262 0.0109
 Jupiter -112560-02-18 09:07 J -39391068.33 -39391068.12 -39391067.89 0.0516 0.0199
 Uranus -112557-03-01 16:05 J -39389961.02 -39389960.83 -39389960.63 0.0136 0.0089
 Uranus -112556-03-06 06:29 J -39389591.48 -39389591.23 -39389590.97 0.0136 0.0017
 Uranus -112555-03-10 18:43 J -39389221.82 -39389221.72 -39389221.59 0.0135 0.0120
 Saturn -112554-01-18 14:10 J -39388908.13 -39388907.91 -39388907.69 0.0262 0.0134
 Jupiter -112548-02-23 10:05 J -39386680.27 -39386680.08 -39386679.88 0.0517 0.0284
 Jupiter -112543-08-10 15:36 J -39384686.02 -39384685.85 -39384685.66 0.0510 0.0311
 Saturn -112540-07-17 00:14 J -39383614.72 -39383614.49 -39383614.25 0.0300 0.0038
 Mars -112538-07-09 19:55 J -39382891.85 -39382891.67 -39382891.49 0.1645 0.0189
 Jupiter -112531-08-15 00:58 J -39380298.68 -39380298.46 -39380298.24 0.0509 0.0116
 Saturn -112524-01-24 20:38 J -39377943.82 -39377943.64 -39377943.46 0.0262 0.0186
 Neptune -112517-07-12 14:38 J -39375218.02 -39375217.89 -39375217.72 0.0088 0.0070
 Neptune -112516-07-14 21:50 J -39374850.79 -39374850.59 -39374850.35 0.0088 0.0041
 Neptune -112515-07-17 05:31 J -39374483.51 -39374483.27 -39374483.02 0.0088 0.0011
 Mars -112514-01-14 02:24 J -39374302.46 -39374302.40 -39374302.35 0.1868 0.1802
 Neptune -112514-07-19 12:43 J -39374116.20 -39374115.97 -39374115.72 0.0089 0.0019
 Neptune -112513-07-20 20:24 J -39373748.86 -39373748.65 -39373748.44 0.0089 0.0048
 Neptune -112512-07-23 03:36 J -39373381.45 -39373381.35 -39373381.21 0.0089 0.0078
 Uranus -112512-08-23 21:22 J -39373349.83 -39373349.61 -39373349.37 0.0143 0.0050
 Uranus -112511-08-28 15:22 J -39372980.07 -39372979.86 -39372979.63 0.0143 0.0069

Saturn -112495-01-20 00:29 J -39367356.73 -39367356.48 -39367356.23 0.0262 0.0055
 Saturn -112481-07-18 18:00 J -39362062.97 -39362062.75 -39362062.52 0.0300 0.0074
 Pluto -112479-01-07 20:24 J -39361524.82 -39361524.65 -39361524.44 0.0064 0.0045
 Pluto -112478-01-09 11:02 J -39361158.25 -39361158.04 -39361157.77 0.0064 0.0030
 Jupiter -112477-02-18 08:38 J -39360753.33 -39360753.14 -39360752.94 0.0516 0.0292
 Uranus -112473-03-02 06:00 J -39359279.45 -39359279.25 -39359279.03 0.0136 0.0081
 Uranus -112472-03-06 20:10 J -39358909.90 -39358909.66 -39358909.39 0.0136 0.0025
 Uranus -112471-03-11 08:24 J -39358540.21 -39358540.15 -39358540.04 0.0135 0.0128
 Jupiter -112465-02-23 10:34 J -39356365.27 -39356365.06 -39356364.83 0.0517 0.0195
 Jupiter -112460-08-09 15:36 J -39354370.98 -39354370.85 -39354370.71 0.0511 0.0408
 Mars -112459-07-11 18:43 J -39354034.86 -39354034.72 -39354034.57 0.1645 0.0953
 Saturn -112452-07-13 03:36 J -39351476.42 -39351476.35 -39351476.26 0.0301 0.0280
 Jupiter -112448-08-14 01:55 J -39349983.65 -39349983.42 -39349983.19 0.0510 0.0023
 Saturn -112436-01-21 12:43 J -39345805.23 -39345804.97 -39345804.72 0.0262 0.0026
 Jupiter -112436-08-18 12:00 J -39345596.10 -39345596.00 -39345595.90 0.0509 0.0452
 Neptune -112435-01-14 18:00 J -39345446.77 -39345446.75 -39345446.70 0.0089 0.0088
 Neptune -112434-01-17 10:19 J -39345079.26 -39345079.07 -39345078.85 0.0089 0.0056
 Neptune -112433-01-20 02:38 J -39344711.63 -39344711.39 -39344711.12 0.0089 0.0024
 Neptune -112432-01-21 18:58 J -39344343.97 -39344343.71 -39344343.44 0.0089 0.0009
 Neptune -112431-01-24 11:02 J -39343976.28 -39343976.04 -39343975.80 0.0089 0.0041
 Neptune -112430-01-27 02:53 J -39343608.52 -39343608.38 -39343608.22 0.0089 0.0073
 Uranus -112428-08-24 09:36 J -39342668.34 -39342668.10 -39342667.86 0.0143 0.0044
 Uranus -112427-08-29 03:22 J -39342298.56 -39342298.36 -39342298.13 0.0143 0.0074
 Saturn -112422-07-21 13:55 J -39340511.10 -39340510.92 -39340510.74 0.0299 0.0189
 Saturn -112407-01-16 11:31 J -39335218.13 -39335218.02 -39335217.88 0.0261 0.0229
 Jupiter -112394-02-17 06:29 J -39330438.37 -39330438.23 -39330438.06 0.0515 0.0389
 Saturn -112393-07-14 22:34 J -39329924.75 -39329924.56 -39329924.36 0.0300 0.0166
 Pluto -112391-07-07 00:29 J -39329202.57 -39329202.48 -39329202.37 0.0080 0.0074
 Pluto -112390-07-09 01:55 J -39328835.56 -39328835.42 -39328835.25 0.0080 0.0062
 Uranus -112389-03-02 19:41 J -39328597.89 -39328597.68 -39328597.45 0.0136 0.0073

Uranus -112388-03-07 10:05 J -39328228.32 -39328228.08 -39328227.82 0.0136 0.0032
 Uranus -112387-03-11 22:19 J -39327858.58 -39327858.57 -39327858.52 0.0135 0.0135
 Jupiter -112382-02-22 03:50 J -39326050.57 -39326050.34 -39326050.10 0.0516 0.0076
 Saturn -112377-01-24 00:43 J -39324253.70 -39324253.47 -39324253.23 0.0262 0.0107
 Jupiter -112377-08-08 17:31 J -39324055.81 -39324055.77 -39324055.72 0.0512 0.0501
 Jupiter -112365-08-13 02:38 J -39319668.61 -39319668.39 -39319668.16 0.0510 0.0074
 Neptune -112353-07-12 00:00 J -39315317.54 -39315317.50 -39315317.41 0.0088 0.0086
 Jupiter -112353-08-17 12:43 J -39315281.13 -39315280.97 -39315280.81 0.0508 0.0357
 Neptune -112352-07-14 07:41 J -39314950.37 -39314950.18 -39314949.99 0.0088 0.0056
 Neptune -112351-07-16 14:38 J -39314583.12 -39314582.89 -39314582.64 0.0088 0.0027
 Neptune -112350-07-18 22:05 J -39314215.83 -39314215.58 -39314215.33 0.0089 0.0003
 Neptune -112349-07-20 05:17 J -39313848.50 -39313848.28 -39313848.04 0.0089 0.0033
 Saturn -112348-01-18 00:14 J -39313666.69 -39313666.49 -39313666.27 0.0261 0.0148
 Neptune -112348-07-22 12:58 J -39313481.14 -39313480.96 -39313480.79 0.0089 0.0062
 Uranus -112344-08-24 20:10 J -39311986.89 -39311986.66 -39311986.41 0.0143 0.0040
 Uranus -112343-08-29 13:41 J -39311617.12 -39311616.93 -39311616.70 0.0143 0.0079
 Saturn -112334-07-17 16:48 J -39308373.03 -39308372.80 -39308372.57 0.0300 0.0054
 Mars -112333-07-08 05:17 J -39308016.44 -39308016.28 -39308016.13 0.1644 0.0865
 Saturn -112318-01-25 11:46 J -39302702.18 -39302702.01 -39302701.82 0.0262 0.0185
 Jupiter -112311-02-16 01:12 J -39300123.49 -39300123.45 -39300123.38 0.0514 0.0500
 Uranus -112305-03-03 05:02 J -39297916.50 -39297916.29 -39297916.06 0.0137 0.0069
 Uranus -112304-03-07 19:41 J -39297546.93 -39297546.68 -39297546.43 0.0136 0.0036
 Jupiter -112299-02-21 01:41 J -39295735.67 -39295735.43 -39295735.20 0.0516 0.0026
 Saturn -112289-01-20 11:02 J -39292115.28 -39292115.04 -39292114.78 0.0261 0.0071
 Jupiter -112287-02-26 03:50 J -39291347.43 -39291347.34 -39291347.23 0.0518 0.0466
 Jupiter -112282-08-13 04:34 J -39289353.53 -39289353.31 -39289353.09 0.0510 0.0161
 Saturn -112275-07-19 07:12 J -39286821.43 -39286821.20 -39286820.97 0.0300 0.0048
 Neptune -112270-01-16 11:46 J -39285179.13 -39285179.01 -39285178.82 0.0089 0.0073
 Jupiter -112270-08-17 14:10 J -39284966.10 -39284965.91 -39284965.72 0.0509 0.0267
 Neptune -112269-01-19 04:34 J -39284811.54 -39284811.31 -39284811.06 0.0089 0.0040

Neptune -112268-01-20 20:38 J -39284443.90 -39284443.64 -39284443.36 0.0089 0.0008
 Neptune -112267-01-23 12:43 J -39284076.21 -39284075.97 -39284075.70 0.0089 0.0025
 Neptune -112266-01-26 04:34 J -39283708.49 -39283708.31 -39283708.09 0.0089 0.0057
 Uranus -112260-08-25 07:41 J -39281305.43 -39281305.18 -39281304.94 0.0142 0.0034
 Saturn -112259-01-26 20:53 J -39281150.67 -39281150.63 -39281150.58 0.0262 0.0258
 Uranus -112259-08-30 01:12 J -39280935.64 -39280935.45 -39280935.24 0.0143 0.0083
 Mars -112254-07-11 04:05 J -39279159.51 -39279159.33 -39279159.15 0.1644 0.0266
 Pluto -112230-01-10 11:17 J -39270575.30 -39270575.03 -39270574.76 0.0064 0.0008
 Mars -112230-01-12 20:38 J -39270572.85 -39270572.64 -39270572.44 0.1869 0.0563
 Saturn -112230-01-21 19:41 J -39270563.94 -39270563.68 -39270563.43 0.0261 0.0002
 Uranus -112221-03-03 14:10 J -39267235.12 -39267234.91 -39267234.67 0.0137 0.0065
 Uranus -112220-03-08 05:17 J -39266865.52 -39266865.28 -39266865.03 0.0136 0.0040
 Jupiter -112216-02-20 04:19 J -39265420.55 -39265420.32 -39265420.08 0.0516 0.0101
 Saturn -112216-07-20 16:34 J -39265270.01 -39265269.81 -39265269.60 0.0300 0.0137
 Jupiter -112204-02-25 04:19 J -39261032.48 -39261032.32 -39261032.16 0.0517 0.0375
 Saturn -112201-01-16 19:12 J -39259976.76 -39259976.70 -39259976.61 0.0261 0.0248
 Jupiter -112199-08-12 08:53 J -39259038.32 -39259038.13 -39259037.92 0.0511 0.0241
 Neptune -112188-07-13 17:02 J -39255049.91 -39255049.79 -39255049.62 0.0088 0.0072
 Saturn -112187-07-15 00:14 J -39254683.64 -39254683.49 -39254683.33 0.0301 0.0222
 Neptune -112187-07-16 00:43 J -39254682.68 -39254682.47 -39254682.25 0.0088 0.0042
 Jupiter -112187-08-16 19:41 J -39254650.89 -39254650.68 -39254650.46 0.0509 0.0195
 Neptune -112186-07-18 08:10 J -39254315.40 -39254315.16 -39254314.91 0.0088 0.0012
 Neptune -112185-07-19 15:22 J -39253948.10 -39253947.86 -39253947.61 0.0088 0.0017
 Neptune -112184-07-21 22:48 J -39253580.76 -39253580.55 -39253580.34 0.0089 0.0047
 Neptune -112183-07-24 05:46 J -39253213.36 -39253213.26 -39253213.11 0.0089 0.0077
 Uranus -112177-08-21 05:02 J -39250993.33 -39250993.29 -39250993.24 0.0142 0.0139
 Uranus -112176-08-25 21:07 J -39250623.86 -39250623.62 -39250623.37 0.0142 0.0025
 Mars -112175-07-13 03:07 J -39250302.46 -39250302.37 -39250302.27 0.1644 0.1399
 Uranus -112175-08-30 14:53 J -39250254.07 -39250253.88 -39250253.69 0.0143 0.0091
 Saturn -112171-01-23 00:43 J -39249012.72 -39249012.47 -39249012.22 0.0261 0.0065

Saturn -112157-07-21 21:36 J -39243718.76 -39243718.60 -39243718.43 0.0300 0.0214
 Saturn -112142-01-17 22:48 J -39238425.73 -39238425.55 -39238425.37 0.0261 0.0187
 Pluto -112142-07-10 00:29 J -39238252.73 -39238252.48 -39238252.23 0.0080 0.0001
 Uranus -112137-03-03 23:02 J -39236553.75 -39236553.54 -39236553.29 0.0137 0.0062
 Uranus -112136-03-08 14:10 J -39236184.14 -39236183.91 -39236183.65 0.0136 0.0044
 Jupiter -112133-02-20 06:43 J -39235105.44 -39235105.22 -39235105.00 0.0515 0.0180
 Mars -112128-07-07 15:22 J -39233140.93 -39233140.86 -39233140.80 0.1644 0.1525
 Saturn -112128-07-16 02:38 J -39233132.59 -39233132.39 -39233132.18 0.0301 0.0151
 Jupiter -112121-02-25 05:31 J -39230717.46 -39230717.27 -39230717.07 0.0517 0.0293
 Jupiter -112116-08-11 20:10 J -39228722.84 -39228722.66 -39228722.47 0.0511 0.0289
 Saturn -112112-01-24 02:53 J -39227461.60 -39227461.38 -39227461.15 0.0261 0.0124
 Neptune -112106-01-15 15:22 J -39225278.87 -39225278.86 -39225278.81 0.0089 0.0088
 Neptune -112105-01-18 07:26 J -39224911.37 -39224911.19 -39224910.96 0.0089 0.0056
 Neptune -112104-01-20 00:14 J -39224543.75 -39224543.49 -39224543.23 0.0089 0.0023
 Jupiter -112104-08-16 05:31 J -39224335.49 -39224335.27 -39224335.05 0.0509 0.0138
 Neptune -112103-01-22 16:19 J -39224176.09 -39224175.82 -39224175.55 0.0089 0.0009
 Neptune -112102-01-25 07:55 J -39223808.38 -39223808.17 -39223807.91 0.0089 0.0042
 Neptune -112101-01-27 23:31 J -39223440.64 -39223440.52 -39223440.34 0.0089 0.0074
 Saturn -112098-07-23 21:22 J -39222167.69 -39222167.61 -39222167.52 0.0300 0.0277
 Uranus -112093-08-21 18:58 J -39220311.78 -39220311.71 -39220311.60 0.0142 0.0131
 Uranus -112092-08-26 11:17 J -39219942.27 -39219942.03 -39219941.78 0.0142 0.0018
 Uranus -112091-08-31 05:02 J -39219572.46 -39219572.29 -39219572.11 0.0143 0.0099
 Saturn -112083-01-18 22:34 J -39216874.77 -39216874.56 -39216874.33 0.0261 0.0133
 Saturn -112069-07-17 00:58 J -39211581.69 -39211581.46 -39211581.24 0.0301 0.0091
 Saturn -112053-01-26 02:10 J -39205910.58 -39205910.41 -39205910.21 0.0261 0.0178
 Uranus -112053-03-04 11:02 J -39205872.27 -39205872.04 -39205871.80 0.0137 0.0055
 Uranus -112052-03-09 02:10 J -39205502.65 -39205502.41 -39205502.17 0.0136 0.0050
 Jupiter -112050-02-19 11:17 J -39204790.24 -39204790.03 -39204789.82 0.0516 0.0248
 Mars -112049-07-09 14:10 J -39204284.09 -39204283.91 -39204283.74 0.1644 0.0397
 Jupiter -112038-02-24 15:36 J -39200402.06 -39200401.85 -39200401.64 0.0517 0.0245

Jupiter -112033-08-11 06:00 J -39198407.41 -39198407.25 -39198407.08 0.0511 0.0345
 Saturn -112024-01-19 20:53 J -39195323.87 -39195323.63 -39195323.38 0.0261 0.0081
 Neptune -112024-07-13 04:34 J -39195149.36 -39195149.31 -39195149.25 0.0088 0.0086
 Neptune -112023-07-15 11:31 J -39194782.20 -39194782.02 -39194781.82 0.0088 0.0057
 Neptune -112022-07-17 18:58 J -39194414.93 -39194414.71 -39194414.46 0.0088 0.0027
 Neptune -112021-07-19 02:24 J -39194047.64 -39194047.40 -39194047.15 0.0088 0.0003
 Jupiter -112021-08-15 15:36 J -39194020.08 -39194019.85 -39194019.63 0.0510 0.0085
 Neptune -112020-07-21 09:22 J -39193680.32 -39193680.11 -39193679.86 0.0088 0.0033
 Neptune -112019-07-23 17:02 J -39193312.96 -39193312.79 -39193312.60 0.0089 0.0062
 Saturn -112010-07-18 19:26 J -39190030.92 -39190030.69 -39190030.45 0.0301 0.0039
 Uranus -112009-08-22 09:07 J -39189630.22 -39189630.12 -39189629.97 0.0142 0.0123
 Uranus -112008-08-27 01:41 J -39189260.68 -39189260.43 -39189260.18 0.0142 0.0009
 Uranus -112007-08-31 19:26 J -39188890.85 -39188890.69 -39188890.52 0.0143 0.0107

112TH MILLENNIUM BCE

This is a list of transits of Earth in the 112th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-111994-01-26 23:46 J	-39184359.62	-39184359.51	-39184359.37	0.0261	0.0228		
Pluto	-111982-01-11 13:55 J	-39179992.11	-39179991.92	-39179991.67	0.0064	0.0038		
Pluto	-111981-01-13 04:48 J	-39179625.49	-39179625.30	-39179625.05	0.0064	0.0038		
Mars	-111970-07-12 12:58 J	-39175427.12	-39175426.96	-39175426.80	0.1644	0.0724		

Uranus -111969-03-04 22:19 J -39175190.80 -39175190.57 -39175190.32 0.0137 0.0050
 Uranus -111968-03-09 13:12 J -39174821.17 -39174820.95 -39174820.70 0.0136 0.0055
 Jupiter -111967-02-18 21:50 J -39174474.79 -39174474.59 -39174474.39 0.0515 0.0294
 Saturn -111965-01-21 17:46 J -39173773.01 -39173772.76 -39173772.50 0.0261 0.0033
 Jupiter -111955-02-23 23:31 J -39170086.74 -39170086.52 -39170086.30 0.0516 0.0187
 Saturn -111951-07-19 13:12 J -39168480.18 -39168479.95 -39168479.71 0.0301 0.0011
 Jupiter -111950-08-11 19:12 J -39168091.84 -39168091.70 -39168091.54 0.0512 0.0385
 Mars -111946-01-11 13:41 J -39166843.13 -39166842.93 -39166842.73 0.1869 0.0690
 Neptune -111941-01-17 10:48 J -39165011.18 -39165011.05 -39165010.86 0.0089 0.0072
 Neptune -111940-01-19 03:36 J -39164643.58 -39164643.35 -39164643.09 0.0089 0.0039
 Neptune -111939-01-21 20:10 J -39164275.92 -39164275.66 -39164275.39 0.0089 0.0006
 Neptune -111938-01-24 12:14 J -39163908.24 -39163907.99 -39163907.73 0.0089 0.0026
 Jupiter -111938-08-16 08:10 J -39163704.38 -39163704.16 -39163703.93 0.0510 0.0058
 Neptune -111937-01-27 03:36 J -39163540.52 -39163540.35 -39163540.12 0.0089 0.0059
 Jupiter -111926-08-20 17:17 J -39159316.84 -39159316.78 -39159316.70 0.0508 0.0482
 Uranus -111925-08-22 21:36 J -39158948.72 -39158948.60 -39158948.44 0.0142 0.0117
 Uranus -111924-08-27 13:55 J -39158579.16 -39158578.92 -39158578.66 0.0142 0.0005
 Uranus -111923-09-01 07:26 J -39158209.33 -39158209.19 -39158209.02 0.0143 0.0113
 Saturn -111906-01-22 14:38 J -39152222.14 -39152221.89 -39152221.63 0.0261 0.0017
 Pluto -111894-07-11 02:53 J -39147669.56 -39147669.38 -39147669.16 0.0080 0.0048
 Saturn -111892-07-20 06:58 J -39146929.44 -39146929.21 -39146928.98 0.0301 0.0062
 Uranus -111885-03-05 10:48 J -39144509.28 -39144509.05 -39144508.79 0.0137 0.0044
 Jupiter -111884-02-18 00:00 J -39144159.66 -39144159.50 -39144159.33 0.0515 0.0373
 Uranus -111884-03-10 01:55 J -39144139.64 -39144139.42 -39144139.18 0.0136 0.0061
 Saturn -111877-01-17 12:29 J -39141635.08 -39141634.98 -39141634.85 0.0260 0.0232
 Jupiter -111872-02-23 03:36 J -39139771.58 -39139771.35 -39139771.11 0.0517 0.0117
 Jupiter -111867-08-11 09:36 J -39137776.22 -39137776.10 -39137775.97 0.0511 0.0425
 Neptune -111859-07-15 00:00 J -39134881.63 -39134881.50 -39134881.33 0.0088 0.0071
 Neptune -111858-07-17 06:58 J -39134514.41 -39134514.21 -39134513.97 0.0088 0.0042
 Neptune -111857-07-18 14:38 J -39134147.13 -39134146.89 -39134146.64 0.0088 0.0011

Neptune -111856-07-20 21:50 J -39133779.82 -39133779.59 -39133779.34 0.0088 0.0018
 Neptune -111855-07-23 05:31 J -39133412.48 -39133412.27 -39133412.06 0.0088 0.0048
 Jupiter -111855-08-15 19:12 J -39133388.93 -39133388.70 -39133388.47 0.0510 0.0005
 Neptune -111854-07-25 12:29 J -39133045.08 -39133044.98 -39133044.84 0.0089 0.0078
 Saturn -111847-01-23 12:43 J -39130671.21 -39130670.97 -39130670.71 0.0261 0.0069
 Mars -111844-07-09 00:00 J -39129408.64 -39129408.50 -39129408.36 0.1644 0.1055
 Jupiter -111843-08-20 04:19 J -39129001.44 -39129001.32 -39129001.20 0.0509 0.0430
 Uranus -111841-08-23 08:10 J -39128267.30 -39128267.16 -39128267.01 0.0142 0.0113
 Uranus -111840-08-28 00:00 J -39127897.75 -39127897.50 -39127897.25 0.0142 0.0002
 Uranus -111839-09-01 17:02 J -39127527.91 -39127527.79 -39127527.62 0.0143 0.0116
 Saturn -111833-07-21 03:07 J -39125378.59 -39125378.37 -39125378.15 0.0300 0.0118
 Saturn -111818-01-18 11:46 J -39120084.19 -39120084.01 -39120083.81 0.0261 0.0178
 Saturn -111804-07-15 00:00 J -39114792.62 -39114792.50 -39114792.38 0.0301 0.0256
 Jupiter -111801-02-18 09:36 J -39113844.22 -39113844.10 -39113843.95 0.0515 0.0424
 Uranus -111801-03-05 20:24 J -39113827.89 -39113827.65 -39113827.40 0.0137 0.0040
 Uranus -111800-03-10 11:46 J -39113458.24 -39113458.01 -39113457.78 0.0136 0.0064
 Jupiter -111789-02-23 13:12 J -39109456.19 -39109455.95 -39109455.71 0.0516 0.0065
 Saturn -111788-01-24 13:12 J -39109120.17 -39109119.95 -39109119.72 0.0261 0.0125
 Jupiter -111784-08-10 18:14 J -39107460.80 -39107460.74 -39107460.67 0.0512 0.0486
 Neptune -111777-01-16 15:22 J -39105110.89 -39105110.86 -39105110.77 0.0089 0.0087
 Neptune -111776-01-18 08:10 J -39104743.35 -39104743.16 -39104742.92 0.0089 0.0054
 Neptune -111775-01-21 00:58 J -39104375.71 -39104375.46 -39104375.19 0.0089 0.0021
 Neptune -111774-01-23 17:02 J -39104008.04 -39104007.79 -39104007.51 0.0089 0.0012
 Saturn -111774-07-23 02:24 J -39103827.58 -39103827.40 -39103827.21 0.0300 0.0182
 Neptune -111773-01-26 09:22 J -39103640.33 -39103640.11 -39103639.87 0.0089 0.0044
 Neptune -111772-01-28 00:43 J -39103272.57 -39103272.47 -39103272.30 0.0089 0.0077
 Jupiter -111772-08-15 06:14 J -39103073.47 -39103073.24 -39103073.02 0.0511 0.0046
 Mars -111765-07-10 22:19 J -39100551.75 -39100551.57 -39100551.39 0.1644 0.0057
 Jupiter -111760-08-19 18:00 J -39098685.89 -39098685.75 -39098685.60 0.0509 0.0390
 Saturn -111759-01-19 13:41 J -39098533.15 -39098532.93 -39098532.70 0.0261 0.0118

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 Uranus -111756-08-28 08:10 J -39097216.41 -39097216.16 -39097215.91 0.0142 0.0003
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 Pluto -111733-01-14 08:24 J -39089042.41 -39089042.15 -39089041.88 0.0064 0.0008
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 Jupiter -111718-02-17 13:55 J -39083528.97 -39083528.92 -39083528.84 0.0514 0.0494
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 Saturn -111715-07-24 06:00 J -39082276.36 -39082276.25 -39082276.13 0.0300 0.0257
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 Neptune -111695-07-14 13:26 J -39074981.01 -39074980.94 -39074980.86 0.0088 0.0084
 Jupiter -111694-02-27 12:29 J -39074753.09 -39074752.98 -39074752.86 0.0517 0.0448
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 Jupiter -111606-08-14 17:17 J -39042442.99 -39042442.78 -39042442.57 0.0511 0.0198
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 Mars -111583-01-14 05:31 J -39034254.37 -39034254.27 -39034254.17 0.1870 0.1655
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 Jupiter -111540-02-20 12:00 J -39018511.22 -39018511.00 -39018510.78 0.0515 0.0208
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Neptune -111525-07-25 22:33 J -39012876.64 -39012876.56 -39012876.45 0.0089 0.0081
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 Jupiter -111523-08-13 20:24 J -39012127.83 -39012127.65 -39012127.46 0.0512 0.0285
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 Mars -111481-07-12 06:57 J -38996819.38 -38996819.21 -38996819.04 0.1644 0.0500
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 Jupiter -111457-02-20 05:31 J -38988196.46 -38988196.27 -38988196.09 0.0514 0.0324
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 Uranus -111420-08-30 02:53 J -38974490.62 -38974490.38 -38974490.13 0.0142 0.0019

Uranus -111419-09-03 19:12 J -38974120.77 -38974120.70 -38974120.59 0.0143 0.0133
 Jupiter -111416-08-21 14:38 J -38973037.96 -38973037.89 -38973037.80 0.0510 0.0474
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 Uranus -111336-08-30 12:14 J -38943809.24 -38943808.99 -38943808.74 0.0142 0.0021
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 Neptune -111200-07-19 07:26 J -38894177.41 -38894177.19 -38894176.95 0.0088 0.0033

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 Neptune -111198-07-23 21:36 J -38893442.83 -38893442.60 -38893442.36 0.0088 0.0027
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 Neptune -111197-07-25 04:33 J -38893075.49 -38893075.31 -38893075.11 0.0089 0.0057
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 Uranus -111129-03-08 09:36 J -38868377.35 -38868377.10 -38868376.84 0.0137 0.0024
 Uranus -111128-03-13 01:26 J -38868007.64 -38868007.44 -38868007.21 0.0136 0.0079
 Neptune -111119-01-18 01:12 J -38864774.55 -38864774.45 -38864774.29 0.0089 0.0078
 Neptune -111118-01-20 18:14 J -38864406.96 -38864406.74 -38864406.49 0.0089 0.0045
 Neptune -111117-01-23 11:02 J -38864039.30 -38864039.04 -38864038.77 0.0089 0.0012
 Neptune -111116-01-25 03:36 J -38863671.61 -38863671.35 -38863671.08 0.0089 0.0021
 Neptune -111115-01-27 19:55 J -38863303.87 -38863303.67 -38863303.44 0.0089 0.0054
 Neptune -111114-01-30 12:00 J -38862936.03 -38862936.00 -38862935.91 0.0089 0.0087
 Jupiter -111113-02-22 14:24 J -38862548.12 -38862547.90 -38862547.67 0.0514 0.0163
 Saturn -111111-01-24 12:57 J -38861846.20 -38861845.96 -38861845.71 0.0261 0.0076
 Jupiter -111101-02-27 15:50 J -38858160.03 -38858159.84 -38858159.65 0.0516 0.0315
 Saturn -111097-07-21 02:24 J -38856554.63 -38856554.40 -38856554.16 0.0300 0.0019
 Jupiter -111096-08-15 09:21 J -38856164.31 -38856164.11 -38856163.90 0.0512 0.0224

Uranus -111085-08-26 18:29 J -38852134.91 -38852134.73 -38852134.52 0.0141 0.0088
 Jupiter -111084-08-19 21:50 J -38851776.79 -38851776.59 -38851776.38 0.0511 0.0218
 Uranus -111084-08-31 09:50 J -38851765.33 -38851765.09 -38851764.84 0.0142 0.0023
 Uranus -111083-09-05 02:09 J -38851395.48 -38851395.41 -38851395.32 0.0143 0.0135
 Saturn -111082-01-19 10:19 J -38851259.25 -38851259.07 -38851258.86 0.0261 0.0169
 Mars -111071-07-11 02:38 J -38847068.55 -38847068.39 -38847068.23 0.1646 0.0794
 Saturn -111052-01-25 11:31 J -38840295.25 -38840295.02 -38840294.80 0.0261 0.0126
 Uranus -111046-03-04 20:38 J -38838065.70 -38838065.64 -38838065.53 0.0138 0.0130
 Uranus -111045-03-08 14:38 J -38837696.14 -38837695.89 -38837695.63 0.0137 0.0025
 Uranus -111044-03-13 06:43 J -38837326.42 -38837326.22 -38837326.00 0.0136 0.0079
 Saturn -111038-07-22 20:38 J -38835003.86 -38835003.64 -38835003.40 0.0300 0.0069
 Neptune -111037-07-16 15:50 J -38834643.94 -38834643.84 -38834643.68 0.0088 0.0075
 Neptune -111036-07-18 23:17 J -38834276.73 -38834276.53 -38834276.30 0.0088 0.0045
 Neptune -111035-07-21 06:29 J -38833909.47 -38833909.23 -38833908.98 0.0088 0.0015
 Neptune -111034-07-23 13:41 J -38833542.17 -38833541.93 -38833541.69 0.0088 0.0015
 Neptune -111033-07-24 20:38 J -38833174.85 -38833174.64 -38833174.42 0.0088 0.0045
 Neptune -111032-07-27 03:21 J -38832807.47 -38832807.36 -38832807.21 0.0088 0.0075
 Jupiter -111030-02-21 16:05 J -38832233.04 -38832232.83 -38832232.62 0.0514 0.0242
 Saturn -111023-01-20 08:53 J -38829708.35 -38829708.13 -38829707.89 0.0261 0.0118
 Jupiter -111018-02-26 20:09 J -38827844.86 -38827844.66 -38827844.44 0.0516 0.0246
 Mars -111015-01-11 12:43 J -38826795.16 -38826794.97 -38826794.78 0.1868 0.0883
 Jupiter -111013-08-14 23:31 J -38825848.71 -38825848.52 -38825848.33 0.0512 0.0264
 Jupiter -111001-08-19 09:21 J -38821461.33 -38821461.11 -38821460.90 0.0511 0.0167
 Uranus -111001-08-27 03:50 J -38821453.52 -38821453.34 -38821453.12 0.0141 0.0085

111TH MILLENNIUM BCE

This is a list of transits of Earth in the 111th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
	TRANSIT							
	TIME							
Uranus	-111000-08-31 19:12 J	-38821083.94	-38821083.70	-38821083.45	0.0142	0.0025		
Uranus	-110999-09-05 11:17 J	-38820714.08	-38820714.03	-38820713.95	0.0143	0.0138		
Saturn	-110993-01-27 08:53 J	-38818744.32	-38818744.13	-38818743.94	0.0261	0.0175		
Mars	-110992-07-13 00:57 J	-38818211.64	-38818211.46	-38818211.29	0.1645	0.0299		
Pluto	-110989-01-18 09:36 J	-38817292.27	-38817292.10	-38817291.89	0.0064	0.0046		
Pluto	-110988-01-19 00:57 J	-38816925.70	-38816925.46	-38816925.22	0.0064	0.0030		
Saturn	-110979-07-23 15:07 J	-38813453.08	-38813452.87	-38813452.65	0.0300	0.0119		
Saturn	-110964-01-21 06:43 J	-38808157.46	-38808157.22	-38808156.96	0.0261	0.0067		
Uranus	-110962-03-05 03:07 J	-38807384.45	-38807384.37	-38807384.27	0.0138	0.0129		
Uranus	-110961-03-08 20:53 J	-38807014.88	-38807014.63	-38807014.37	0.0137	0.0024		
Uranus	-110960-03-13 13:26 J	-38806645.15	-38806644.94	-38806644.73	0.0136	0.0079		
Neptune	-110954-01-20 02:09 J	-38804506.60	-38804506.41	-38804506.20	0.0089	0.0058		
Neptune	-110953-01-22 18:43 J	-38804138.97	-38804138.72	-38804138.46	0.0089	0.0025		
Neptune	-110952-01-24 11:17 J	-38803771.29	-38803771.03	-38803770.75	0.0089	0.0008		
Neptune	-110951-01-27 03:21 J	-38803403.58	-38803403.36	-38803403.10	0.0089	0.0041		
Neptune	-110950-01-29 19:26 J	-38803035.81	-38803035.69	-38803035.51	0.0089	0.0074		
Saturn	-110950-07-17 10:05 J	-38802867.19	-38802867.08	-38802866.94	0.0301	0.0251		
Jupiter	-110947-02-21 03:21 J	-38801917.56	-38801917.36	-38801917.16	0.0514	0.0286		
Jupiter	-110935-02-26 06:57 J	-38797529.43	-38797529.21	-38797528.98	0.0515	0.0201		
Saturn	-110934-01-28 06:43 J	-38797193.34	-38797193.22	-38797193.08	0.0261	0.0225		
Jupiter	-110930-08-15 09:50 J	-38795533.26	-38795533.09	-38795532.91	0.0513	0.0318		
Saturn	-110920-07-24 10:05 J	-38791902.26	-38791902.08	-38791901.88	0.0300	0.0171		

Jupiter -110918-08-19 21:50 J -38791145.81 -38791145.59 -38791145.37 0.0511 0.0123
 Uranus -110917-08-27 14:24 J -38790772.10 -38790771.90 -38790771.69 0.0141 0.0081
 Uranus -110916-09-01 05:17 J -38790402.51 -38790402.28 -38790402.03 0.0142 0.0029
 Uranus -110915-09-05 21:36 J -38790032.62 -38790032.60 -38790032.55 0.0143 0.0141
 Mars -110913-07-14 23:31 J -38789354.61 -38789354.52 -38789354.42 0.1644 0.1378
 Saturn -110905-01-23 05:17 J -38786606.53 -38786606.28 -38786606.02 0.0261 0.0014
 Pluto -110901-07-17 15:21 J -38784969.08 -38784968.86 -38784968.62 0.0080 0.0029
 Saturn -110891-07-18 07:55 J -38781316.35 -38781316.17 -38781315.99 0.0300 0.0191
 Uranus -110878-03-05 11:45 J -38776703.12 -38776703.01 -38776702.91 0.0138 0.0126
 Uranus -110877-03-09 05:17 J -38776333.53 -38776333.28 -38776333.01 0.0137 0.0022
 Uranus -110876-03-13 21:36 J -38775963.79 -38775963.60 -38775963.38 0.0136 0.0081
 Neptune -110873-07-16 07:55 J -38774743.20 -38774743.17 -38774743.10 0.0088 0.0087
 Neptune -110872-07-18 15:07 J -38774376.05 -38774375.87 -38774375.68 0.0088 0.0057
 Neptune -110871-07-20 22:05 J -38774008.80 -38774008.58 -38774008.33 0.0088 0.0028
 Neptune -110870-07-23 05:31 J -38773641.52 -38773641.27 -38773641.02 0.0088 0.0003
 Neptune -110869-07-24 12:14 J -38773274.21 -38773273.99 -38773273.75 0.0088 0.0033
 Neptune -110868-07-26 19:12 J -38772906.85 -38772906.70 -38772906.51 0.0088 0.0063
 Mars -110866-07-10 12:00 J -38772193.09 -38772193.00 -38772192.91 0.1647 0.1429
 Jupiter -110864-02-20 10:05 J -38771602.25 -38771602.08 -38771601.90 0.0513 0.0346
 Saturn -110861-07-25 08:24 J -38770351.29 -38770351.15 -38770350.99 0.0300 0.0231
 Jupiter -110852-02-25 06:57 J -38767214.44 -38767214.21 -38767213.97 0.0515 0.0111
 Jupiter -110847-08-15 00:00 J -38765217.66 -38765217.50 -38765217.34 0.0513 0.0359
 Saturn -110846-01-24 05:31 J -38765055.53 -38765055.27 -38765055.02 0.0261 0.0041
 Jupiter -110835-08-19 09:36 J -38760830.32 -38760830.10 -38760829.87 0.0512 0.0073
 Uranus -110833-08-28 00:00 J -38760090.69 -38760090.50 -38760090.28 0.0141 0.0078
 Saturn -110832-07-19 08:38 J -38759765.35 -38759765.14 -38759764.92 0.0300 0.0124
 Uranus -110832-09-01 15:07 J -38759721.11 -38759720.87 -38759720.62 0.0142 0.0032
 Jupiter -110823-08-23 18:57 J -38756442.75 -38756442.71 -38756442.67 0.0510 0.0499
 Saturn -110817-01-18 21:21 J -38754468.74 -38754468.61 -38754468.45 0.0261 0.0214
 Uranus -110794-03-05 20:38 J -38746021.74 -38746021.64 -38746021.51 0.0137 0.0123

Uranus -110793-03-09 14:53 J -38745652.14 -38745651.88 -38745651.62 0.0137 0.0018
 Uranus -110792-03-14 07:12 J -38745282.41 -38745282.20 -38745282.00 0.0136 0.0084
 Neptune -110790-01-19 09:07 J -38744606.26 -38744606.12 -38744605.94 0.0089 0.0072
 Neptune -110789-01-22 01:55 J -38744238.64 -38744238.42 -38744238.16 0.0089 0.0039
 Neptune -110788-01-23 18:57 J -38743870.98 -38743870.71 -38743870.44 0.0089 0.0006
 Saturn -110787-01-25 07:55 J -38743504.41 -38743504.17 -38743503.94 0.0262 0.0101
 Neptune -110787-01-26 11:31 J -38743503.28 -38743503.02 -38743502.76 0.0089 0.0027
 Mars -110787-07-12 11:02 J -38743336.22 -38743336.04 -38743335.87 0.1646 0.0343
 Neptune -110786-01-29 03:36 J -38743135.53 -38743135.35 -38743135.14 0.0089 0.0060
 Jupiter -110781-02-20 09:21 J -38741287.23 -38741287.11 -38741286.99 0.0513 0.0438
 Saturn -110773-07-20 14:38 J -38738214.12 -38738213.89 -38738213.66 0.0300 0.0045
 Jupiter -110769-02-25 12:57 J -38736899.20 -38736898.96 -38736898.72 0.0515 0.0046
 Jupiter -110764-08-14 07:12 J -38734902.31 -38734902.20 -38734902.07 0.0513 0.0429
 Saturn -110758-01-20 00:57 J -38732917.66 -38732917.46 -38732917.24 0.0261 0.0152
 Jupiter -110752-08-18 15:21 J -38730515.09 -38730514.86 -38730514.64 0.0512 0.0010
 Uranus -110749-08-28 08:09 J -38729409.35 -38729409.16 -38729408.94 0.0142 0.0077
 Uranus -110748-09-01 23:02 J -38729039.77 -38729039.54 -38729039.29 0.0142 0.0034
 Pluto -110741-01-19 19:55 J -38726708.76 -38726708.67 -38726708.54 0.0064 0.0058
 Pluto -110740-01-20 11:02 J -38726342.28 -38726342.04 -38726341.76 0.0064 0.0018
 Jupiter -110740-08-23 01:41 J -38726127.54 -38726127.43 -38726127.30 0.0511 0.0432
 Saturn -110728-01-26 12:57 J -38721953.15 -38721952.96 -38721952.75 0.0262 0.0166
 Saturn -110714-07-23 00:57 J -38716662.70 -38716662.46 -38716662.23 0.0300 0.0043
 Uranus -110710-03-06 06:14 J -38715340.36 -38715340.24 -38715340.10 0.0137 0.0119
 Uranus -110709-03-10 00:29 J -38714970.74 -38714970.48 -38714970.22 0.0137 0.0015
 Uranus -110708-03-14 16:19 J -38714601.00 -38714600.82 -38714600.60 0.0136 0.0088
 Mars -110708-07-14 09:36 J -38714479.26 -38714479.10 -38714478.94 0.1645 0.0748
 Neptune -110708-07-18 07:12 J -38714475.34 -38714475.20 -38714475.03 0.0088 0.0069
 Neptune -110707-07-20 13:55 J -38714108.12 -38714107.92 -38714107.68 0.0088 0.0040
 Neptune -110706-07-22 21:21 J -38713740.85 -38713740.61 -38713740.36 0.0088 0.0009
 Neptune -110705-07-24 04:19 J -38713373.55 -38713373.32 -38713373.07 0.0088 0.0021

Neptune -110704-07-26 11:31 J -38713006.21 -38713006.02 -38713005.81 0.0088 0.0051
 Neptune -110703-07-28 18:14 J -38712638.81 -38712638.74 -38712638.61 0.0088 0.0081
 Saturn -110699-01-21 07:55 J -38711366.40 -38711366.17 -38711365.92 0.0262 0.0085
 Jupiter -110698-02-19 12:57 J -38710971.98 -38710971.96 -38710971.93 0.0512 0.0509
 Jupiter -110686-02-24 14:24 J -38706584.14 -38706583.90 -38706583.66 0.0514 0.0037
 Saturn -110685-07-16 09:21 J -38706076.14 -38706076.11 -38706076.05 0.0300 0.0294
 Jupiter -110681-08-13 11:02 J -38704587.05 -38704587.04 -38704587.01 0.0514 0.0512
 Jupiter -110674-03-01 11:17 J -38702196.17 -38702196.03 -38702195.90 0.0515 0.0421
 Saturn -110669-01-28 21:21 J -38700401.71 -38700401.61 -38700401.49 0.0262 0.0235
 Jupiter -110669-08-17 21:36 J -38700199.83 -38700199.60 -38700199.38 0.0513 0.0077
 Uranus -110665-08-28 15:07 J -38698728.07 -38698727.87 -38698727.66 0.0141 0.0077
 Uranus -110664-09-02 05:31 J -38698358.50 -38698358.27 -38698358.02 0.0142 0.0032
 Jupiter -110657-08-22 06:43 J -38695812.38 -38695812.22 -38695812.06 0.0511 0.0351
 Saturn -110655-07-24 15:50 J -38695111.05 -38695110.84 -38695110.64 0.0299 0.0141
 Pluto -110653-07-19 06:00 J -38694385.46 -38694385.25 -38694385.04 0.0080 0.0041
 Mars -110652-01-14 04:19 J -38694206.46 -38694206.32 -38694206.18 0.1868 0.1410
 Saturn -110640-01-22 18:00 J -38689815.01 -38689814.75 -38689814.49 0.0262 0.0012
 Neptune -110626-01-18 16:33 J -38684705.85 -38684705.81 -38684705.72 0.0089 0.0086
 Uranus -110626-03-06 13:41 J -38684659.05 -38684658.93 -38684658.78 0.0137 0.0117
 Saturn -110626-07-19 00:43 J -38684524.64 -38684524.47 -38684524.29 0.0300 0.0195
 Neptune -110625-01-21 09:21 J -38684338.30 -38684338.11 -38684337.87 0.0089 0.0053
 Uranus -110625-03-10 08:09 J -38684289.42 -38684289.16 -38684288.90 0.0137 0.0013
 Neptune -110624-01-23 02:38 J -38683970.65 -38683970.39 -38683970.12 0.0089 0.0019
 Uranus -110624-03-15 00:14 J -38683919.68 -38683919.49 -38683919.29 0.0136 0.0089
 Neptune -110623-01-25 18:57 J -38683602.97 -38683602.71 -38683602.43 0.0089 0.0014
 Neptune -110622-01-28 11:17 J -38683235.24 -38683235.03 -38683234.79 0.0089 0.0047
 Neptune -110621-01-31 03:21 J -38682867.45 -38682867.36 -38682867.21 0.0089 0.0080
 Saturn -110611-01-17 20:38 J -38679227.73 -38679227.64 -38679227.53 0.0262 0.0242
 Jupiter -110603-02-23 08:09 J -38676269.39 -38676269.16 -38676268.93 0.0513 0.0149
 Saturn -110596-07-26 09:07 J -38673559.24 -38673559.12 -38673558.98 0.0299 0.0244

Jupiter -110591-02-28 09:50 J -38671881.27 -38671881.09 -38671880.91 0.0515 0.0328
 Jupiter -110586-08-18 00:00 J -38669884.72 -38669884.50 -38669884.29 0.0513 0.0165
 Mars -110582-07-11 20:38 J -38668460.79 -38668460.64 -38668460.50 0.1648 0.0971
 Saturn -110581-01-25 05:31 J -38668263.52 -38668263.27 -38668263.02 0.0262 0.0063
 Uranus -110581-08-28 21:21 J -38668046.80 -38668046.61 -38668046.38 0.0141 0.0077
 Uranus -110580-09-02 12:00 J -38667677.24 -38667677.00 -38667676.75 0.0142 0.0032
 Uranus -110579-09-07 04:05 J -38667307.35 -38667307.33 -38667307.31 0.0143 0.0142
 Jupiter -110574-08-22 07:12 J -38665497.39 -38665497.20 -38665497.00 0.0511 0.0258
 Saturn -110567-07-20 18:43 J -38662972.94 -38662972.72 -38662972.49 0.0300 0.0089
 Saturn -110552-01-19 08:38 J -38657676.33 -38657676.14 -38657675.93 0.0262 0.0166
 Neptune -110544-07-17 22:33 J -38654574.62 -38654574.56 -38654574.43 0.0088 0.0082
 Neptune -110543-07-20 05:45 J -38654207.45 -38654207.26 -38654207.05 0.0088 0.0052
 Uranus -110542-03-06 19:41 J -38653977.81 -38653977.68 -38653977.53 0.0138 0.0116
 Neptune -110542-07-22 12:57 J -38653840.20 -38653839.96 -38653839.72 0.0088 0.0022
 Uranus -110541-03-10 13:55 J -38653608.17 -38653607.92 -38653607.65 0.0137 0.0012
 Neptune -110541-07-23 19:41 J -38653472.92 -38653472.68 -38653472.43 0.0088 0.0009
 Uranus -110540-03-15 06:14 J -38653238.42 -38653238.24 -38653238.03 0.0136 0.0090
 Neptune -110540-07-26 02:38 J -38653105.59 -38653105.39 -38653105.15 0.0088 0.0039
 Neptune -110539-07-28 09:36 J -38652738.23 -38652738.10 -38652737.92 0.0088 0.0069
 Saturn -110522-01-26 17:45 J -38646711.96 -38646711.76 -38646711.53 0.0262 0.0140
 Jupiter -110520-02-22 06:43 J -38645954.43 -38645954.22 -38645954.00 0.0513 0.0240
 Jupiter -110508-02-27 08:24 J -38641566.36 -38641566.15 -38641565.93 0.0514 0.0236
 Saturn -110508-07-22 12:14 J -38641421.22 -38641420.99 -38641420.75 0.0300 0.0015
 Mars -110503-07-13 19:55 J -38639603.85 -38639603.67 -38639603.49 0.1647 0.0118
 Jupiter -110503-08-16 23:31 J -38639569.71 -38639569.52 -38639569.32 0.0514 0.0264
 Uranus -110497-08-29 05:45 J -38637365.46 -38637365.26 -38637365.04 0.0141 0.0074
 Uranus -110496-09-02 20:09 J -38636995.90 -38636995.66 -38636995.42 0.0142 0.0033
 Saturn -110493-01-21 20:53 J -38636124.87 -38636124.63 -38636124.39 0.0262 0.0091
 Pluto -110492-01-22 00:14 J -38635758.75 -38635758.49 -38635758.22 0.0064 0.0010
 Jupiter -110491-08-21 08:38 J -38635182.36 -38635182.14 -38635181.93 0.0513 0.0165

Saturn -110463-01-28 06:00 J -38625160.38 -38625160.25 -38625160.09 0.0262 0.0214
 Neptune -110461-01-20 16:05 J -38624437.98 -38624437.83 -38624437.62 0.0089 0.0067
 Neptune -110460-01-22 09:07 J -38624070.35 -38624070.12 -38624069.85 0.0089 0.0034
 Neptune -110459-01-25 02:24 J -38623702.67 -38623702.40 -38623702.13 0.0089 0.0000
 Neptune -110458-01-27 18:57 J -38623334.95 -38623334.71 -38623334.45 0.0089 0.0033
 Uranus -110458-03-07 01:41 J -38623296.56 -38623296.43 -38623296.27 0.0138 0.0115
 Neptune -110457-01-30 11:31 J -38622967.19 -38622967.02 -38622966.83 0.0089 0.0066
 Uranus -110457-03-10 20:24 J -38622926.91 -38622926.65 -38622926.39 0.0137 0.0011
 Uranus -110456-03-15 12:14 J -38622557.16 -38622556.99 -38622556.78 0.0136 0.0091
 Saturn -110449-07-24 04:05 J -38619869.54 -38619869.33 -38619869.11 0.0300 0.0114
 Jupiter -110437-02-22 04:05 J -38615639.51 -38615639.33 -38615639.15 0.0512 0.0337
 Saturn -110434-01-23 08:09 J -38614573.42 -38614573.16 -38614572.90 0.0262 0.0018
 Jupiter -110425-02-27 04:05 J -38611251.56 -38611251.33 -38611251.09 0.0514 0.0132
 Mars -110424-07-15 18:29 J -38610746.85 -38610746.73 -38610746.60 0.1646 0.1195
 Saturn -110420-07-18 18:00 J -38609282.91 -38609282.75 -38609282.58 0.0299 0.0211
 Jupiter -110420-08-16 01:55 J -38609254.58 -38609254.42 -38609254.25 0.0514 0.0351
 Uranus -110413-08-29 14:53 J -38606684.07 -38606683.88 -38606683.65 0.0141 0.0072
 Uranus -110412-09-03 05:17 J -38606314.52 -38606314.28 -38606314.04 0.0142 0.0036
 Jupiter -110408-08-20 13:12 J -38604867.17 -38604866.95 -38604866.73 0.0512 0.0088
 Saturn -110405-01-18 06:00 J -38603986.26 -38603986.25 -38603986.20 0.0262 0.0260
 Pluto -110405-07-20 21:07 J -38603801.79 -38603801.62 -38603801.40 0.0080 0.0048
 Jupiter -110396-08-24 21:07 J -38600479.62 -38600479.62 -38600479.61 0.0511 0.0510
 Saturn -110390-07-26 17:02 J -38598317.95 -38598317.79 -38598317.61 0.0300 0.0205
 Neptune -110379-07-19 21:50 J -38594306.75 -38594306.59 -38594306.41 0.0088 0.0064
 Neptune -110378-07-22 04:48 J -38593939.53 -38593939.30 -38593939.07 0.0088 0.0034
 Mars -110377-07-10 06:29 J -38593585.27 -38593585.23 -38593585.19 0.1650 0.1604
 Neptune -110377-07-23 11:45 J -38593572.25 -38593572.01 -38593571.76 0.0088 0.0004
 Neptune -110376-07-25 18:29 J -38593204.96 -38593204.73 -38593204.49 0.0088 0.0026
 Saturn -110375-01-24 16:33 J -38593022.05 -38593021.81 -38593021.55 0.0262 0.0050
 Neptune -110375-07-28 01:26 J -38592837.62 -38592837.44 -38592837.24 0.0088 0.0056

Uranus -110374-03-07 10:05 J -38592615.23 -38592615.08 -38592614.93 0.0138 0.0112
 Neptune -110374-07-30 08:09 J -38592470.19 -38592470.16 -38592470.07 0.0088 0.0086
 Uranus -110373-03-11 04:19 J -38592245.58 -38592245.32 -38592245.06 0.0137 0.0009
 Uranus -110372-03-15 20:24 J -38591875.83 -38591875.65 -38591875.44 0.0136 0.0092
 Mars -110368-01-12 21:07 J -38590476.83 -38590476.62 -38590476.40 0.1866 0.0234
 Saturn -110361-07-20 04:48 J -38587731.51 -38587731.30 -38587731.08 0.0299 0.0125
 Jupiter -110354-02-21 00:29 J -38585324.60 -38585324.48 -38585324.35 0.0512 0.0435
 Saturn -110346-01-19 14:53 J -38582435.05 -38582434.88 -38582434.70 0.0261 0.0191
 Jupiter -110342-02-26 03:36 J -38580936.59 -38580936.35 -38580936.11 0.0514 0.0046
 Jupiter -110337-08-15 07:41 J -38578939.30 -38578939.18 -38578939.05 0.0514 0.0424
 Saturn -110331-07-28 00:57 J -38576766.52 -38576766.46 -38576766.38 0.0300 0.0285
 Uranus -110329-08-30 01:26 J -38576002.65 -38576002.44 -38576002.21 0.0141 0.0068
 Uranus -110328-09-03 15:36 J -38575633.08 -38575632.85 -38575632.60 0.0142 0.0040
 Jupiter -110325-08-19 17:02 J -38574552.02 -38574551.79 -38574551.56 0.0513 0.0007
 Saturn -110316-01-25 22:33 J -38571470.78 -38571470.56 -38571470.32 0.0262 0.0112
 Jupiter -110313-08-24 01:26 J -38570164.56 -38570164.44 -38570164.32 0.0512 0.0433
 Saturn -110302-07-22 11:02 J -38566180.27 -38566180.04 -38566179.81 0.0300 0.0049
 Mars -110298-07-13 05:17 J -38564728.45 -38564728.28 -38564728.10 0.1649 0.0508
 Neptune -110297-01-19 22:33 J -38564537.66 -38564537.56 -38564537.44 0.0089 0.0081
 Neptune -110296-01-21 15:07 J -38564170.08 -38564169.87 -38564169.63 0.0089 0.0048
 Neptune -110295-01-24 08:09 J -38563802.41 -38563802.16 -38563801.88 0.0089 0.0015
 Neptune -110294-01-27 00:57 J -38563434.71 -38563434.46 -38563434.18 0.0089 0.0019
 Neptune -110293-01-29 17:31 J -38563066.97 -38563066.77 -38563066.53 0.0089 0.0052
 Neptune -110292-01-31 10:05 J -38562699.14 -38562699.08 -38562698.99 0.0089 0.0085
 Uranus -110290-03-07 19:41 J -38561933.84 -38561933.68 -38561933.52 0.0138 0.0108
 Uranus -110289-03-11 13:55 J -38561564.18 -38561563.92 -38561563.66 0.0137 0.0005
 Uranus -110288-03-16 06:00 J -38561194.42 -38561194.25 -38561194.05 0.0136 0.0096
 Saturn -110287-01-20 20:38 J -38560883.86 -38560883.64 -38560883.42 0.0261 0.0128
 Jupiter -110271-02-20 06:00 J -38555009.30 -38555009.25 -38555009.19 0.0512 0.0498
 Jupiter -110259-02-25 08:38 J -38550621.39 -38550621.14 -38550620.90 0.0513 0.0023

Saturn -110257-01-28 02:09 J -38549919.60 -38549919.41 -38549919.21 0.0261 0.0169
 Jupiter -110254-08-15 13:41 J -38548623.99 -38548623.93 -38548623.87 0.0515 0.0497
 Jupiter -110247-03-02 09:36 J -38546233.21 -38546233.10 -38546232.98 0.0515 0.0453
 Uranus -110245-08-30 11:17 J -38545321.24 -38545321.03 -38545320.80 0.0141 0.0064
 Pluto -110244-01-23 12:57 J -38545175.23 -38545174.96 -38545174.68 0.0064 0.0002
 Uranus -110244-09-04 01:26 J -38544951.67 -38544951.44 -38544951.19 0.0142 0.0043
 Saturn -110243-07-23 12:29 J -38544629.21 -38544628.98 -38544628.74 0.0300 0.0016
 Jupiter -110242-08-20 01:12 J -38544236.67 -38544236.45 -38544236.22 0.0513 0.0053
 Jupiter -110230-08-24 13:41 J -38539849.07 -38539848.93 -38539848.78 0.0511 0.0387
 Saturn -110228-01-21 23:17 J -38539332.77 -38539332.53 -38539332.27 0.0261 0.0070
 Mars -110219-07-15 04:33 J -38535871.48 -38535871.31 -38535871.14 0.1648 0.0568
 Neptune -110215-07-19 12:43 J -38534406.07 -38534405.97 -38534405.82 0.0088 0.0077
 Neptune -110214-07-21 19:55 J -38534038.87 -38534038.67 -38534038.45 0.0088 0.0047
 Neptune -110213-07-23 02:53 J -38533671.62 -38533671.38 -38533671.13 0.0088 0.0017
 Neptune -110212-07-25 09:36 J -38533304.33 -38533304.10 -38533303.84 0.0088 0.0014
 Neptune -110211-07-27 16:19 J -38532937.02 -38532936.82 -38532936.58 0.0088 0.0044
 Neptune -110210-07-29 23:45 J -38532569.65 -38532569.51 -38532569.37 0.0088 0.0073
 Uranus -110206-03-08 06:29 J -38531252.38 -38531252.23 -38531252.04 0.0138 0.0104
 Uranus -110205-03-12 00:43 J -38530882.73 -38530882.47 -38530882.20 0.0137 0.0003
 Uranus -110204-03-16 17:17 J -38530512.95 -38530512.78 -38530512.60 0.0136 0.0100
 Saturn -110198-01-29 02:53 J -38528368.50 -38528368.38 -38528368.24 0.0261 0.0222
 Saturn -110184-07-24 10:48 J -38523078.28 -38523078.05 -38523077.82 0.0300 0.0074
 Jupiter -110176-02-24 08:38 J -38520306.37 -38520306.14 -38520305.90 0.0513 0.0105
 Saturn -110169-01-24 00:14 J -38517781.75 -38517781.49 -38517781.24 0.0261 0.0016
 Jupiter -110164-03-01 12:29 J -38515918.13 -38515917.98 -38515917.81 0.0515 0.0380
 Uranus -110161-08-30 19:55 J -38514639.88 -38514639.67 -38514639.43 0.0141 0.0063
 Uranus -110160-09-04 10:19 J -38514270.29 -38514270.07 -38514269.82 0.0142 0.0045
 Jupiter -110159-08-19 14:09 J -38513921.13 -38513920.91 -38513920.69 0.0513 0.0099
 Pluto -110157-07-22 14:09 J -38513218.08 -38513217.91 -38513217.70 0.0080 0.0050
 Saturn -110155-07-18 06:14 J -38512492.31 -38512492.24 -38512492.16 0.0300 0.0284

Jupiter -110147-08-23 23:31 J -38509533.68 -38509533.52 -38509533.34 0.0512 0.0331
 Mars -110140-07-17 03:36 J -38507014.35 -38507014.35 -38507014.34 0.1647 0.1643
 Neptune -110132-01-20 20:38 J -38504269.80 -38504269.64 -38504269.42 0.0089 0.0063
 Neptune -110131-01-23 13:41 J -38503902.16 -38503901.93 -38503901.65 0.0089 0.0030
 Neptune -110130-01-26 06:57 J -38503534.48 -38503534.21 -38503533.94 0.0089 0.0004
 Neptune -110129-01-28 23:31 J -38503166.76 -38503166.52 -38503166.27 0.0089 0.0037
 Neptune -110128-01-30 15:50 J -38502798.98 -38502798.84 -38502798.65 0.0089 0.0071
 Saturn -110125-07-25 05:45 J -38501527.46 -38501527.26 -38501527.04 0.0300 0.0125
 Uranus -110122-03-08 17:31 J -38500570.95 -38500570.77 -38500570.59 0.0138 0.0098
 Uranus -110121-03-12 11:31 J -38500201.28 -38500201.02 -38500200.76 0.0137 0.0005
 Uranus -110120-03-17 03:50 J -38499831.49 -38499831.34 -38499831.16 0.0136 0.0105
 Saturn -110110-01-24 23:17 J -38496230.78 -38496230.53 -38496230.27 0.0261 0.0036
 Saturn -110096-07-19 01:26 J -38490941.58 -38490941.44 -38490941.29 0.0300 0.0232
 Jupiter -110093-02-24 19:12 J -38489990.93 -38489990.70 -38489990.47 0.0513 0.0150
 Mars -110093-07-11 15:07 J -38489853.00 -38489852.87 -38489852.75 0.1652 0.1147
 Mars -110084-01-11 14:09 J -38486747.10 -38486746.91 -38486746.72 0.1864 0.0911
 Saturn -110081-01-19 13:12 J -38485644.07 -38485643.95 -38485643.79 0.0261 0.0217
 Jupiter -110081-02-29 23:02 J -38485602.72 -38485602.54 -38485602.35 0.0514 0.0335
 Uranus -110077-08-31 03:21 J -38483958.58 -38483958.36 -38483958.13 0.0141 0.0062
 Jupiter -110076-08-19 00:00 J -38483605.71 -38483605.50 -38483605.28 0.0514 0.0154
 Uranus -110076-09-04 17:31 J -38483588.99 -38483588.77 -38483588.52 0.0142 0.0045
 Saturn -110066-07-27 00:29 J -38479976.66 -38479976.48 -38479976.28 0.0300 0.0175
 Jupiter -110064-08-23 12:00 J -38479218.19 -38479218.00 -38479217.81 0.0512 0.0287
 Saturn -110051-01-25 21:36 J -38474679.83 -38474679.60 -38474679.35 0.0261 0.0086
 Neptune -110050-07-21 10:33 J -38474138.23 -38474138.06 -38474137.86 0.0088 0.0060
 Neptune -110049-07-22 17:17 J -38473771.00 -38473770.78 -38473770.54 0.0088 0.0030
 Neptune -110048-07-25 00:29 J -38473403.73 -38473403.48 -38473403.24 0.0088 0.0002
 Neptune -110047-07-27 06:43 J -38473036.44 -38473036.22 -38473035.97 0.0088 0.0031
 Neptune -110046-07-29 13:26 J -38472669.09 -38472668.94 -38472668.73 0.0088 0.0061
 Uranus -110038-03-09 02:09 J -38469889.58 -38469889.41 -38469889.20 0.0138 0.0095

Uranus	-110037-03-12 20:53 J	-38469519.89	-38469519.63	-38469519.37	0.0137	0.0008
Saturn	-110037-07-19 20:38 J	-38469390.82	-38469390.64	-38469390.45	0.0300	0.0180
Uranus	-110036-03-17 13:41 J	-38469150.09	-38469149.93	-38469149.77	0.0136	0.0108
Saturn	-110022-01-20 11:45 J	-38464093.20	-38464093.01	-38464092.81	0.0262	0.0166
Mars	-110014-07-14 14:09 J	-38460996.09	-38460995.91	-38460995.73	0.1651	0.0060
Jupiter	-110010-02-24 03:21 J	-38459675.58	-38459675.36	-38459675.13	0.0512	0.0204
Saturn	-110007-07-27 19:40 J	-38458425.83	-38458425.68	-38458425.52	0.0300	0.0226

110TH MILLENNIUM BCE

This is a list of transits of Earth in the 110th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-109998-03-01 00:14 J	-38455287.70	-38455287.49	-38455287.28	0.0514	0.0252		
Pluto	-109996-01-25 04:48 J	-38454591.56	-38454591.30	-38454591.02	0.0064	0.0003		
Jupiter	-109993-08-18 15:50 J	-38453290.04	-38453289.84	-38453289.62	0.0514	0.0189		
Uranus	-109993-08-31 11:45 J	-38453277.22	-38453277.01	-38453276.77	0.0141	0.0060		
Saturn	-109992-01-26 20:24 J	-38453128.86	-38453128.65	-38453128.43	0.0262	0.0137		
Uranus	-109992-09-05 02:09 J	-38452907.64	-38452907.41	-38452907.17	0.0142	0.0047		
Jupiter	-109981-08-23 01:55 J	-38448902.61	-38448902.42	-38448902.21	0.0512	0.0246		
Saturn	-109978-07-21 18:14 J	-38447839.95	-38447839.74	-38447839.52	0.0299	0.0123		
Neptune	-109968-01-20 01:12 J	-38444369.56	-38444369.45	-38444369.31	0.0089	0.0078		
Neptune	-109967-01-22 18:00 J	-38444001.96	-38444001.75	-38444001.50	0.0089	0.0045		

Neptune -109966-01-25 11:02 J -38443634.30 -38443634.04 -38443633.76 0.0089 0.0012
 Neptune -109965-01-28 03:50 J -38443266.59 -38443266.34 -38443266.07 0.0089 0.0022
 Neptune -109964-01-29 20:38 J -38442898.84 -38442898.64 -38442898.42 0.0089 0.0055
 Saturn -109963-01-21 10:33 J -38442542.28 -38442542.06 -38442541.82 0.0262 0.0115
 Neptune -109963-02-01 13:12 J -38442530.95 -38442530.95 -38442530.91 0.0089 0.0089
 Uranus -109954-03-09 09:36 J -38439208.27 -38439208.10 -38439207.88 0.0138 0.0092
 Uranus -109953-03-13 04:33 J -38438838.57 -38438838.31 -38438838.05 0.0137 0.0011
 Uranus -109952-03-17 21:21 J -38438468.74 -38438468.61 -38438468.44 0.0136 0.0111
 Saturn -109948-07-28 16:48 J -38436874.87 -38436874.80 -38436874.72 0.0299 0.0282
 Mars -109935-07-16 12:57 J -38432139.10 -38432138.96 -38432138.82 0.1649 0.1013
 Saturn -109933-01-28 20:24 J -38431577.82 -38431577.65 -38431577.47 0.0262 0.0191
 Jupiter -109927-02-23 04:48 J -38429360.49 -38429360.30 -38429360.09 0.0512 0.0286
 Saturn -109919-07-22 18:00 J -38426288.97 -38426288.75 -38426288.51 0.0299 0.0061
 Jupiter -109915-02-28 09:21 J -38424972.33 -38424972.11 -38424971.89 0.0514 0.0199
 Jupiter -109910-08-19 02:09 J -38422974.61 -38422974.41 -38422974.22 0.0514 0.0245
 Pluto -109909-07-24 08:38 J -38422634.31 -38422634.14 -38422633.92 0.0080 0.0048
 Uranus -109909-08-31 21:07 J -38422595.83 -38422595.62 -38422595.38 0.0141 0.0056
 Uranus -109908-09-05 11:16 J -38422226.25 -38422226.03 -38422225.78 0.0142 0.0050
 Saturn -109904-01-22 11:02 J -38420991.28 -38420991.04 -38420990.78 0.0262 0.0060
 Jupiter -109898-08-23 10:19 J -38418587.28 -38418587.07 -38418586.86 0.0513 0.0181
 Neptune -109886-07-21 00:14 J -38414237.60 -38414237.49 -38414237.32 0.0088 0.0073
 Neptune -109885-07-22 07:26 J -38413870.39 -38413870.19 -38413869.96 0.0088 0.0043
 Neptune -109884-07-24 14:24 J -38413503.14 -38413502.90 -38413502.65 0.0088 0.0013
 Neptune -109883-07-26 21:21 J -38413135.85 -38413135.61 -38413135.36 0.0088 0.0017
 Neptune -109882-07-29 04:19 J -38412768.53 -38412768.32 -38412768.11 0.0088 0.0047
 Neptune -109881-07-30 10:48 J -38412401.16 -38412401.05 -38412400.92 0.0088 0.0077
 Saturn -109874-01-29 22:04 J -38410026.66 -38410026.58 -38410026.50 0.0262 0.0248
 Uranus -109870-03-09 18:57 J -38408526.91 -38408526.71 -38408526.51 0.0138 0.0088
 Uranus -109869-03-13 13:40 J -38408157.19 -38408156.93 -38408156.67 0.0137 0.0014
 Uranus -109868-03-18 06:43 J -38407787.36 -38407787.22 -38407787.07 0.0136 0.0114

Saturn -109860-07-23 22:04 J -38404737.81 -38404737.58 -38404737.35 0.0299 0.0011
 Saturn -109845-01-24 13:40 J -38399440.18 -38399439.93 -38399439.67 0.0262 0.0003
 Jupiter -109844-02-22 12:00 J -38399045.18 -38399045.00 -38399044.82 0.0512 0.0343
 Jupiter -109832-02-27 13:26 J -38394657.17 -38394656.94 -38394656.70 0.0513 0.0129
 Jupiter -109827-08-18 08:52 J -38392659.31 -38392659.13 -38392658.95 0.0515 0.0315
 Uranus -109825-09-01 08:52 J -38391914.35 -38391914.13 -38391913.89 0.0141 0.0051
 Uranus -109824-09-05 23:02 J -38391544.76 -38391544.54 -38391544.30 0.0142 0.0055
 Saturn -109816-01-18 13:12 J -38388853.05 -38388852.95 -38388852.81 0.0263 0.0231
 Jupiter -109815-08-22 19:55 J -38388271.88 -38388271.67 -38388271.45 0.0514 0.0122
 Mars -109809-07-12 23:02 J -38386120.70 -38386120.54 -38386120.38 0.1653 0.0695
 Neptune -109803-01-21 21:36 J -38384101.77 -38384101.60 -38384101.38 0.0089 0.0061
 Neptune -109802-01-24 14:38 J -38383734.14 -38383733.89 -38383733.63 0.0089 0.0027
 Neptune -109801-01-27 07:26 J -38383366.45 -38383366.19 -38383365.92 0.0089 0.0006
 Saturn -109801-07-25 06:57 J -38383186.43 -38383186.21 -38383185.99 0.0299 0.0093
 Neptune -109800-01-29 00:14 J -38382998.73 -38382998.49 -38382998.25 0.0089 0.0039
 Neptune -109799-01-31 16:19 J -38382630.95 -38382630.82 -38382630.64 0.0089 0.0073
 Saturn -109786-01-25 18:57 J -38377888.96 -38377888.71 -38377888.46 0.0262 0.0062
 Uranus -109786-03-10 05:16 J -38377845.48 -38377845.28 -38377845.06 0.0138 0.0083
 Uranus -109785-03-14 00:14 J -38377475.75 -38377475.49 -38377475.23 0.0137 0.0019
 Uranus -109784-03-18 17:16 J -38377105.89 -38377105.78 -38377105.64 0.0136 0.0119
 Saturn -109772-07-19 15:21 J -38372600.00 -38372599.86 -38372599.71 0.0298 0.0232
 Jupiter -109761-02-22 08:52 J -38368730.24 -38368730.13 -38368730.00 0.0510 0.0441
 Saturn -109757-01-20 19:55 J -38367301.87 -38367301.67 -38367301.47 0.0263 0.0166
 Jupiter -109749-02-27 09:50 J -38364342.33 -38364342.09 -38364341.85 0.0512 0.0025
 Pluto -109748-01-27 00:14 J -38364007.75 -38364007.49 -38364007.22 0.0065 0.0011
 Jupiter -109744-08-17 14:38 J -38362344.03 -38362343.89 -38362343.74 0.0516 0.0392
 Saturn -109742-07-27 19:12 J -38361634.87 -38361634.70 -38361634.50 0.0298 0.0183
 Uranus -109741-09-01 20:24 J -38361232.88 -38361232.65 -38361232.41 0.0141 0.0047
 Uranus -109740-09-06 10:33 J -38360863.28 -38360863.06 -38360862.83 0.0142 0.0059
 Jupiter -109737-03-03 12:00 J -38359954.04 -38359954.00 -38359953.95 0.0514 0.0502

Jupiter -109732-08-22 00:43 J -38357956.69 -38357956.47 -38357956.24 0.0514 0.0043
 Mars -109730-07-15 22:19 J -38357263.74 -38357263.57 -38357263.39 0.1652 0.0391
 Saturn -109727-01-27 02:52 J -38356337.59 -38356337.38 -38356337.15 0.0262 0.0129
 Neptune -109722-07-20 12:57 J -38354336.97 -38354336.96 -38354336.89 0.0088 0.0088
 Mars -109721-01-15 06:57 J -38354158.35 -38354158.21 -38354158.06 0.1864 0.1369
 Neptune -109721-07-21 19:55 J -38353969.83 -38353969.67 -38353969.46 0.0088 0.0058
 Neptune -109720-07-24 03:07 J -38353602.59 -38353602.37 -38353602.12 0.0088 0.0028
 Jupiter -109720-08-26 08:09 J -38353569.25 -38353569.16 -38353569.06 0.0512 0.0464
 Neptune -109719-07-26 10:19 J -38353235.32 -38353235.07 -38353234.82 0.0088 0.0003
 Neptune -109718-07-28 17:02 J -38352868.02 -38352867.79 -38352867.56 0.0088 0.0033
 Neptune -109717-07-29 23:45 J -38352500.67 -38352500.51 -38352500.33 0.0088 0.0063
 Saturn -109713-07-21 05:16 J -38351048.48 -38351048.28 -38351048.07 0.0299 0.0139
 Uranus -109702-03-10 18:14 J -38347163.94 -38347163.74 -38347163.51 0.0138 0.0077
 Uranus -109701-03-14 13:12 J -38346794.20 -38346793.95 -38346793.69 0.0137 0.0025
 Uranus -109700-03-19 06:00 J -38346424.33 -38346424.25 -38346424.12 0.0136 0.0125
 Saturn -109698-01-22 04:19 J -38345750.55 -38345750.32 -38345750.07 0.0263 0.0099
 Saturn -109683-07-29 11:31 J -38340083.09 -38340083.02 -38340082.93 0.0298 0.0279
 Saturn -109668-01-28 13:26 J -38334786.10 -38334785.94 -38334785.77 0.0262 0.0199
 Jupiter -109666-02-26 09:50 J -38334027.33 -38334027.09 -38334026.85 0.0512 0.0059
 Pluto -109661-07-26 09:36 J -38332050.32 -38332050.10 -38332049.85 0.0080 0.0026
 Jupiter -109661-08-16 15:50 J -38332028.91 -38332028.84 -38332028.76 0.0516 0.0485
 Uranus -109657-09-02 08:38 J -38330551.37 -38330551.14 -38330550.89 0.0141 0.0041
 Uranus -109656-09-06 22:48 J -38330181.77 -38330181.55 -38330181.33 0.0142 0.0064
 Jupiter -109654-03-03 11:16 J -38329639.17 -38329639.03 -38329638.89 0.0514 0.0413
 Saturn -109654-07-23 21:36 J -38329496.84 -38329496.60 -38329496.37 0.0299 0.0042
 Mars -109651-07-17 21:21 J -38328406.70 -38328406.61 -38328406.53 0.1651 0.1454
 Jupiter -109649-08-21 01:26 J -38327641.67 -38327641.44 -38327641.22 0.0515 0.0052
 Neptune -109639-01-21 00:00 J -38324201.62 -38324201.50 -38324201.36 0.0089 0.0077
 Saturn -109639-01-23 15:07 J -38324199.12 -38324198.87 -38324198.61 0.0263 0.0027
 Neptune -109638-01-23 16:48 J -38323834.02 -38323833.80 -38323833.55 0.0089 0.0044

Neptune -109637-01-26 09:50 J -38323466.35 -38323466.09 -38323465.82 0.0089 0.0011
 Jupiter -109637-08-25 10:19 J -38323254.22 -38323254.07 -38323253.91 0.0513 0.0376
 Neptune -109636-01-28 02:24 J -38323098.65 -38323098.40 -38323098.13 0.0089 0.0023
 Neptune -109635-01-30 18:57 J -38322730.90 -38322730.71 -38322730.49 0.0089 0.0056
 Uranus -109618-03-11 08:09 J -38316482.38 -38316482.16 -38316481.92 0.0138 0.0069
 Uranus -109617-03-15 03:07 J -38316112.63 -38316112.37 -38316112.12 0.0137 0.0032
 Uranus -109616-03-19 19:40 J -38315742.72 -38315742.68 -38315742.59 0.0136 0.0132
 Mars -109604-07-12 07:12 J -38311245.31 -38311245.20 -38311245.10 0.1656 0.1344
 Saturn -109595-07-25 14:52 J -38307945.11 -38307944.88 -38307944.65 0.0299 0.0058
 Jupiter -109583-02-25 05:45 J -38303712.49 -38303712.26 -38303712.03 0.0511 0.0160
 Saturn -109580-01-25 03:07 J -38302647.62 -38302647.37 -38302647.12 0.0263 0.0045
 Uranus -109573-09-02 18:14 J -38299869.97 -38299869.74 -38299869.49 0.0141 0.0039
 Uranus -109572-09-07 08:09 J -38299500.37 -38299500.16 -38299499.93 0.0142 0.0066
 Jupiter -109571-03-02 05:31 J -38299324.46 -38299324.27 -38299324.08 0.0513 0.0303
 Saturn -109566-07-20 07:40 J -38297358.30 -38297358.18 -38297358.05 0.0298 0.0249
 Jupiter -109566-08-21 02:38 J -38297326.61 -38297326.39 -38297326.18 0.0515 0.0144
 Neptune -109557-07-21 08:24 J -38294069.28 -38294069.15 -38294069.00 0.0088 0.0072
 Neptune -109556-07-23 15:07 J -38293702.07 -38293701.87 -38293701.64 0.0088 0.0042
 Neptune -109555-07-25 22:19 J -38293334.82 -38293334.57 -38293334.33 0.0088 0.0012
 Neptune -109554-07-28 05:02 J -38292967.52 -38292967.29 -38292967.04 0.0088 0.0019
 Jupiter -109554-08-25 13:26 J -38292939.12 -38292938.94 -38292938.75 0.0513 0.0292
 Neptune -109553-07-29 11:45 J -38292600.20 -38292600.01 -38292599.79 0.0088 0.0049
 Neptune -109552-07-31 18:28 J -38292232.82 -38292232.73 -38292232.59 0.0088 0.0079
 Saturn -109551-01-20 00:14 J -38292060.66 -38292060.49 -38292060.31 0.0263 0.0192
 Saturn -109536-07-27 06:57 J -38286393.41 -38286393.21 -38286393.00 0.0299 0.0155
 Uranus -109534-03-11 21:50 J -38285800.81 -38285800.59 -38285800.34 0.0138 0.0062
 Uranus -109533-03-15 16:48 J -38285431.04 -38285430.80 -38285430.54 0.0137 0.0040
 Mars -109525-07-14 06:43 J -38282388.40 -38282388.22 -38282388.04 0.1655 0.0256
 Saturn -109521-01-27 15:07 J -38281096.10 -38281095.87 -38281095.64 0.0263 0.0117
 Saturn -109507-07-21 23:16 J -38275806.72 -38275806.53 -38275806.32 0.0298 0.0155

Pluto -109501-01-28 10:04 J -38273790.26 -38273790.08 -38273789.85 0.0064 0.0043
 Pluto -109500-01-29 01:40 J -38273423.64 -38273423.43 -38273423.18 0.0065 0.0034
 Jupiter -109500-02-24 00:43 J -38273397.68 -38273397.47 -38273397.26 0.0511 0.0262
 Saturn -109492-01-21 12:43 J -38270509.19 -38270508.97 -38270508.73 0.0263 0.0119
 Uranus -109490-08-30 16:19 J -38269557.86 -38269557.82 -38269557.75 0.0141 0.0137
 Uranus -109489-09-03 04:33 J -38269188.54 -38269188.31 -38269188.06 0.0141 0.0036
 Jupiter -109488-03-01 03:21 J -38269009.58 -38269009.36 -38269009.14 0.0513 0.0212
 Uranus -109488-09-07 18:28 J -38268818.95 -38268818.73 -38268818.51 0.0142 0.0069
 Jupiter -109483-08-20 05:45 J -38267011.46 -38267011.26 -38267011.06 0.0515 0.0229
 Saturn -109477-07-28 21:07 J -38264841.74 -38264841.62 -38264841.48 0.0299 0.0246
 Neptune -109474-01-22 18:14 J -38263933.93 -38263933.74 -38263933.54 0.0089 0.0061
 Neptune -109473-01-25 10:48 J -38263566.29 -38263566.05 -38263565.78 0.0089 0.0028
 Neptune -109472-01-27 03:50 J -38263198.61 -38263198.34 -38263198.07 0.0089 0.0006
 Neptune -109471-01-29 20:09 J -38262830.89 -38262830.66 -38262830.41 0.0089 0.0039
 Jupiter -109471-08-24 14:38 J -38262624.10 -38262623.89 -38262623.68 0.0514 0.0200
 Neptune -109470-02-01 13:12 J -38262463.11 -38262462.95 -38262462.80 0.0089 0.0072
 Saturn -109462-01-29 01:26 J -38259544.61 -38259544.44 -38259544.25 0.0263 0.0186
 Uranus -109450-03-12 09:36 J -38255119.34 -38255119.10 -38255118.86 0.0138 0.0055
 Uranus -109449-03-16 04:19 J -38254749.57 -38254749.32 -38254749.08 0.0137 0.0046
 Saturn -109448-07-23 11:16 J -38254255.25 -38254255.03 -38254254.80 0.0298 0.0069
 Mars -109446-07-17 06:14 J -38253531.40 -38253531.24 -38253531.09 0.1653 0.0822
 Mars -109437-01-14 00:00 J -38250428.72 -38250428.50 -38250428.29 0.1860 0.0258
 Saturn -109433-01-23 23:45 J -38248957.76 -38248957.51 -38248957.25 0.0262 0.0048
 Jupiter -109417-02-24 03:07 J -38243082.55 -38243082.37 -38243082.19 0.0511 0.0336
 Pluto -109413-07-28 17:16 J -38241466.01 -38241465.78 -38241465.53 0.0080 0.0016
 Uranus -109406-08-31 02:24 J -38238876.47 -38238876.40 -38238876.31 0.0141 0.0133
 Jupiter -109405-02-29 04:48 J -38238694.53 -38238694.30 -38238694.07 0.0512 0.0133
 Uranus -109405-09-03 14:38 J -38238507.13 -38238506.89 -38238506.65 0.0141 0.0032
 Uranus -109404-09-08 04:04 J -38238137.54 -38238137.33 -38238137.12 0.0142 0.0072
 Saturn -109403-01-30 09:21 J -38237993.17 -38237993.11 -38237993.02 0.0262 0.0250

Jupiter -109400-08-19 08:09 J -38236696.34 -38236696.16 -38236695.98 0.0516 0.0314
 Neptune -109393-07-20 18:57 J -38234168.71 -38234168.71 -38234168.63 0.0088 0.0088
 Neptune -109392-07-23 01:55 J -38233801.59 -38233801.42 -38233801.21 0.0088 0.0058
 Neptune -109391-07-25 08:52 J -38233434.35 -38233434.13 -38233433.88 0.0088 0.0028
 Neptune -109390-07-27 16:04 J -38233067.08 -38233066.83 -38233066.59 0.0088 0.0003
 Saturn -109389-07-24 19:40 J -38232703.91 -38232703.68 -38232703.44 0.0298 0.0010
 Neptune -109389-07-28 22:48 J -38232699.77 -38232699.55 -38232699.31 0.0088 0.0033
 Neptune -109388-07-31 05:31 J -38232332.42 -38232332.27 -38232332.07 0.0088 0.0064
 Jupiter -109388-08-23 19:40 J -38232308.90 -38232308.68 -38232308.46 0.0514 0.0127
 Saturn -109374-01-25 07:55 J -38227406.42 -38227406.17 -38227405.91 0.0262 0.0018
 Uranus -109366-03-12 20:09 J -38224437.90 -38224437.66 -38224437.41 0.0138 0.0050
 Uranus -109365-03-16 14:52 J -38224068.11 -38224067.88 -38224067.62 0.0137 0.0051
 Saturn -109345-01-20 01:55 J -38216819.54 -38216819.42 -38216819.27 0.0263 0.0222
 Jupiter -109334-02-23 05:31 J -38212767.41 -38212767.27 -38212767.13 0.0510 0.0409
 Saturn -109330-07-26 22:48 J -38211152.77 -38211152.55 -38211152.32 0.0299 0.0076
 Jupiter -109322-02-28 02:24 J -38208379.64 -38208379.40 -38208379.16 0.0512 0.0041
 Uranus -109322-08-31 15:50 J -38208194.94 -38208194.84 -38208194.73 0.0141 0.0126
 Uranus -109321-09-04 03:50 J -38207825.58 -38207825.34 -38207825.09 0.0141 0.0025
 Mars -109320-07-13 14:38 J -38207513.04 -38207512.89 -38207512.74 0.1658 0.0902
 Uranus -109320-09-08 17:02 J -38207455.99 -38207455.79 -38207455.58 0.0142 0.0079
 Jupiter -109317-08-18 19:40 J -38206380.83 -38206380.68 -38206380.52 0.0516 0.0363
 Saturn -109315-01-26 12:57 J -38205855.20 -38205854.96 -38205854.71 0.0262 0.0078
 Neptune -109310-01-21 18:00 J -38204033.86 -38204033.75 -38204033.62 0.0089 0.0079
 Neptune -109309-01-24 10:48 J -38203666.26 -38203666.05 -38203665.80 0.0089 0.0046
 Neptune -109308-01-26 03:50 J -38203298.61 -38203298.34 -38203298.07 0.0089 0.0012
 Neptune -109307-01-28 20:52 J -38202930.89 -38202930.63 -38202930.37 0.0089 0.0021
 Neptune -109306-01-31 12:57 J -38202563.15 -38202562.96 -38202562.73 0.0089 0.0055
 Neptune -109305-02-03 05:31 J -38202195.28 -38202195.27 -38202195.22 0.0089 0.0088
 Jupiter -109305-08-23 05:45 J -38201993.48 -38201993.26 -38201993.03 0.0514 0.0070
 Saturn -109301-07-19 21:50 J -38200566.69 -38200566.59 -38200566.47 0.0298 0.0262

Jupiter -109293-08-27 15:07 J -38197605.92 -38197605.87 -38197605.82 0.0513 0.0499
 Saturn -109286-01-21 05:02 J -38195268.48 -38195268.29 -38195268.08 0.0263 0.0165
 Uranus -109282-03-13 07:55 J -38193756.41 -38193756.17 -38193755.91 0.0138 0.0044
 Uranus -109281-03-17 02:38 J -38193386.62 -38193386.39 -38193386.14 0.0137 0.0057
 Saturn -109271-07-27 22:04 J -38189601.78 -38189601.58 -38189601.37 0.0299 0.0134
 Saturn -109256-01-27 14:52 J -38184304.09 -38184303.88 -38184303.65 0.0262 0.0134
 Pluto -109253-01-30 18:14 J -38183206.01 -38183205.74 -38183205.47 0.0065 0.0007
 Jupiter -109251-02-22 06:57 J -38182452.28 -38182452.21 -38182452.14 0.0510 0.0487
 Saturn -109242-07-21 19:40 J -38179015.84 -38179015.68 -38179015.51 0.0298 0.0207
 Mars -109241-07-15 14:09 J -38178656.09 -38178655.91 -38178655.73 0.1657 0.0183
 Jupiter -109239-02-27 11:16 J -38178064.27 -38178064.03 -38178063.78 0.0512 0.0014
 Uranus -109238-09-01 04:33 J -38177513.42 -38177513.31 -38177513.17 0.0141 0.0120
 Uranus -109237-09-04 16:33 J -38177144.05 -38177143.81 -38177143.56 0.0141 0.0019
 Uranus -109236-09-09 06:00 J -38176774.44 -38176774.25 -38176774.04 0.0142 0.0085
 Jupiter -109234-08-19 05:16 J -38176065.40 -38176065.28 -38176065.14 0.0516 0.0423
 Neptune -109228-07-22 12:43 J -38173901.10 -38173900.97 -38173900.82 0.0088 0.0073
 Saturn -109227-01-22 05:16 J -38173717.50 -38173717.28 -38173717.04 0.0263 0.0112
 Jupiter -109227-03-04 14:38 J -38173675.98 -38173675.89 -38173675.79 0.0513 0.0469
 Neptune -109227-07-24 18:57 J -38173533.90 -38173533.71 -38173533.47 0.0088 0.0044
 Neptune -109226-07-27 02:09 J -38173166.65 -38173166.41 -38173166.16 0.0088 0.0013
 Neptune -109225-07-28 08:52 J -38172799.36 -38172799.13 -38172798.88 0.0088 0.0018
 Neptune -109224-07-30 15:36 J -38172432.05 -38172431.85 -38172431.63 0.0088 0.0047
 Neptune -109223-08-01 22:19 J -38172064.66 -38172064.57 -38172064.42 0.0088 0.0078
 Jupiter -109222-08-23 14:09 J -38171678.14 -38171677.91 -38171677.69 0.0515 0.0009
 Saturn -109212-07-28 18:43 J -38168050.90 -38168050.72 -38168050.53 0.0299 0.0187
 Jupiter -109210-08-28 01:40 J -38167290.53 -38167290.43 -38167290.31 0.0513 0.0450
 Uranus -109198-03-13 21:36 J -38163074.85 -38163074.60 -38163074.34 0.0138 0.0037
 Saturn -109197-01-29 14:38 J -38162753.06 -38162752.89 -38162752.70 0.0262 0.0185
 Uranus -109197-03-17 16:33 J -38162705.03 -38162704.81 -38162704.57 0.0137 0.0064
 Saturn -109183-07-22 15:50 J -38157465.04 -38157464.84 -38157464.64 0.0298 0.0154

Saturn -109168-01-23 03:36 J -38152166.60 -38152166.35 -38152166.10 0.0263 0.0063
 Pluto -109166-07-30 09:21 J -38151248.29 -38151248.11 -38151247.88 0.0080 0.0044
 Mars -109162-07-18 14:09 J -38149799.03 -38149798.91 -38149798.79 0.1655 0.1253
 Jupiter -109156-02-26 18:57 J -38147748.95 -38147748.71 -38147748.47 0.0511 0.0065
 Uranus -109154-09-01 19:40 J -38146831.81 -38146831.68 -38146831.51 0.0141 0.0112
 Mars -109153-01-12 18:00 J -38146698.94 -38146698.75 -38146698.55 0.1856 0.0774
 Saturn -109153-07-29 13:26 J -38146500.08 -38146499.94 -38146499.80 0.0299 0.0235
 Uranus -109153-09-05 08:09 J -38146462.40 -38146462.16 -38146461.91 0.0141 0.0011
 Uranus -109152-09-09 21:50 J -38146092.78 -38146092.59 -38146092.41 0.0142 0.0093
 Jupiter -109151-08-18 16:33 J -38145749.90 -38145749.81 -38145749.72 0.0517 0.0473
 Neptune -109145-01-23 09:07 J -38143766.27 -38143766.12 -38143765.91 0.0089 0.0065
 Neptune -109144-01-25 02:38 J -38143398.63 -38143398.39 -38143398.13 0.0089 0.0031
 Jupiter -109144-03-03 15:36 J -38143361.00 -38143360.85 -38143360.68 0.0513 0.0387
 Neptune -109143-01-27 19:40 J -38143030.94 -38143030.68 -38143030.41 0.0089 0.0003
 Neptune -109142-01-30 12:28 J -38142663.22 -38142662.98 -38142662.73 0.0089 0.0036
 Neptune -109141-02-02 04:48 J -38142295.45 -38142295.30 -38142295.12 0.0089 0.0070
 Jupiter -109139-08-23 05:45 J -38141362.48 -38141362.26 -38141362.03 0.0516 0.0026
 Saturn -109138-01-30 12:43 J -38141202.06 -38141201.97 -38141201.84 0.0262 0.0235
 Jupiter -109127-08-27 16:19 J -38136974.95 -38136974.82 -38136974.68 0.0513 0.0409
 Saturn -109124-07-23 11:16 J -38135914.24 -38135914.03 -38135913.80 0.0298 0.0104
 Uranus -109115-03-09 16:33 J -38132762.89 -38132762.81 -38132762.71 0.0139 0.0130
 Mars -109115-07-12 22:04 J -38132637.64 -38132637.58 -38132637.52 0.1662 0.1554
 Uranus -109114-03-14 12:57 J -38132393.21 -38132392.96 -38132392.69 0.0138 0.0028
 Uranus -109113-03-18 07:40 J -38132023.38 -38132023.18 -38132022.94 0.0137 0.0073
 Saturn -109109-01-25 00:57 J -38130615.71 -38130615.46 -38130615.20 0.0263 0.0016
 Saturn -109094-07-31 08:09 J -38124949.22 -38124949.16 -38124949.08 0.0299 0.0285
 Saturn -109080-01-18 20:52 J -38120028.71 -38120028.63 -38120028.53 0.0264 0.0246
 Jupiter -109073-02-26 21:36 J -38117433.83 -38117433.60 -38117433.37 0.0511 0.0140
 Uranus -109070-09-02 09:21 J -38116150.27 -38116150.11 -38116149.94 0.0141 0.0105
 Uranus -109069-09-05 21:36 J -38115780.85 -38115780.60 -38115780.36 0.0141 0.0004

Jupiter -109068-08-18 06:57 J -38115434.23 -38115434.21 -38115434.19 0.0517 0.0514
 Uranus -109068-09-10 11:02 J -38115411.21 -38115411.04 -38115410.86 0.0142 0.0099
 Saturn -109065-07-24 07:55 J -38114363.40 -38114363.17 -38114362.93 0.0298 0.0051
 Neptune -109063-07-24 04:33 J -38113633.47 -38113633.31 -38113633.11 0.0088 0.0060
 Neptune -109062-07-26 11:31 J -38113266.24 -38113266.02 -38113265.77 0.0088 0.0030
 Jupiter -109061-03-03 01:55 J -38113045.60 -38113045.42 -38113045.24 0.0513 0.0340
 Neptune -109061-07-27 18:28 J -38112898.98 -38112898.73 -38112898.48 0.0088 0.0001
 Neptune -109060-07-30 00:57 J -38112531.67 -38112531.46 -38112531.21 0.0088 0.0032
 Neptune -109059-08-01 07:26 J -38112164.34 -38112164.19 -38112163.98 0.0088 0.0062
 Jupiter -109056-08-22 17:31 J -38111046.99 -38111046.77 -38111046.55 0.0516 0.0076
 Saturn -109050-01-25 22:48 J -38109064.80 -38109064.55 -38109064.29 0.0263 0.0033
 Jupiter -109044-08-27 01:55 J -38106659.58 -38106659.42 -38106659.25 0.0514 0.0352
 Mars -109036-07-14 22:04 J -38103780.76 -38103780.58 -38103780.41 0.1661 0.0469
 Uranus -109031-03-10 08:38 J -38102081.24 -38102081.14 -38102080.99 0.0139 0.0121
 Uranus -109030-03-15 05:31 J -38101711.53 -38101711.27 -38101711.01 0.0138 0.0018
 Uranus -109029-03-19 00:14 J -38101341.69 -38101341.49 -38101341.27 0.0137 0.0081
 Saturn -109021-01-20 19:12 J -38098477.86 -38098477.70 -38098477.52 0.0264 0.0196
 Pluto -109006-01-31 15:36 J -38092988.05 -38092987.85 -38092987.59 0.0065 0.0035
 Saturn -109006-07-26 07:26 J -38092812.43 -38092812.19 -38092811.96 0.0298 0.0009
 Pluto -109005-02-02 07:12 J -38092621.37 -38092621.20 -38092620.97 0.0065 0.0043

109TH MILLENNIUM BCE

This is a list of transits of Earth in the 109th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-108991-01-26 22:19 J	-38087513.81	-38087513.57	-38087513.33	0.0263	0.0084		
Jupiter	-108990-02-26 07:12 J	-38087118.43	-38087118.20	-38087117.98	0.0510	0.0187		
Uranus	-108986-09-02 22:48 J	-38085468.71	-38085468.55	-38085468.36	0.0141	0.0099		
Uranus	-108985-09-06 11:31 J	-38085099.27	-38085099.02	-38085098.78	0.0141	0.0003		
Uranus	-108984-09-11 00:28 J	-38084729.62	-38084729.48	-38084729.30	0.0142	0.0106		
Neptune	-108981-01-22 08:24 J	-38083866.23	-38083866.15	-38083866.04	0.0089	0.0083		
Neptune	-108980-01-24 01:12 J	-38083498.65	-38083498.45	-38083498.21	0.0089	0.0050		
Neptune	-108979-01-26 18:14 J	-38083131.00	-38083130.74	-38083130.47	0.0089	0.0016		
Neptune	-108978-01-29 11:02 J	-38082763.29	-38082763.04	-38082762.76	0.0089	0.0018		
Jupiter	-108978-03-03 08:52 J	-38082730.33	-38082730.13	-38082729.92	0.0512	0.0282		
Neptune	-108977-02-01 03:50 J	-38082395.55	-38082395.34	-38082395.12	0.0089	0.0051		
Neptune	-108976-02-02 20:09 J	-38082027.71	-38082027.66	-38082027.55	0.0089	0.0085		
Jupiter	-108973-08-22 02:52 J	-38080731.60	-38080731.38	-38080731.16	0.0516	0.0136		
Saturn	-108962-01-21 19:12 J	-38076926.90	-38076926.70	-38076926.47	0.0264	0.0144		
Jupiter	-108961-08-26 14:38 J	-38076344.07	-38076343.89	-38076343.71	0.0515	0.0305		
Mars	-108957-07-16 21:50 J	-38074923.76	-38074923.59	-38074923.42	0.1659	0.0618		
Uranus	-108947-03-10 23:45 J	-38071399.65	-38071399.51	-38071399.34	0.0139	0.0111		
Saturn	-108947-07-27 09:21 J	-38071261.33	-38071261.11	-38071260.87	0.0297	0.0074		
Uranus	-108946-03-15 20:38 J	-38071029.90	-38071029.64	-38071029.38	0.0138	0.0009		
Uranus	-108945-03-19 15:21 J	-38070660.04	-38070659.86	-38070659.65	0.0137	0.0091		
Saturn	-108932-01-28 00:00 J	-38065962.71	-38065962.50	-38065962.28	0.0263	0.0139		
Saturn	-108918-07-21 17:45 J	-38060674.88	-38060674.76	-38060674.61	0.0297	0.0242		
Pluto	-108918-08-02 08:52 J	-38060663.31	-38060663.13	-38060662.91	0.0079	0.0046		
Jupiter	-108907-02-25 06:43 J	-38056803.42	-38056803.22	-38056803.02	0.0509	0.0275		
Saturn	-108903-01-22 22:04 J	-38055375.82	-38055375.58	-38055375.33	0.0264	0.0087		
Uranus	-108902-09-03 11:02 J	-38054787.21	-38054787.04	-38054786.85	0.0140	0.0092		
Uranus	-108901-09-06 23:02 J	-38054417.78	-38054417.54	-38054417.29	0.0141	0.0008		

Uranus -108900-09-11 12:14 J -38054048.13 -38054047.99 -38054047.83 0.0142 0.0110
 Neptune -108899-07-23 12:57 J -38053733.06 -38053732.96 -38053732.81 0.0088 0.0077
 Neptune -108898-07-25 19:40 J -38053365.87 -38053365.68 -38053365.45 0.0088 0.0047
 Neptune -108897-07-27 02:52 J -38052998.62 -38052998.38 -38052998.13 0.0088 0.0016
 Neptune -108896-07-29 09:21 J -38052631.34 -38052631.11 -38052630.85 0.0088 0.0015
 Jupiter -108895-03-02 07:55 J -38052415.39 -38052415.17 -38052414.94 0.0511 0.0190
 Neptune -108895-07-31 16:04 J -38052264.02 -38052263.83 -38052263.59 0.0088 0.0045
 Neptune -108894-08-02 22:48 J -38051896.65 -38051896.55 -38051896.39 0.0088 0.0075
 Jupiter -108890-08-22 12:00 J -38050416.21 -38050416.00 -38050415.79 0.0517 0.0198
 Saturn -108888-07-28 16:33 J -38049710.00 -38049709.81 -38049709.60 0.0297 0.0149
 Jupiter -108878-08-26 22:19 J -38046028.76 -38046028.57 -38046028.36 0.0515 0.0239
 Saturn -108873-01-30 04:04 J -38044411.49 -38044411.33 -38044411.15 0.0263 0.0198
 Mars -108869-01-11 13:55 J -38042968.99 -38042968.92 -38042968.84 0.1851 0.1711
 Uranus -108863-03-11 12:00 J -38040718.16 -38040718.00 -38040717.82 0.0139 0.0104
 Uranus -108862-03-16 09:07 J -38040348.38 -38040348.12 -38040347.86 0.0138 0.0002
 Uranus -108861-03-20 04:04 J -38039978.49 -38039978.33 -38039978.12 0.0137 0.0098
 Saturn -108859-07-23 01:40 J -38039123.62 -38039123.43 -38039123.24 0.0297 0.0165
 Saturn -108844-01-24 03:50 J -38033824.60 -38033824.34 -38033824.09 0.0264 0.0027
 Mars -108831-07-14 05:31 J -38028905.40 -38028905.27 -38028905.14 0.1665 0.1111
 Saturn -108829-07-30 03:36 J -38028158.49 -38028158.35 -38028158.20 0.0297 0.0230
 Jupiter -108824-02-24 08:38 J -38026488.31 -38026488.14 -38026487.96 0.0509 0.0351
 Uranus -108818-09-04 01:26 J -38024105.63 -38024105.44 -38024105.23 0.0140 0.0084
 Uranus -108817-09-07 13:26 J -38023736.18 -38023735.94 -38023735.69 0.0141 0.0015
 Neptune -108816-01-22 23:16 J -38023598.68 -38023598.53 -38023598.34 0.0089 0.0069
 Uranus -108816-09-12 02:38 J -38023366.53 -38023366.39 -38023366.25 0.0142 0.0117
 Neptune -108815-01-25 16:33 J -38023231.05 -38023230.81 -38023230.55 0.0089 0.0035
 Neptune -108814-01-28 09:21 J -38022863.38 -38022863.11 -38022862.84 0.0089 0.0002
 Saturn -108814-01-31 11:16 J -38022860.05 -38022860.03 -38022859.98 0.0263 0.0261
 Neptune -108813-01-31 02:09 J -38022495.65 -38022495.41 -38022495.15 0.0089 0.0032
 Neptune -108812-02-01 18:43 J -38022127.88 -38022127.72 -38022127.52 0.0089 0.0066

Jupiter -108812-03-01 11:16 J -38022100.26 -38022100.03 -38022099.79 0.0511 0.0119
 Jupiter -108807-08-21 15:36 J -38020101.04 -38020100.85 -38020100.66 0.0517 0.0282
 Saturn -108800-07-24 13:55 J -38017572.14 -38017571.92 -38017571.69 0.0297 0.0079
 Jupiter -108795-08-26 01:26 J -38015713.65 -38015713.44 -38015713.22 0.0516 0.0154
 Mars -108790-01-15 10:19 J -38014110.21 -38014110.07 -38014109.93 0.1855 0.1412
 Saturn -108785-01-26 12:00 J -38012273.25 -38012273.00 -38012272.75 0.0264 0.0038
 Uranus -108779-03-12 00:14 J -38010036.66 -38010036.49 -38010036.29 0.0139 0.0097
 Uranus -108778-03-16 21:36 J -38009666.86 -38009666.60 -38009666.33 0.0138 0.0005
 Uranus -108777-03-20 17:16 J -38009296.95 -38009296.78 -38009296.61 0.0137 0.0104
 Pluto -108759-02-01 18:14 J -38002769.87 -38002769.74 -38002769.54 0.0065 0.0052
 Pluto -108758-02-03 09:50 J -38002403.31 -38002403.09 -38002402.81 0.0065 0.0026
 Saturn -108756-01-20 04:33 J -38001686.46 -38001686.31 -38001686.13 0.0264 0.0203
 Mars -108752-07-16 05:45 J -38000048.45 -38000048.26 -38000048.08 0.1663 0.0052
 Jupiter -108741-02-24 09:21 J -37996173.23 -37996173.11 -37996172.98 0.0509 0.0431
 Saturn -108741-07-26 04:33 J -37996020.54 -37996020.31 -37996020.07 0.0297 0.0013
 Neptune -108734-07-25 04:19 J -37993465.47 -37993465.32 -37993465.13 0.0088 0.0064
 Uranus -108734-09-04 15:50 J -37993424.03 -37993423.84 -37993423.62 0.0140 0.0077
 Neptune -108733-07-26 11:02 J -37993098.25 -37993098.04 -37993097.80 0.0088 0.0034
 Uranus -108733-09-08 03:36 J -37993054.59 -37993054.35 -37993054.10 0.0141 0.0023
 Neptune -108732-07-28 18:14 J -37992730.99 -37992730.74 -37992730.49 0.0088 0.0003
 Uranus -108732-09-12 16:19 J -37992684.92 -37992684.82 -37992684.69 0.0142 0.0125
 Neptune -108731-07-31 00:43 J -37992363.69 -37992363.47 -37992363.22 0.0088 0.0028
 Neptune -108730-08-02 07:12 J -37991996.36 -37991996.20 -37991995.99 0.0088 0.0058
 Jupiter -108729-02-29 07:55 J -37991785.42 -37991785.17 -37991784.93 0.0510 0.0022
 Neptune -108729-08-03 14:09 J -37991628.92 -37991628.91 -37991628.85 0.0088 0.0088
 Saturn -108726-01-27 22:04 J -37990721.81 -37990721.58 -37990721.34 0.0264 0.0106
 Jupiter -108724-08-20 17:02 J -37989785.94 -37989785.79 -37989785.63 0.0518 0.0374
 Jupiter -108717-03-05 07:26 J -37987397.26 -37987397.19 -37987397.11 0.0512 0.0481
 Saturn -108712-07-20 23:02 J -37985433.60 -37985433.54 -37985433.46 0.0296 0.0281
 Jupiter -108712-08-25 04:04 J -37985398.55 -37985398.33 -37985398.11 0.0516 0.0067

Jupiter -108700-08-29 14:38 J -37981010.94 -37981010.89 -37981010.84 0.0514 0.0502
 Saturn -108697-01-22 16:33 J -37980135.02 -37980134.81 -37980134.58 0.0264 0.0131
 Uranus -108695-03-12 12:57 J -37979355.15 -37979354.96 -37979354.76 0.0139 0.0090
 Uranus -108694-03-17 10:19 J -37978985.32 -37978985.07 -37978984.80 0.0138 0.0012
 Uranus -108693-03-21 05:45 J -37978615.39 -37978615.26 -37978615.09 0.0137 0.0111
 Saturn -108682-07-28 21:07 J -37974468.84 -37974468.62 -37974468.40 0.0297 0.0105
 Mars -108673-07-18 05:45 J -37971191.40 -37971191.26 -37971191.12 0.1661 0.1057
 Pluto -108671-08-03 15:50 J -37970445.06 -37970444.84 -37970444.60 0.0080 0.0030
 Saturn -108667-01-29 09:36 J -37969170.29 -37969170.10 -37969169.91 0.0264 0.0175
 Saturn -108653-07-22 15:36 J -37963882.02 -37963881.85 -37963881.66 0.0296 0.0187
 Neptune -108652-01-21 22:04 J -37963698.59 -37963698.58 -37963698.51 0.0089 0.0088
 Neptune -108651-01-24 15:07 J -37963331.08 -37963330.87 -37963330.65 0.0089 0.0054
 Neptune -108650-01-27 07:40 J -37962963.43 -37962963.18 -37962962.90 0.0089 0.0021
 Uranus -108650-09-05 08:09 J -37962742.37 -37962742.16 -37962741.94 0.0140 0.0067
 Neptune -108649-01-30 00:43 J -37962595.73 -37962595.47 -37962595.20 0.0089 0.0013
 Uranus -108649-09-08 19:55 J -37962372.91 -37962372.67 -37962372.43 0.0141 0.0032
 Neptune -108648-01-31 16:48 J -37962228.00 -37962227.80 -37962227.55 0.0089 0.0047
 Uranus -108648-09-13 08:24 J -37962003.21 -37962003.15 -37962003.05 0.0142 0.0134
 Neptune -108647-02-03 09:50 J -37961860.19 -37961860.09 -37961859.96 0.0089 0.0080
 Jupiter -108646-02-28 03:07 J -37961470.61 -37961470.37 -37961470.13 0.0510 0.0079
 Jupiter -108641-08-19 20:52 J -37959470.73 -37959470.63 -37959470.52 0.0518 0.0455
 Saturn -108638-01-24 05:31 J -37958583.52 -37958583.27 -37958583.02 0.0264 0.0058
 Jupiter -108634-03-05 05:16 J -37957082.43 -37957082.28 -37957082.12 0.0512 0.0391
 Jupiter -108629-08-24 05:31 J -37955083.49 -37955083.27 -37955083.04 0.0517 0.0024
 Saturn -108623-07-30 13:12 J -37952917.12 -37952916.95 -37952916.77 0.0297 0.0198
 Jupiter -108617-08-28 14:38 J -37950696.02 -37950695.89 -37950695.75 0.0515 0.0405
 Uranus -108611-03-13 04:04 J -37948673.54 -37948673.33 -37948673.12 0.0139 0.0081
 Uranus -108610-03-18 01:26 J -37948303.69 -37948303.44 -37948303.17 0.0138 0.0020
 Uranus -108609-03-21 21:07 J -37947933.74 -37947933.62 -37947933.48 0.0137 0.0119
 Saturn -108608-01-30 21:21 J -37947618.70 -37947618.61 -37947618.52 0.0264 0.0244

Saturn -108594-07-25 07:26 J -37942330.41 -37942330.19 -37942329.96 0.0296 0.0096
 Saturn -108579-01-25 18:00 J -37937032.01 -37937031.75 -37937031.49 0.0264 0.0014
 Neptune -108570-07-24 11:45 J -37933565.08 -37933565.01 -37933564.90 0.0088 0.0082
 Neptune -108569-07-25 18:43 J -37933197.90 -37933197.72 -37933197.50 0.0088 0.0051
 Neptune -108568-07-28 02:09 J -37932830.65 -37932830.41 -37932830.17 0.0088 0.0021
 Neptune -108567-07-30 08:38 J -37932463.38 -37932463.14 -37932462.89 0.0088 0.0010
 Neptune -108566-08-01 15:36 J -37932096.07 -37932095.85 -37932095.62 0.0088 0.0040
 Uranus -108566-09-05 23:45 J -37932060.73 -37932060.51 -37932060.28 0.0140 0.0059
 Neptune -108565-08-02 21:50 J -37931728.71 -37931728.59 -37931728.41 0.0088 0.0071
 Uranus -108565-09-09 11:16 J -37931691.26 -37931691.03 -37931690.79 0.0141 0.0040
 Saturn -108564-08-01 03:21 J -37931365.42 -37931365.36 -37931365.30 0.0298 0.0286
 Uranus -108564-09-14 00:00 J -37931321.50 -37931321.50 -37931321.48 0.0142 0.0141
 Jupiter -108563-02-27 03:21 J -37931155.59 -37931155.36 -37931155.13 0.0509 0.0160
 Jupiter -108551-03-04 03:50 J -37926767.53 -37926767.34 -37926767.14 0.0511 0.0303
 Saturn -108550-01-20 14:38 J -37926445.02 -37926444.89 -37926444.73 0.0265 0.0217
 Mars -108547-07-15 12:28 J -37925173.14 -37925172.98 -37925172.81 0.1667 0.0678
 Jupiter -108546-08-24 05:45 J -37924768.47 -37924768.26 -37924768.03 0.0518 0.0120
 Saturn -108535-07-26 20:38 J -37920778.88 -37920778.64 -37920778.41 0.0297 0.0011
 Jupiter -108534-08-28 17:02 J -37920380.97 -37920380.79 -37920380.62 0.0516 0.0321
 Uranus -108527-03-13 18:57 J -37917991.92 -37917991.71 -37917991.47 0.0139 0.0073
 Uranus -108526-03-18 16:48 J -37917622.05 -37917621.80 -37917621.54 0.0138 0.0029
 Uranus -108525-03-22 12:14 J -37917252.08 -37917251.99 -37917251.88 0.0138 0.0127
 Saturn -108520-01-27 05:16 J -37915480.52 -37915480.28 -37915480.03 0.0264 0.0083
 Pluto -108512-02-03 02:09 J -37912551.51 -37912551.41 -37912551.27 0.0065 0.0058
 Pluto -108511-02-04 17:45 J -37912185.00 -37912184.76 -37912184.48 0.0065 0.0019
 Mars -108506-01-14 08:24 J -37910380.35 -37910380.15 -37910379.94 0.1850 0.0526
 Saturn -108491-01-22 00:28 J -37904893.68 -37904893.48 -37904893.26 0.0264 0.0150
 Neptune -108487-01-23 14:09 J -37903431.04 -37903430.91 -37903430.74 0.0089 0.0073
 Neptune -108486-01-26 07:26 J -37903063.43 -37903063.19 -37903062.95 0.0089 0.0039
 Neptune -108485-01-29 00:00 J -37902695.77 -37902695.50 -37902695.23 0.0089 0.0006

Neptune -108484-01-30 16:33 J -37902328.06 -37902327.81 -37902327.55 0.0089 0.0028
 Neptune -108483-02-02 08:38 J -37901960.30 -37901960.14 -37901959.92 0.0089 0.0062
 Uranus -108482-09-06 14:38 J -37901379.10 -37901378.89 -37901378.65 0.0140 0.0052
 Uranus -108481-09-10 02:09 J -37901009.63 -37901009.41 -37901009.17 0.0141 0.0048
 Jupiter -108480-02-26 02:38 J -37900840.60 -37900840.39 -37900840.18 0.0509 0.0244
 Saturn -108476-07-28 05:31 J -37899227.49 -37899227.27 -37899227.04 0.0297 0.0067
 Jupiter -108468-03-02 23:31 J -37896452.74 -37896452.52 -37896452.30 0.0511 0.0203
 Mars -108468-07-17 13:12 J -37896316.12 -37896315.95 -37896315.77 0.1665 0.0416
 Jupiter -108463-08-23 14:09 J -37894453.12 -37894452.91 -37894452.70 0.0518 0.0181
 Saturn -108461-01-29 14:38 J -37893929.10 -37893928.89 -37893928.68 0.0264 0.0149
 Jupiter -108451-08-28 00:00 J -37890065.69 -37890065.50 -37890065.30 0.0516 0.0252
 Saturn -108447-07-22 08:38 J -37888641.26 -37888641.14 -37888641.01 0.0297 0.0251
 Uranus -108443-03-14 11:31 J -37887310.24 -37887310.02 -37887309.78 0.0139 0.0063
 Uranus -108442-03-19 08:52 J -37886940.37 -37886940.13 -37886939.87 0.0138 0.0038
 Uranus -108441-03-23 04:19 J -37886570.34 -37886570.32 -37886570.27 0.0138 0.0136
 Saturn -108432-01-23 07:55 J -37883342.41 -37883342.17 -37883341.93 0.0264 0.0086
 Pluto -108424-08-05 02:24 J -37880226.64 -37880226.40 -37880226.17 0.0080 0.0024
 Saturn -108417-07-29 10:33 J -37877676.27 -37877676.06 -37877675.85 0.0297 0.0135
 Neptune -108405-07-25 02:52 J -37873297.52 -37873297.38 -37873297.21 0.0088 0.0069
 Neptune -108404-07-27 09:50 J -37872930.30 -37872930.09 -37872929.86 0.0088 0.0038
 Neptune -108403-07-29 17:02 J -37872563.03 -37872562.79 -37872562.54 0.0088 0.0008
 Saturn -108402-01-30 20:52 J -37872377.77 -37872377.63 -37872377.46 0.0263 0.0211
 Neptune -108402-07-31 23:45 J -37872195.74 -37872195.51 -37872195.27 0.0088 0.0022
 Neptune -108401-08-02 06:43 J -37871828.42 -37871828.22 -37871828.02 0.0088 0.0053
 Neptune -108400-08-04 12:57 J -37871461.01 -37871460.96 -37871460.85 0.0088 0.0084
 Uranus -108398-09-07 04:04 J -37870697.56 -37870697.33 -37870697.10 0.0140 0.0045
 Jupiter -108397-02-26 01:40 J -37870525.60 -37870525.43 -37870525.24 0.0509 0.0330
 Uranus -108397-09-10 15:07 J -37870328.09 -37870327.87 -37870327.64 0.0141 0.0053
 Mars -108389-07-19 13:26 J -37867459.02 -37867458.94 -37867458.86 0.1663 0.1490
 Saturn -108388-07-23 11:45 J -37867090.19 -37867090.01 -37867089.82 0.0297 0.0186

Jupiter -108385-03-02 05:16 J -37866137.51 -37866137.28 -37866137.04 0.0510 0.0142
 Jupiter -108380-08-22 20:52 J -37864137.82 -37864137.63 -37864137.43 0.0518 0.0251
 Saturn -108373-01-25 12:14 J -37861791.24 -37861790.99 -37861790.73 0.0264 0.0029
 Jupiter -108368-08-27 05:16 J -37859750.48 -37859750.28 -37859750.06 0.0516 0.0180
 Uranus -108359-03-15 00:14 J -37856628.73 -37856628.49 -37856628.25 0.0139 0.0055
 Uranus -108358-03-19 21:36 J -37856258.84 -37856258.60 -37856258.34 0.0138 0.0045
 Saturn -108358-07-31 11:02 J -37856125.21 -37856125.04 -37856124.86 0.0297 0.0194
 Saturn -108344-01-19 08:24 J -37851204.20 -37851204.15 -37851204.06 0.0265 0.0254
 Mars -108342-07-14 19:12 J -37850297.81 -37850297.70 -37850297.59 0.1672 0.1338
 Saturn -108329-07-24 11:16 J -37845539.23 -37845539.03 -37845538.81 0.0297 0.0129
 Neptune -108322-01-25 06:28 J -37843163.41 -37843163.23 -37843163.00 0.0089 0.0058
 Neptune -108321-01-27 23:45 J -37842795.77 -37842795.51 -37842795.25 0.0089 0.0024
 Neptune -108320-01-29 16:04 J -37842428.09 -37842427.83 -37842427.56 0.0089 0.0010
 Neptune -108319-02-01 08:38 J -37842060.36 -37842060.14 -37842059.89 0.0089 0.0043
 Neptune -108318-02-04 00:57 J -37841692.56 -37841692.46 -37841692.30 0.0089 0.0077
 Uranus -108315-09-03 06:43 J -37840385.27 -37840385.22 -37840385.13 0.0139 0.0134
 Saturn -108314-01-26 14:24 J -37840240.15 -37840239.90 -37840239.64 0.0264 0.0027
 Jupiter -108314-02-25 10:04 J -37840210.23 -37840210.08 -37840209.91 0.0508 0.0379
 Uranus -108314-09-07 16:48 J -37840016.03 -37840015.80 -37840015.56 0.0140 0.0038
 Uranus -108313-09-11 03:50 J -37839646.56 -37839646.34 -37839646.12 0.0141 0.0059
 Jupiter -108302-03-02 11:16 J -37835822.26 -37835822.03 -37835821.79 0.0510 0.0082
 Saturn -108299-08-01 09:21 J -37834574.23 -37834574.11 -37834573.98 0.0297 0.0248
 Jupiter -108297-08-22 06:00 J -37833822.43 -37833822.25 -37833822.07 0.0519 0.0310
 Saturn -108285-01-21 10:19 J -37829653.23 -37829653.07 -37829652.89 0.0265 0.0200
 Jupiter -108285-08-26 19:40 J -37829434.89 -37829434.68 -37829434.46 0.0517 0.0140
 Uranus -108275-03-15 11:31 J -37825947.26 -37825947.02 -37825946.77 0.0139 0.0049
 Uranus -108274-03-20 08:52 J -37825577.36 -37825577.13 -37825576.87 0.0138 0.0051
 Saturn -108270-07-26 08:24 J -37823988.37 -37823988.15 -37823987.91 0.0296 0.0077
 Pluto -108265-02-05 12:14 J -37822333.09 -37822332.99 -37822332.84 0.0065 0.0057
 Pluto -108264-02-06 04:19 J -37821966.57 -37821966.32 -37821966.05 0.0065 0.0020

Mars -108263-07-16 19:40 J -37821440.86 -37821440.68 -37821440.50 0.1670 0.0243
 Saturn -108255-01-27 14:38 J -37818689.13 -37818688.89 -37818688.64 0.0264 0.0078
 Neptune -108241-07-24 11:31 J -37813397.07 -37813397.02 -37813396.95 0.0088 0.0086
 Neptune -108240-07-26 18:14 J -37813029.91 -37813029.74 -37813029.53 0.0088 0.0056
 Neptune -108239-07-29 01:11 J -37812662.67 -37812662.45 -37812662.20 0.0088 0.0026
 Neptune -108238-07-31 08:38 J -37812295.39 -37812295.14 -37812294.89 0.0088 0.0005
 Neptune -108237-08-01 15:35 J -37811928.07 -37811927.85 -37811927.62 0.0088 0.0036
 Neptune -108236-08-03 21:50 J -37811560.72 -37811560.59 -37811560.40 0.0088 0.0067
 Jupiter -108231-02-24 11:16 J -37809895.13 -37809895.03 -37809894.93 0.0507 0.0459
 Uranus -108231-09-03 20:38 J -37809703.74 -37809703.64 -37809703.53 0.0139 0.0126
 Uranus -108230-09-08 06:14 J -37809334.47 -37809334.24 -37809333.99 0.0140 0.0031
 Uranus -108229-09-11 17:16 J -37808965.00 -37808964.78 -37808964.56 0.0141 0.0066
 Saturn -108226-01-22 09:50 J -37808102.29 -37808102.09 -37808101.87 0.0265 0.0149
 Mars -108222-01-13 07:11 J -37806650.41 -37806650.20 -37806649.99 0.1845 0.0312
 Jupiter -108219-03-01 13:40 J -37805507.18 -37805506.93 -37805506.69 0.0509 0.0011
 Jupiter -108214-08-22 20:24 J -37803506.81 -37803506.65 -37803506.48 0.0519 0.0351
 Saturn -108211-07-27 05:16 J -37802437.51 -37802437.28 -37802437.04 0.0296 0.0025
 Jupiter -108207-03-06 17:45 J -37801118.83 -37801118.76 -37801118.68 0.0511 0.0482
 Jupiter -108202-08-27 07:26 J -37799119.41 -37799119.19 -37799118.97 0.0517 0.0088
 Saturn -108196-01-28 13:11 J -37797138.17 -37797137.95 -37797137.72 0.0264 0.0126
 Uranus -108191-03-15 20:24 J -37795265.89 -37795265.65 -37795265.40 0.0139 0.0045
 Uranus -108190-03-20 18:00 J -37794895.98 -37794895.75 -37794895.50 0.0138 0.0055
 Jupiter -108190-08-31 15:50 J -37794731.84 -37794731.84 -37794731.84 0.0515 0.0515
 Mars -108184-07-18 20:09 J -37792583.81 -37792583.66 -37792583.50 0.1668 0.0843
 Pluto -108177-08-06 18:57 J -37790007.93 -37790007.71 -37790007.49 0.0079 0.0038
 Saturn -108167-01-23 08:09 J -37786551.39 -37786551.16 -37786550.91 0.0265 0.0100
 Neptune -108158-01-24 07:11 J -37783263.31 -37783263.20 -37783263.03 0.0089 0.0076
 Neptune -108157-01-27 00:00 J -37782895.72 -37782895.50 -37782895.25 0.0089 0.0042
 Neptune -108156-01-28 17:02 J -37782528.05 -37782527.79 -37782527.52 0.0089 0.0008
 Neptune -108155-01-31 09:21 J -37782160.35 -37782160.11 -37782159.83 0.0089 0.0026

Neptune -108154-02-03 01:55 J -37781792.61 -37781792.42 -37781792.21 0.0089 0.0059
 Saturn -108152-07-28 01:55 J -37780886.65 -37780886.42 -37780886.18 0.0296 0.0027
 Jupiter -108148-02-23 20:52 J -37779579.65 -37779579.63 -37779579.61 0.0507 0.0505
 Uranus -108147-09-04 10:33 J -37779022.17 -37779022.06 -37779021.92 0.0139 0.0119
 Uranus -108146-09-08 20:24 J -37778652.89 -37778652.65 -37778652.40 0.0140 0.0024
 Uranus -108145-09-12 06:43 J -37778283.41 -37778283.22 -37778282.99 0.0141 0.0074
 Saturn -108137-01-30 11:16 J -37775587.22 -37775587.03 -37775586.83 0.0264 0.0173
 Jupiter -108136-03-01 00:14 J -37775191.73 -37775191.49 -37775191.25 0.0509 0.0036
 Jupiter -108131-08-22 05:45 J -37773191.40 -37773191.26 -37773191.13 0.0519 0.0411
 Jupiter -108124-03-06 01:55 J -37770803.55 -37770803.42 -37770803.29 0.0511 0.0428
 Saturn -108123-07-22 09:50 J -37770300.16 -37770300.09 -37770300.01 0.0295 0.0278
 Jupiter -108119-08-26 17:31 J -37768803.99 -37768803.77 -37768803.54 0.0518 0.0034
 Saturn -108108-01-24 06:28 J -37765000.48 -37765000.23 -37764999.97 0.0265 0.0052
 Uranus -108107-03-16 07:55 J -37764584.42 -37764584.17 -37764583.91 0.0139 0.0040
 Jupiter -108107-08-31 06:28 J -37764416.32 -37764416.23 -37764416.15 0.0516 0.0476
 Uranus -108106-03-21 05:31 J -37764214.50 -37764214.27 -37764214.03 0.0138 0.0060
 Saturn -108093-07-29 00:43 J -37759335.69 -37759335.47 -37759335.24 0.0296 0.0082
 Saturn -108078-01-31 10:19 J -37754036.21 -37754036.07 -37754035.93 0.0264 0.0222
 Neptune -108076-07-26 03:35 J -37753129.47 -37753129.35 -37753129.19 0.0088 0.0072
 Neptune -108075-07-28 10:48 J -37752762.26 -37752762.05 -37752761.83 0.0088 0.0042
 Neptune -108074-07-30 17:45 J -37752395.00 -37752394.76 -37752394.51 0.0088 0.0012
 Neptune -108073-08-01 00:28 J -37752027.71 -37752027.48 -37752027.23 0.0088 0.0019
 Neptune -108072-08-03 07:26 J -37751660.38 -37751660.19 -37751659.97 0.0088 0.0050
 Neptune -108071-08-05 14:24 J -37751292.99 -37751292.90 -37751292.78 0.0088 0.0080
 Saturn -108064-07-23 08:38 J -37748749.28 -37748749.14 -37748748.98 0.0295 0.0222
 Uranus -108063-09-05 01:26 J -37748340.57 -37748340.44 -37748340.28 0.0139 0.0111
 Uranus -108062-09-09 11:16 J -37747971.27 -37747971.03 -37747970.79 0.0140 0.0016
 Uranus -108061-09-12 22:04 J -37747601.78 -37747601.58 -37747601.37 0.0141 0.0081
 Mars -108058-07-16 01:11 J -37746565.60 -37746565.45 -37746565.29 0.1675 0.0914
 Jupiter -108053-02-29 01:26 J -37744876.67 -37744876.44 -37744876.20 0.0508 0.0117

Saturn -108049-01-26 05:45 J -37743449.51 -37743449.26 -37743449.00 0.0265 0.0005

Jupiter -108048-08-21 17:31 J -37742875.87 -37742875.77 -37742875.67 0.0520 0.0463

Jupiter -108041-03-05 02:52 J -37740488.55 -37740488.38 -37740488.20 0.0510 0.0346

Jupiter -108036-08-26 05:45 J -37738488.49 -37738488.26 -37738488.04 0.0518 0.0017

Saturn -108034-07-31 02:38 J -37737784.59 -37737784.39 -37737784.18 0.0296 0.0143

Uranus -108024-03-11 19:11 J -37734272.73 -37734272.70 -37734272.62 0.0140 0.0137

Jupiter -108024-08-30 16:33 J -37734100.94 -37734100.81 -37734100.68 0.0516 0.0419

Uranus -108023-03-16 18:43 J -37733902.97 -37733902.72 -37733902.46 0.0139 0.0035

Uranus -108022-03-21 16:33 J -37733533.04 -37733532.81 -37733532.57 0.0138 0.0065

Saturn -108020-01-19 14:38 J -37732862.96 -37732862.89 -37732862.80 0.0266 0.0252

Pluto -108018-02-07 03:21 J -37732114.53 -37732114.36 -37732114.15 0.0065 0.0046

Pluto -108017-02-08 19:40 J -37731747.91 -37731747.68 -37731747.44 0.0065 0.0032

Saturn -108005-07-24 11:31 J -37727198.22 -37727198.02 -37727197.82 0.0295 0.0158

108TH MILLENNIUM BCE

This is a list of transits of Earth in the 108th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Neptune -107993-01-26 00:57 J -37722995.63 -37722995.46 -37722995.24 0.0089 0.0060

Neptune -107992-01-27 18:28 J -37722627.98 -37722627.73 -37722627.47 0.0089 0.0026

Neptune -107991-01-30 11:02 J -37722260.30 -37722260.04 -37722259.76 0.0089 0.0008

Saturn -107990-01-27 06:57 J -37721898.46 -37721898.21 -37721897.96 0.0266 0.0049

Neptune -107990-02-02 03:35 J -37721892.57 -37721892.35 -37721892.10 0.0089 0.0042
 Neptune -107989-02-04 19:40 J -37721524.79 -37721524.68 -37721524.51 0.0089 0.0076
 Mars -107979-07-18 01:55 J -37717708.60 -37717708.42 -37717708.24 0.1673 0.0186
 Uranus -107979-09-05 15:35 J -37717659.00 -37717658.85 -37717658.68 0.0139 0.0104
 Uranus -107978-09-10 01:26 J -37717289.68 -37717289.44 -37717289.19 0.0140 0.0009
 Uranus -107977-09-13 12:14 J -37716920.17 -37716919.99 -37716919.79 0.0141 0.0088
 Saturn -107975-08-01 07:26 J -37716233.34 -37716233.19 -37716233.01 0.0296 0.0211
 Jupiter -107970-02-28 06:43 J -37714561.45 -37714561.22 -37714561.00 0.0508 0.0179
 Saturn -107961-01-21 17:02 J -37711311.95 -37711311.79 -37711311.61 0.0266 0.0198
 Jupiter -107958-03-05 09:07 J -37710173.31 -37710173.12 -37710172.91 0.0510 0.0288
 Jupiter -107953-08-25 11:31 J -37708173.24 -37708173.02 -37708172.80 0.0518 0.0091
 Saturn -107946-07-26 17:45 J -37705646.98 -37705646.76 -37705646.53 0.0295 0.0088
 Jupiter -107941-08-29 22:04 J -37703785.74 -37703785.58 -37703785.41 0.0517 0.0345
 Uranus -107940-03-12 09:07 J -37703591.21 -37703591.12 -37703591.01 0.0140 0.0129
 Uranus -107939-03-17 08:24 J -37703221.40 -37703221.15 -37703220.89 0.0139 0.0028
 Mars -107938-01-12 06:14 J -37702920.41 -37702920.24 -37702920.07 0.1839 0.1086
 Uranus -107938-03-22 05:45 J -37702851.47 -37702851.26 -37702851.02 0.0138 0.0072
 Saturn -107931-01-28 10:33 J -37700347.29 -37700347.06 -37700346.82 0.0266 0.0106
 Pluto -107931-08-07 13:26 J -37700156.04 -37700155.94 -37700155.81 0.0080 0.0070
 Pluto -107930-08-09 13:55 J -37699789.05 -37699788.92 -37699788.74 0.0079 0.0062
 Saturn -107916-08-02 17:16 J -37694681.84 -37694681.78 -37694681.73 0.0296 0.0286
 Neptune -107912-07-25 14:38 J -37693228.91 -37693228.89 -37693228.85 0.0088 0.0088
 Neptune -107911-07-27 21:21 J -37692861.78 -37692861.61 -37692861.41 0.0088 0.0058
 Neptune -107910-07-30 04:04 J -37692494.55 -37692494.33 -37692494.08 0.0088 0.0028
 Neptune -107909-07-31 11:16 J -37692127.27 -37692127.03 -37692126.78 0.0088 0.0003
 Neptune -107908-08-02 17:45 J -37691759.97 -37691759.76 -37691759.52 0.0088 0.0034
 Neptune -107907-08-05 00:28 J -37691392.62 -37691392.48 -37691392.29 0.0088 0.0065
 Saturn -107902-01-22 22:48 J -37689760.76 -37689760.55 -37689760.32 0.0266 0.0138
 Mars -107900-07-20 02:24 J -37688851.52 -37688851.40 -37688851.28 0.1671 0.1257
 Uranus -107895-09-06 04:48 J -37686977.46 -37686977.30 -37686977.11 0.0139 0.0097

Uranus -107894-09-10 14:38 J -37686608.13 -37686607.89 -37686607.64 0.0140 0.0004
 Uranus -107893-09-14 01:26 J -37686238.61 -37686238.44 -37686238.24 0.0141 0.0094
 Jupiter -107887-02-27 09:35 J -37684246.31 -37684246.10 -37684245.89 0.0507 0.0249
 Saturn -107887-07-28 04:04 J -37684095.56 -37684095.33 -37684095.09 0.0295 0.0010
 Jupiter -107875-03-04 07:26 J -37679858.41 -37679858.19 -37679857.96 0.0509 0.0196
 Saturn -107872-01-29 17:16 J -37678795.97 -37678795.78 -37678795.57 0.0266 0.0165
 Jupiter -107870-08-25 15:35 J -37677858.06 -37677857.85 -37677857.64 0.0520 0.0173
 Mars -107859-01-16 00:43 J -37674061.49 -37674061.47 -37674061.44 0.1844 0.1825
 Saturn -107858-07-22 21:50 J -37673508.61 -37673508.59 -37673508.55 0.0294 0.0291
 Jupiter -107858-08-30 02:52 J -37673470.57 -37673470.38 -37673470.18 0.0518 0.0270
 Uranus -107856-03-12 19:55 J -37672909.77 -37672909.67 -37672909.53 0.0140 0.0124
 Uranus -107855-03-17 19:40 J -37672539.94 -37672539.68 -37672539.42 0.0139 0.0022
 Uranus -107854-03-22 17:16 J -37672169.99 -37672169.78 -37672169.55 0.0138 0.0077
 Mars -107853-07-14 05:02 J -37671690.33 -37671690.29 -37671690.24 0.1681 0.1626
 Saturn -107843-01-24 08:09 J -37668209.40 -37668209.16 -37668208.91 0.0266 0.0073
 Neptune -107829-01-25 03:21 J -37663095.47 -37663095.36 -37663095.21 0.0089 0.0077
 Neptune -107828-01-26 20:24 J -37662727.88 -37662727.65 -37662727.41 0.0089 0.0043
 Saturn -107828-07-29 17:31 J -37662543.99 -37662543.77 -37662543.54 0.0295 0.0075
 Neptune -107827-01-29 13:26 J -37662360.21 -37662359.94 -37662359.67 0.0089 0.0009
 Neptune -107826-02-01 05:45 J -37661992.50 -37661992.26 -37661991.99 0.0089 0.0025
 Neptune -107825-02-03 22:19 J -37661624.75 -37661624.57 -37661624.34 0.0089 0.0059
 Saturn -107813-02-01 02:52 J -37657244.49 -37657244.38 -37657244.24 0.0266 0.0230
 Uranus -107811-09-06 16:33 J -37656295.99 -37656295.81 -37656295.62 0.0139 0.0092
 Uranus -107810-09-11 02:09 J -37655926.65 -37655926.41 -37655926.16 0.0140 0.0002
 Uranus -107809-09-14 12:43 J -37655557.13 -37655556.97 -37655556.78 0.0141 0.0098
 Jupiter -107804-02-26 06:28 J -37653931.41 -37653931.23 -37653931.05 0.0506 0.0342
 Saturn -107799-07-24 13:40 J -37651957.10 -37651956.93 -37651956.76 0.0294 0.0204
 Jupiter -107792-03-03 05:16 J -37649543.52 -37649543.28 -37649543.04 0.0508 0.0107
 Jupiter -107787-08-24 20:09 J -37647542.86 -37647542.66 -37647542.46 0.0520 0.0250
 Saturn -107784-01-25 19:55 J -37646657.92 -37646657.67 -37646657.41 0.0266 0.0005

Jupiter -107775-08-29 05:16 J -37643155.49 -37643155.28 -37643155.07 0.0518 0.0180
 Mars -107774-07-17 06:57 J -37642833.38 -37642833.21 -37642833.04 0.1678 0.0497
 Uranus -107772-03-13 06:28 J -37642228.36 -37642228.23 -37642228.08 0.0140 0.0118
 Pluto -107771-02-08 21:07 J -37641895.85 -37641895.62 -37641895.36 0.0065 0.0028
 Uranus -107771-03-18 06:14 J -37641858.50 -37641858.24 -37641857.98 0.0139 0.0017
 Pluto -107770-02-10 12:28 J -37641529.11 -37641528.98 -37641528.77 0.0065 0.0051
 Uranus -107770-03-23 04:04 J -37641488.53 -37641488.33 -37641488.11 0.0138 0.0082
 Saturn -107769-07-31 08:38 J -37640992.33 -37640992.14 -37640991.94 0.0296 0.0162
 Saturn -107755-01-20 17:02 J -37636070.91 -37636070.79 -37636070.65 0.0267 0.0229
 Neptune -107747-07-27 08:52 J -37632961.26 -37632961.13 -37632960.98 0.0088 0.0073
 Neptune -107746-07-29 15:35 J -37632594.05 -37632593.85 -37632593.62 0.0088 0.0043
 Neptune -107745-07-30 22:33 J -37632226.80 -37632226.56 -37632226.31 0.0088 0.0012
 Neptune -107744-08-02 05:16 J -37631859.51 -37631859.28 -37631859.03 0.0088 0.0019
 Neptune -107743-08-04 12:14 J -37631492.19 -37631491.99 -37631491.77 0.0088 0.0049
 Neptune -107742-08-06 19:11 J -37631124.81 -37631124.70 -37631124.59 0.0088 0.0079
 Saturn -107740-07-26 05:45 J -37630405.47 -37630405.26 -37630405.04 0.0294 0.0116
 Uranus -107727-09-07 04:04 J -37625614.51 -37625614.33 -37625614.13 0.0139 0.0087
 Uranus -107726-09-11 13:40 J -37625245.18 -37625244.93 -37625244.68 0.0140 0.0006
 Saturn -107725-01-28 09:07 J -37625106.36 -37625106.12 -37625105.87 0.0266 0.0067
 Uranus -107725-09-15 00:14 J -37624875.65 -37624875.49 -37624875.31 0.0140 0.0102
 Jupiter -107721-02-26 03:50 J -37623616.46 -37623616.34 -37623616.21 0.0506 0.0431
 Saturn -107710-08-03 00:43 J -37619440.58 -37619440.47 -37619440.34 0.0296 0.0251
 Jupiter -107709-03-02 04:48 J -37619228.54 -37619228.30 -37619228.05 0.0508 0.0026
 Jupiter -107704-08-23 19:55 J -37617227.83 -37617227.67 -37617227.50 0.0520 0.0349
 Jupiter -107697-03-07 04:19 J -37614840.39 -37614840.32 -37614840.23 0.0509 0.0479
 Saturn -107696-01-22 06:00 J -37614519.44 -37614519.25 -37614519.03 0.0266 0.0158
 Mars -107695-07-19 07:26 J -37613976.36 -37613976.19 -37613976.02 0.1676 0.0589
 Jupiter -107692-08-28 04:19 J -37612840.54 -37612840.32 -37612840.09 0.0519 0.0082
 Uranus -107688-03-13 12:57 J -37611547.09 -37611546.96 -37611546.80 0.0140 0.0116
 Uranus -107687-03-18 12:57 J -37611177.22 -37611176.96 -37611176.70 0.0139 0.0015

Uranus -107686-03-23 11:02 J -37610807.24 -37610807.04 -37610806.82 0.0139 0.0084
 Pluto -107684-08-09 14:38 J -37609937.11 -37609936.89 -37609936.65 0.0080 0.0029
 Saturn -107681-07-27 21:07 J -37608853.85 -37608853.62 -37608853.38 0.0294 0.0028
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 Neptune -107664-01-25 23:02 J -37602827.72 -37602827.54 -37602827.32 0.0089 0.0060
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 Neptune -107662-01-31 09:07 J -37602092.38 -37602092.12 -37602091.85 0.0089 0.0008
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 Neptune -107660-02-04 18:28 J -37601356.85 -37601356.73 -37601356.57 0.0089 0.0076
 Mars -107654-01-11 07:55 J -37599190.23 -37599190.17 -37599190.12 0.1834 0.1758
 Uranus -107643-09-07 15:35 J -37594933.03 -37594932.85 -37594932.64 0.0139 0.0083
 Uranus -107642-09-12 01:11 J -37594563.70 -37594563.45 -37594563.20 0.0140 0.0011
 Uranus -107641-09-15 11:16 J -37594194.17 -37594194.03 -37594193.85 0.0140 0.0107
 Saturn -107637-01-24 18:43 J -37592967.96 -37592967.72 -37592967.47 0.0266 0.0087
 Jupiter -107626-03-02 02:09 J -37588913.65 -37588913.41 -37588913.16 0.0507 0.0067
 Saturn -107622-07-30 10:48 J -37587302.27 -37587302.05 -37587301.81 0.0295 0.0056
 Jupiter -107621-08-22 20:52 J -37586912.74 -37586912.63 -37586912.51 0.0521 0.0440
 Mars -107616-07-21 08:24 J -37585119.15 -37585119.15 -37585119.14 0.1674 0.1671
 Jupiter -107614-03-06 22:48 J -37584525.71 -37584525.55 -37584525.39 0.0509 0.0376
 Jupiter -107609-08-27 10:19 J -37582525.30 -37582525.07 -37582524.85 0.0519 0.0011
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 Uranus -107603-03-18 21:07 J -37580495.88 -37580495.62 -37580495.36 0.0139 0.0012
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 Jupiter -107597-08-31 19:55 J -37578137.78 -37578137.67 -37578137.55 0.0517 0.0441
 Saturn -107593-07-23 18:14 J -37576715.86 -37576715.74 -37576715.60 0.0294 0.0241
 Neptune -107583-07-26 21:21 J -37573060.62 -37573060.61 -37573060.54 0.0088 0.0088
 Neptune -107582-07-29 04:19 J -37572693.49 -37572693.32 -37572693.11 0.0088 0.0057
 Neptune -107581-07-30 11:31 J -37572326.25 -37572326.02 -37572325.78 0.0088 0.0027
 Neptune -107580-08-01 18:28 J -37571958.98 -37571958.73 -37571958.48 0.0088 0.0004

Neptune -107579-08-04 00:43 J -37571591.68 -37571591.47 -37571591.22 0.0088 0.0035
 Saturn -107578-01-26 06:00 J -37571416.51 -37571416.25 -37571416.00 0.0266 0.0019
 Neptune -107578-08-06 07:40 J -37571224.33 -37571224.18 -37571224.00 0.0088 0.0065
 Mars -107575-01-15 00:43 J -37570331.64 -37570331.47 -37570331.29 0.1838 0.1052
 Mars -107569-07-15 09:21 J -37567958.23 -37567958.11 -37567957.99 0.1684 0.1228
 Saturn -107563-07-31 20:52 J -37565750.84 -37565750.63 -37565750.42 0.0295 0.0131
 Uranus -107559-09-08 04:19 J -37564251.52 -37564251.32 -37564251.11 0.0139 0.0076
 Uranus -107558-09-12 13:26 J -37563882.18 -37563881.94 -37563881.69 0.0140 0.0017
 Uranus -107557-09-15 23:45 J -37563512.64 -37563512.51 -37563512.34 0.0140 0.0112
 Saturn -107549-01-21 01:55 J -37560829.51 -37560829.42 -37560829.30 0.0267 0.0242
 Jupiter -107543-02-28 23:16 J -37558598.76 -37558598.53 -37558598.29 0.0507 0.0157
 Jupiter -107538-08-23 03:50 J -37556597.38 -37556597.34 -37556597.30 0.0521 0.0510
 Saturn -107534-07-26 02:09 J -37555164.59 -37555164.41 -37555164.20 0.0294 0.0169
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 Jupiter -107526-08-27 14:09 J -37552210.13 -37552209.91 -37552209.69 0.0519 0.0072
 Pluto -107524-02-10 19:55 J -37551676.94 -37551676.67 -37551676.40 0.0065 0.0001
 Uranus -107520-03-14 04:33 J -37550184.46 -37550184.31 -37550184.14 0.0140 0.0111
 Saturn -107519-01-27 14:24 J -37549865.15 -37549864.90 -37549864.65 0.0266 0.0045
 Uranus -107519-03-19 05:02 J -37549814.55 -37549814.29 -37549814.03 0.0139 0.0010
 Uranus -107518-03-24 03:21 J -37549444.56 -37549444.36 -37549444.15 0.0139 0.0088
 Jupiter -107514-08-31 22:19 J -37547822.73 -37547822.57 -37547822.40 0.0518 0.0356
 Saturn -107504-08-02 02:52 J -37544199.55 -37544199.38 -37544199.21 0.0295 0.0200
 Neptune -107500-01-25 02:38 J -37542927.50 -37542927.39 -37542927.22 0.0089 0.0076
 Neptune -107499-01-27 19:40 J -37542559.90 -37542559.68 -37542559.43 0.0089 0.0042
 Neptune -107498-01-30 12:57 J -37542192.22 -37542191.96 -37542191.69 0.0089 0.0008
 Neptune -107497-02-02 05:31 J -37541824.51 -37541824.27 -37541824.00 0.0089 0.0026
 Neptune -107496-02-03 22:19 J -37541456.75 -37541456.57 -37541456.35 0.0089 0.0060
 Saturn -107490-01-22 10:19 J -37539278.26 -37539278.07 -37539277.88 0.0266 0.0177
 Mars -107490-07-18 11:45 J -37539101.19 -37539101.01 -37539100.83 0.1681 0.0101
 Saturn -107475-07-27 06:14 J -37533613.46 -37533613.24 -37533613.02 0.0295 0.0104

Uranus -107475-09-08 16:19 J -37533570.02 -37533569.82 -37533569.60 0.0139 0.0072
 Uranus -107474-09-13 01:40 J -37533200.67 -37533200.43 -37533200.18 0.0140 0.0021
 Uranus -107473-09-16 12:00 J -37532831.12 -37532831.00 -37532830.85 0.0140 0.0116
 Saturn -107460-01-28 19:40 J -37528313.91 -37528313.68 -37528313.44 0.0265 0.0103
 Jupiter -107460-02-28 04:48 J -37528283.51 -37528283.30 -37528283.08 0.0507 0.0216
 Jupiter -107448-03-05 04:48 J -37523895.51 -37523895.30 -37523895.08 0.0508 0.0236
 Saturn -107445-08-03 04:33 J -37522648.41 -37522648.31 -37522648.19 0.0295 0.0260
 Jupiter -107443-08-26 20:09 J -37521894.87 -37521894.66 -37521894.44 0.0520 0.0143
 Pluto -107437-08-11 20:24 J -37519717.89 -37519717.65 -37519717.41 0.0079 0.0024
 Uranus -107436-03-14 14:38 J -37519503.04 -37519502.89 -37519502.70 0.0140 0.0107
 Uranus -107435-03-19 15:07 J -37519133.13 -37519132.87 -37519132.60 0.0139 0.0007
 Uranus -107434-03-24 13:26 J -37518763.12 -37518762.94 -37518762.73 0.0139 0.0092
 Saturn -107431-01-23 15:07 J -37517727.10 -37517726.87 -37517726.64 0.0266 0.0118
 Jupiter -107431-08-31 10:04 J -37517507.25 -37517507.08 -37517506.89 0.0518 0.0307
 Neptune -107418-07-28 17:45 J -37512792.88 -37512792.76 -37512792.59 0.0088 0.0071
 Neptune -107417-07-30 01:11 J -37512425.67 -37512425.45 -37512425.23 0.0088 0.0041
 Saturn -107416-07-28 07:11 J -37512062.43 -37512062.20 -37512061.97 0.0295 0.0046
 Neptune -107416-08-01 07:40 J -37512058.42 -37512058.18 -37512057.93 0.0088 0.0011
 Neptune -107415-08-03 14:38 J -37511691.12 -37511690.89 -37511690.64 0.0088 0.0020
 Neptune -107414-08-05 21:21 J -37511323.80 -37511323.61 -37511323.40 0.0088 0.0051
 Neptune -107413-08-07 03:35 J -37510956.41 -37510956.35 -37510956.22 0.0088 0.0082
 Mars -107411-07-20 12:57 J -37510244.11 -37510243.96 -37510243.82 0.1679 0.0992
 Saturn -107401-01-30 22:04 J -37506762.77 -37506762.58 -37506762.36 0.0265 0.0157
 Uranus -107391-09-09 04:19 J -37502888.53 -37502888.32 -37502888.10 0.0139 0.0067
 Uranus -107390-09-13 13:26 J -37502519.18 -37502518.94 -37502518.69 0.0140 0.0025
 Uranus -107389-09-16 23:45 J -37502149.63 -37502149.51 -37502149.37 0.0140 0.0120
 Jupiter -107377-02-28 04:04 J -37497968.52 -37497968.33 -37497968.13 0.0506 0.0301
 Saturn -107372-01-24 17:02 J -37496176.03 -37496175.79 -37496175.54 0.0266 0.0064
 Jupiter -107365-03-04 06:00 J -37493580.47 -37493580.25 -37493580.01 0.0508 0.0157
 Jupiter -107360-08-26 09:21 J -37491579.32 -37491579.11 -37491578.90 0.0520 0.0189

Saturn -107357-07-29 05:16 J -37490511.51 -37490511.28 -37490511.04 0.0294 0.0008
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 Uranus -107351-03-20 01:26 J -37488451.71 -37488451.44 -37488451.18 0.0139 0.0003
 Uranus -107350-03-24 23:31 J -37488081.71 -37488081.52 -37488081.33 0.0139 0.0095
 Jupiter -107348-08-30 20:24 J -37487191.84 -37487191.65 -37487191.45 0.0518 0.0251
 Saturn -107342-01-31 22:48 J -37485211.71 -37485211.55 -37485211.39 0.0265 0.0207
 Neptune -107335-01-27 01:11 J -37482659.65 -37482659.45 -37482659.24 0.0089 0.0057
 Neptune -107334-01-29 18:00 J -37482292.01 -37482291.75 -37482291.49 0.0089 0.0023
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 Neptune -107332-02-03 03:07 J -37481556.58 -37481556.37 -37481556.11 0.0089 0.0045
 Neptune -107331-02-05 19:55 J -37481188.76 -37481188.67 -37481188.51 0.0089 0.0079
 Saturn -107328-07-23 15:50 J -37479924.89 -37479924.84 -37479924.77 0.0293 0.0282
 Saturn -107313-01-26 17:02 J -37474625.05 -37474624.79 -37474624.54 0.0266 0.0015
 Uranus -107307-09-09 14:24 J -37472207.10 -37472206.90 -37472206.67 0.0139 0.0065
 Uranus -107306-09-13 23:45 J -37471837.75 -37471837.51 -37471837.27 0.0140 0.0028
 Uranus -107305-09-17 09:50 J -37471468.20 -37471468.09 -37471467.95 0.0140 0.0122
 Saturn -107298-07-31 02:09 J -37468960.63 -37468960.41 -37468960.17 0.0294 0.0056
 Jupiter -107294-02-27 13:40 J -37467653.10 -37467652.93 -37467652.75 0.0506 0.0348
 Mars -107291-01-14 03:07 J -37466601.57 -37466601.37 -37466601.16 0.1832 0.0378
 Mars -107285-07-16 14:09 J -37464226.07 -37464225.91 -37464225.75 0.1688 0.0821
 Saturn -107284-01-19 23:02 J -37464038.57 -37464038.54 -37464038.49 0.0267 0.0263
 Saturn -107283-02-01 21:35 J -37463660.67 -37463660.60 -37463660.52 0.0265 0.0254
 Jupiter -107282-03-04 16:33 J -37463265.04 -37463264.81 -37463264.57 0.0508 0.0115
 Pluto -107278-02-12 05:02 J -37461824.47 -37461824.29 -37461824.06 0.0065 0.0042
 Pluto -107277-02-13 21:07 J -37461457.82 -37461457.62 -37461457.37 0.0065 0.0037
 Jupiter -107277-08-25 18:00 J -37461263.95 -37461263.75 -37461263.56 0.0521 0.0251
 Saturn -107269-07-24 11:31 J -37458374.16 -37458374.02 -37458373.88 0.0293 0.0235
 Uranus -107268-03-15 11:02 J -37458140.21 -37458140.04 -37458139.84 0.0140 0.0098
 Uranus -107267-03-20 11:16 J -37457770.29 -37457770.03 -37457769.76 0.0139 0.0004
 Uranus -107266-03-25 09:35 J -37457400.28 -37457400.10 -37457399.91 0.0139 0.0099

Jupiter -107265-08-30 06:28 J -37456876.44 -37456876.23 -37456876.02 0.0519 0.0195
 Saturn -107254-01-27 15:35 J -37453074.11 -37453073.85 -37453073.60 0.0267 0.0033
 Neptune -107254-07-28 08:24 J -37452892.21 -37452892.15 -37452892.07 0.0088 0.0085
 Neptune -107253-07-29 15:07 J -37452525.05 -37452524.87 -37452524.66 0.0088 0.0055
 Neptune -107252-07-31 22:19 J -37452157.80 -37452157.57 -37452157.33 0.0088 0.0024
 Neptune -107251-08-03 05:16 J -37451790.53 -37451790.28 -37451790.04 0.0088 0.0007
 Neptune -107250-08-05 11:45 J -37451423.22 -37451423.01 -37451422.78 0.0088 0.0037
 Neptune -107249-08-06 18:28 J -37451055.87 -37451055.73 -37451055.56 0.0088 0.0068
 Saturn -107239-07-31 23:02 J -37447409.75 -37447409.54 -37447409.32 0.0294 0.0105
 Saturn -107225-01-21 20:52 J -37442487.77 -37442487.63 -37442487.47 0.0267 0.0217
 Uranus -107223-09-09 23:31 J -37441525.73 -37441525.52 -37441525.29 0.0139 0.0062
 Uranus -107222-09-14 08:38 J -37441156.37 -37441156.14 -37441155.89 0.0140 0.0030
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 Jupiter -107211-02-26 22:33 J -37437337.71 -37437337.56 -37437337.41 0.0505 0.0395
 Saturn -107210-07-26 08:24 J -37436823.33 -37436823.15 -37436822.97 0.0293 0.0185
 Mars -107206-07-19 16:04 J -37435369.00 -37435368.83 -37435368.65 0.1685 0.0299
 Jupiter -107199-03-03 18:43 J -37432949.96 -37432949.72 -37432949.48 0.0507 0.0038
 Saturn -107195-01-28 13:40 J -37431523.17 -37431522.93 -37431522.68 0.0267 0.0079
 Jupiter -107194-08-26 07:26 J -37430948.38 -37430948.19 -37430948.01 0.0522 0.0296
 Pluto -107191-08-13 05:31 J -37429865.47 -37429865.27 -37429865.03 0.0080 0.0039
 Jupiter -107187-03-08 20:09 J -37428561.71 -37428561.66 -37428561.61 0.0509 0.0497
 Uranus -107184-03-15 17:45 J -37427458.93 -37427458.76 -37427458.55 0.0140 0.0096
 Uranus -107183-03-20 18:14 J -37427089.00 -37427088.74 -37427088.48 0.0139 0.0004
 Uranus -107182-03-25 16:04 J -37426718.99 -37426718.83 -37426718.63 0.0139 0.0101
 Jupiter -107182-08-30 20:09 J -37426560.87 -37426560.66 -37426560.44 0.0520 0.0153
 Saturn -107180-08-01 20:52 J -37425858.82 -37425858.63 -37425858.42 0.0294 0.0156
 Neptune -107171-01-26 06:43 J -37422759.36 -37422759.22 -37422759.05 0.0089 0.0072
 Neptune -107170-01-28 23:16 J -37422391.75 -37422391.53 -37422391.27 0.0089 0.0039
 Neptune -107169-01-31 16:19 J -37422024.09 -37422023.82 -37422023.55 0.0089 0.0005
 Neptune -107168-02-02 09:07 J -37421656.37 -37421656.12 -37421655.86 0.0089 0.0029

Neptune -107167-02-05 02:09 J -37421288.60 -37421288.41 -37421288.22 0.0089 0.0063
 Saturn -107166-01-22 19:40 J -37420936.87 -37420936.68 -37420936.47 0.0268 0.0169
 Saturn -107151-07-27 06:43 J -37415272.43 -37415272.22 -37415272.01 0.0293 0.0133
 Uranus -107139-09-10 08:38 J -37410844.36 -37410844.14 -37410843.91 0.0139 0.0059
 Uranus -107138-09-14 17:31 J -37410475.01 -37410474.77 -37410474.53 0.0140 0.0032
 Uranus -107137-09-18 03:07 J -37410105.46 -37410105.37 -37410105.24 0.0140 0.0125
 Saturn -107136-01-29 12:43 J -37409972.19 -37409971.97 -37409971.74 0.0267 0.0126
 Jupiter -107128-02-26 01:11 J -37407022.54 -37407022.45 -37407022.36 0.0504 0.0466
 Mars -107127-07-21 18:28 J -37406511.83 -37406511.73 -37406511.64 0.1682 0.1399
 Saturn -107121-08-02 22:04 J -37404307.73 -37404307.58 -37404307.40 0.0294 0.0213
 Jupiter -107116-03-03 02:24 J -37402634.64 -37402634.40 -37402634.15 0.0507 0.0017
 Jupiter -107111-08-25 18:28 J -37400632.89 -37400632.73 -37400632.56 0.0522 0.0348
 Saturn -107107-01-23 19:40 J -37399385.91 -37399385.68 -37399385.45 0.0268 0.0121
 Jupiter -107104-03-08 05:02 J -37398246.40 -37398246.29 -37398246.17 0.0508 0.0449
 Uranus -107100-03-15 23:16 J -37396777.70 -37396777.53 -37396777.32 0.0140 0.0095
 Uranus -107099-03-20 23:45 J -37396407.78 -37396407.51 -37396407.25 0.0139 0.0005
 Jupiter -107099-08-30 04:19 J -37396245.54 -37396245.32 -37396245.10 0.0520 0.0088
 Uranus -107098-03-25 21:50 J -37396037.75 -37396037.59 -37396037.40 0.0139 0.0101
 Saturn -107092-07-28 07:55 J -37393721.39 -37393721.17 -37393720.94 0.0293 0.0075
 Neptune -107089-07-29 06:00 J -37392624.39 -37392624.25 -37392624.07 0.0088 0.0068
 Neptune -107088-07-31 12:57 J -37392257.16 -37392256.96 -37392256.71 0.0088 0.0038
 Neptune -107087-08-02 20:24 J -37391889.89 -37391889.65 -37391889.40 0.0088 0.0006
 Neptune -107086-08-05 03:07 J -37391522.59 -37391522.37 -37391522.12 0.0088 0.0025
 Neptune -107085-08-06 10:04 J -37391155.27 -37391155.08 -37391154.88 0.0088 0.0055
 Neptune -107084-08-08 16:19 J -37390787.85 -37390787.82 -37390787.72 0.0088 0.0086
 Mars -107080-07-15 15:35 J -37389350.92 -37389350.85 -37389350.79 0.1694 0.1568
 Saturn -107077-01-31 13:26 J -37388421.12 -37388420.94 -37388420.74 0.0267 0.0176
 Saturn -107062-08-05 02:09 J -37382756.48 -37382756.41 -37382756.32 0.0294 0.0274
 Uranus -107055-09-10 18:14 J -37380162.96 -37380162.74 -37380162.51 0.0139 0.0056
 Uranus -107054-09-15 02:52 J -37379793.61 -37379793.38 -37379793.13 0.0140 0.0035

Uranus -107053-09-18 12:43 J -37379424.05 -37379423.97 -37379423.85 0.0140 0.0128
 Saturn -107048-01-24 21:35 J -37377834.84 -37377834.60 -37377834.35 0.0268 0.0069
 Jupiter -107033-03-02 08:24 J -37372319.39 -37372319.15 -37372318.91 0.0506 0.0073
 Saturn -107033-07-29 13:11 J -37372170.18 -37372169.95 -37372169.71 0.0293 0.0011
 Pluto -107031-02-14 11:31 J -37371605.29 -37371605.02 -37371604.74 0.0065 0.0004
 Jupiter -107028-08-25 00:00 J -37370317.62 -37370317.50 -37370317.37 0.0522 0.0424
 Jupiter -107021-03-07 05:31 J -37367931.43 -37367931.27 -37367931.10 0.0507 0.0367
 Saturn -107018-02-01 16:19 J -37366869.94 -37366869.82 -37366869.68 0.0267 0.0227
 Uranus -107016-03-16 04:19 J -37366096.49 -37366096.32 -37366096.10 0.0140 0.0095
 Jupiter -107016-08-29 11:16 J -37365930.25 -37365930.03 -37365929.81 0.0521 0.0019
 Uranus -107015-03-21 04:48 J -37365726.56 -37365726.30 -37365726.03 0.0139 0.0005
 Uranus -107014-03-26 03:07 J -37365356.54 -37365356.37 -37365356.18 0.0139 0.0101
 Mars -107007-01-13 07:40 J -37362871.39 -37362871.18 -37362870.97 0.1826 0.0210
 Neptune -107007-01-25 13:11 J -37362858.98 -37362858.95 -37362858.88 0.0089 0.0087
 Neptune -107006-01-28 06:00 J -37362491.45 -37362491.25 -37362491.02 0.0089 0.0053
 Neptune -107005-01-30 22:48 J -37362123.80 -37362123.55 -37362123.28 0.0089 0.0019
 Neptune -107004-02-01 15:35 J -37361756.10 -37361755.85 -37361755.57 0.0089 0.0015
 Saturn -107004-07-24 06:14 J -37361583.29 -37361583.24 -37361583.18 0.0291 0.0282
 Jupiter -107004-09-02 23:31 J -37361542.61 -37361542.52 -37361542.42 0.0519 0.0463
 Neptune -107003-02-04 07:55 J -37361388.37 -37361388.17 -37361387.92 0.0089 0.0049
 Neptune -107002-02-07 00:28 J -37361020.54 -37361020.48 -37361020.35 0.0089 0.0083
 Mars -107001-07-17 18:43 J -37360493.90 -37360493.72 -37360493.55 0.1692 0.0419

107TH MILLENNIUM BCE

This is a list of transits of Earth in the 107th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-106989-01-27 02:24 J	-37356283.65	-37356283.40	-37356283.14	0.0268	0.0013		
Saturn	-106974-07-31 21:50 J	-37350618.82	-37350618.59	-37350618.36	0.0293	0.0062		
Uranus	-106971-09-11 03:50 J	-37349481.56	-37349481.34	-37349481.10	0.0139	0.0054		
Uranus	-106970-09-15 12:43 J	-37349112.20	-37349111.97	-37349111.73	0.0140	0.0037		
Uranus	-106969-09-18 22:33 J	-37348742.63	-37348742.56	-37348742.45	0.0140	0.0130		
Saturn	-106960-01-20 20:09 J	-37345696.76	-37345696.66	-37345696.53	0.0269	0.0238		
Jupiter	-106950-03-02 07:11 J	-37342004.43	-37342004.20	-37342003.97	0.0505	0.0157		
Saturn	-106945-07-25 17:31 J	-37340031.93	-37340031.77	-37340031.60	0.0291	0.0206		
Jupiter	-106945-08-24 04:33 J	-37340002.36	-37340002.31	-37340002.24	0.0523	0.0501		
Pluto	-106944-08-15 19:55 J	-37339645.86	-37339645.67	-37339645.44	0.0079	0.0043		
Jupiter	-106938-03-07 06:00 J	-37337616.44	-37337616.25	-37337616.05	0.0507	0.0290		
Jupiter	-106933-08-28 17:45 J	-37335614.98	-37335614.76	-37335614.54	0.0521	0.0050		
Uranus	-106932-03-16 11:02 J	-37335415.21	-37335415.04	-37335414.82	0.0140	0.0094		
Uranus	-106931-03-21 11:31 J	-37335045.28	-37335045.02	-37335044.76	0.0139	0.0005		
Saturn	-106930-01-28 10:19 J	-37334732.32	-37334732.07	-37334731.82	0.0268	0.0048		
Uranus	-106930-03-26 09:50 J	-37334675.25	-37334675.09	-37334674.89	0.0139	0.0102		
Neptune	-106925-07-28 21:21 J	-37332723.69	-37332723.61	-37332723.49	0.0088	0.0081		
Neptune	-106924-07-31 04:04 J	-37332356.51	-37332356.33	-37332356.10	0.0088	0.0051		
Neptune	-106923-08-02 11:31 J	-37331989.26	-37331989.02	-37331988.77	0.0088	0.0019		
Mars	-106922-07-20 21:07 J	-37331636.78	-37331636.62	-37331636.45	0.1689	0.0705		
Neptune	-106922-08-04 18:14 J	-37331621.98	-37331621.74	-37331621.49	0.0088	0.0011		
Neptune	-106921-08-06 01:26 J	-37331254.65	-37331254.44	-37331254.22	0.0088	0.0042		
Jupiter	-106921-09-02 03:07 J	-37331227.52	-37331227.37	-37331227.21	0.0519	0.0381		
Neptune	-106920-08-08 07:40 J	-37330887.29	-37330887.18	-37330887.01	0.0088	0.0073		
Saturn	-106915-08-02 09:50 J	-37329067.29	-37329067.09	-37329066.88	0.0293	0.0139		

Saturn -106901-01-23 04:48 J -37324145.49 -37324145.30 -37324145.10 0.0269 0.0176
 Uranus -106887-09-11 13:55 J -37318800.14 -37318799.92 -37318799.68 0.0139 0.0051
 Saturn -106886-07-28 07:11 J -37318480.40 -37318480.20 -37318479.98 0.0292 0.0126
 Uranus -106886-09-15 23:16 J -37318430.77 -37318430.53 -37318430.30 0.0140 0.0040
 Uranus -106885-09-19 09:07 J -37318061.18 -37318061.12 -37318061.03 0.0140 0.0133
 Saturn -106871-01-29 20:52 J -37313180.86 -37313180.63 -37313180.39 0.0268 0.0113
 Jupiter -106867-03-01 06:43 J -37311689.43 -37311689.22 -37311689.00 0.0505 0.0236
 Saturn -106856-08-04 00:00 J -37307515.65 -37307515.50 -37307515.34 0.0294 0.0221
 Jupiter -106855-03-06 07:11 J -37307301.41 -37307301.20 -37307300.97 0.0507 0.0214
 Jupiter -106850-08-28 18:28 J -37305299.95 -37305299.73 -37305299.52 0.0522 0.0146
 Uranus -106848-03-16 19:26 J -37304733.88 -37304733.69 -37304733.49 0.0140 0.0091
 Uranus -106847-03-21 19:26 J -37304363.95 -37304363.69 -37304363.42 0.0139 0.0007
 Uranus -106846-03-26 18:14 J -37303993.91 -37303993.74 -37303993.56 0.0139 0.0103
 Saturn -106842-01-24 15:35 J -37302594.07 -37302593.85 -37302593.61 0.0269 0.0111
 Neptune -106842-01-27 12:43 J -37302591.12 -37302590.97 -37302590.78 0.0089 0.0068
 Neptune -106841-01-30 05:45 J -37302223.49 -37302223.26 -37302222.99 0.0089 0.0034
 Neptune -106840-01-31 23:02 J -37301855.81 -37301855.54 -37301855.27 0.0089 0.0001
 Neptune -106839-02-03 15:50 J -37301488.09 -37301487.84 -37301487.59 0.0089 0.0034
 Neptune -106838-02-06 07:40 J -37301120.32 -37301120.18 -37301119.98 0.0089 0.0069
 Jupiter -106838-09-02 03:21 J -37300912.54 -37300912.36 -37300912.17 0.0520 0.0287
 Saturn -106827-07-29 22:48 J -37296928.78 -37296928.55 -37296928.31 0.0292 0.0042
 Saturn -106812-01-31 09:35 J -37291629.29 -37291629.10 -37291628.91 0.0267 0.0181
 Uranus -106804-09-07 15:50 J -37288487.86 -37288487.84 -37288487.79 0.0138 0.0137
 Uranus -106803-09-11 23:45 J -37288118.73 -37288118.51 -37288118.27 0.0139 0.0048
 Uranus -106802-09-16 08:52 J -37287749.36 -37287749.13 -37287748.89 0.0140 0.0042
 Uranus -106801-09-19 18:43 J -37287379.77 -37287379.72 -37287379.63 0.0140 0.0135
 Mars -106796-07-16 19:40 J -37285618.81 -37285618.68 -37285618.54 0.1698 0.1166
 Pluto -106785-02-16 02:24 J -37281752.64 -37281752.40 -37281752.15 0.0065 0.0026
 Pluto -106784-02-16 18:00 J -37281385.88 -37281385.75 -37281385.57 0.0066 0.0054
 Jupiter -106784-02-28 06:00 J -37281374.44 -37281374.25 -37281374.06 0.0504 0.0317

Saturn -106783-01-26 04:19 J -37281042.57 -37281042.32 -37281042.07 0.0268 0.0042
 Jupiter -106772-03-05 04:04 J -37276986.56 -37276986.33 -37276986.09 0.0506 0.0123
 Saturn -106768-07-31 13:55 J -37275377.15 -37275376.92 -37275376.69 0.0292 0.0041
 Jupiter -106767-08-27 18:28 J -37274984.93 -37274984.73 -37274984.53 0.0523 0.0239
 Uranus -106764-03-17 04:19 J -37274052.51 -37274052.32 -37274052.11 0.0140 0.0088
 Uranus -106763-03-22 04:33 J -37273682.57 -37273682.31 -37273682.05 0.0139 0.0010
 Uranus -106762-03-27 03:07 J -37273312.52 -37273312.37 -37273312.19 0.0139 0.0106
 Neptune -106760-07-30 20:38 J -37272455.80 -37272455.64 -37272455.45 0.0088 0.0063
 Neptune -106759-08-02 03:21 J -37272088.58 -37272088.36 -37272088.12 0.0088 0.0032
 Neptune -106758-08-04 10:33 J -37271721.31 -37271721.06 -37271720.81 0.0088 0.0002
 Neptune -106757-08-05 17:02 J -37271354.01 -37271353.79 -37271353.54 0.0088 0.0029
 Neptune -106756-08-08 00:00 J -37270986.67 -37270986.50 -37270986.30 0.0088 0.0060
 Jupiter -106755-09-01 07:55 J -37270597.37 -37270597.17 -37270596.96 0.0521 0.0211
 Saturn -106754-01-20 21:35 J -37270455.62 -37270455.60 -37270455.54 0.0269 0.0265
 Saturn -106753-02-02 23:02 J -37270077.61 -37270077.54 -37270077.44 0.0267 0.0250
 Saturn -106739-07-26 01:11 J -37264790.57 -37264790.45 -37264790.30 0.0292 0.0235
 Saturn -106724-01-27 17:16 J -37259491.03 -37259490.78 -37259490.52 0.0268 0.0027
 Mars -106723-01-12 14:38 J -37259141.08 -37259140.89 -37259140.69 0.1819 0.0687
 Uranus -106720-09-08 00:28 J -37257806.52 -37257806.48 -37257806.42 0.0138 0.0135
 Uranus -106719-09-12 08:09 J -37257437.38 -37257437.16 -37257436.92 0.0139 0.0047
 Uranus -106718-09-16 17:16 J -37257068.01 -37257067.78 -37257067.54 0.0140 0.0043
 Mars -106717-07-18 22:48 J -37256761.73 -37256761.55 -37256761.37 0.1695 0.0016
 Uranus -106717-09-20 02:52 J -37256698.42 -37256698.38 -37256698.29 0.0140 0.0136
 Saturn -106709-08-02 03:21 J -37253825.57 -37253825.36 -37253825.14 0.0293 0.0122
 Jupiter -106701-02-28 00:00 J -37251059.63 -37251059.50 -37251059.36 0.0504 0.0417
 Pluto -106698-08-17 13:26 J -37249793.19 -37249792.94 -37249792.69 0.0079 0.0005
 Saturn -106695-01-22 12:00 J -37248904.17 -37248904.00 -37248903.82 0.0269 0.0193
 Jupiter -106689-03-04 00:28 J -37246671.73 -37246671.48 -37246671.24 0.0506 0.0030
 Jupiter -106684-08-26 22:48 J -37244669.72 -37244669.55 -37244669.37 0.0523 0.0320
 Uranus -106680-03-17 12:00 J -37243371.19 -37243371.00 -37243370.77 0.0140 0.0085

Saturn -106680-07-27 13:11 J -37243239.15 -37243238.95 -37243238.75 0.0292 0.0158
 Uranus -106679-03-22 12:43 J -37243001.23 -37243000.97 -37243000.71 0.0139 0.0013
 Neptune -106678-01-26 20:09 J -37242690.75 -37242690.66 -37242690.55 0.0089 0.0083
 Uranus -106678-03-27 11:02 J -37242631.18 -37242631.04 -37242630.85 0.0139 0.0109
 Neptune -106677-01-29 13:11 J -37242323.17 -37242322.95 -37242322.72 0.0089 0.0048
 Jupiter -106677-03-09 01:40 J -37242283.50 -37242283.43 -37242283.36 0.0507 0.0483
 Neptune -106676-01-31 06:00 J -37241955.51 -37241955.25 -37241954.98 0.0089 0.0014
 Neptune -106675-02-02 22:33 J -37241587.81 -37241587.56 -37241587.29 0.0089 0.0020
 Neptune -106674-02-05 15:21 J -37241220.06 -37241219.86 -37241219.64 0.0089 0.0054
 Neptune -106673-02-08 07:55 J -37240852.18 -37240852.17 -37240852.11 0.0089 0.0088
 Jupiter -106672-08-31 09:35 J -37240282.32 -37240282.10 -37240281.88 0.0521 0.0119
 Saturn -106665-01-30 05:45 J -37237939.50 -37237939.26 -37237939.02 0.0268 0.0095
 Saturn -106650-08-04 13:55 J -37232274.08 -37232273.92 -37232273.73 0.0293 0.0197
 Mars -106638-07-22 01:55 J -37227904.56 -37227904.42 -37227904.29 0.1692 0.1109
 Saturn -106636-01-24 00:57 J -37227352.68 -37227352.46 -37227352.22 0.0268 0.0122
 Uranus -106636-09-08 08:09 J -37227125.20 -37227125.16 -37227125.08 0.0138 0.0133
 Uranus -106635-09-12 15:50 J -37226756.06 -37226755.84 -37226755.59 0.0139 0.0046
 Uranus -106634-09-17 00:57 J -37226386.69 -37226386.46 -37226386.22 0.0140 0.0044
 Uranus -106633-09-20 10:33 J -37226017.10 -37226017.06 -37226016.98 0.0140 0.0136
 Saturn -106621-07-28 22:19 J -37221687.79 -37221687.57 -37221687.34 0.0292 0.0087
 Jupiter -106618-02-27 02:24 J -37220744.44 -37220744.40 -37220744.33 0.0504 0.0488
 Saturn -106606-01-31 15:35 J -37216388.04 -37216387.85 -37216387.63 0.0267 0.0160
 Jupiter -106606-03-04 03:07 J -37216356.61 -37216356.37 -37216356.12 0.0505 0.0040
 Jupiter -106601-08-25 23:31 J -37214354.65 -37214354.52 -37214354.38 0.0523 0.0413
 Uranus -106596-03-17 18:28 J -37212689.94 -37212689.73 -37212689.52 0.0140 0.0083
 Neptune -106596-07-30 12:14 J -37212555.09 -37212554.99 -37212554.84 0.0088 0.0076
 Uranus -106595-03-22 18:57 J -37212319.97 -37212319.71 -37212319.45 0.0139 0.0014
 Neptune -106595-08-01 19:40 J -37212187.89 -37212187.68 -37212187.46 0.0088 0.0045
 Jupiter -106594-03-09 02:09 J -37211968.55 -37211968.41 -37211968.26 0.0507 0.0406
 Uranus -106594-03-27 17:45 J -37211949.90 -37211949.76 -37211949.59 0.0139 0.0110

Neptune -106594-08-04 02:24 J -37211820.64 -37211820.40 -37211820.15 0.0088 0.0014
 Neptune -106593-08-05 09:21 J -37211453.35 -37211453.11 -37211452.86 0.0088 0.0016
 Neptune -106592-08-07 15:50 J -37211086.03 -37211085.84 -37211085.61 0.0088 0.0048
 Saturn -106591-08-05 21:07 J -37210722.72 -37210722.62 -37210722.52 0.0293 0.0263
 Neptune -106591-08-09 22:33 J -37210718.65 -37210718.56 -37210718.42 0.0088 0.0078
 Jupiter -106589-08-30 12:28 J -37209967.20 -37209966.98 -37209966.75 0.0522 0.0037
 Saturn -106577-01-26 11:45 J -37205801.26 -37205801.01 -37205800.76 0.0268 0.0056
 Jupiter -106577-09-04 02:23 J -37205579.47 -37205579.40 -37205579.31 0.0520 0.0485
 Saturn -106562-07-31 03:50 J -37200136.58 -37200136.34 -37200136.11 0.0292 0.0022
 Uranus -106552-09-08 16:19 J -37196443.87 -37196443.82 -37196443.72 0.0138 0.0131
 Uranus -106551-09-12 23:59 J -37196074.72 -37196074.50 -37196074.26 0.0139 0.0044
 Uranus -106550-09-17 08:38 J -37195705.36 -37195705.14 -37195704.90 0.0140 0.0045
 Uranus -106549-09-20 18:14 J -37195335.78 -37195335.74 -37195335.67 0.0140 0.0136
 Saturn -106547-02-01 23:02 J -37194836.67 -37194836.54 -37194836.38 0.0267 0.0220
 Pluto -106539-02-16 20:52 J -37191899.81 -37191899.63 -37191899.45 0.0065 0.0048
 Pluto -106538-02-18 12:28 J -37191533.19 -37191532.98 -37191532.71 0.0066 0.0032
 Saturn -106533-07-24 20:38 J -37189549.66 -37189549.64 -37189549.59 0.0291 0.0288
 Jupiter -106523-03-03 00:14 J -37186041.72 -37186041.49 -37186041.25 0.0504 0.0131
 Saturn -106518-01-27 18:43 J -37184249.98 -37184249.72 -37184249.46 0.0268 0.0005
 Jupiter -106518-08-26 10:04 J -37184039.18 -37184039.08 -37184038.98 0.0524 0.0469
 Neptune -106513-01-28 19:55 J -37182422.83 -37182422.67 -37182422.45 0.0089 0.0063
 Neptune -106512-01-30 12:57 J -37182055.20 -37182054.96 -37182054.69 0.0089 0.0029
 Uranus -106512-03-17 22:47 J -37182008.74 -37182008.55 -37182008.32 0.0140 0.0083
 Mars -106512-07-17 23:02 J -37181886.70 -37181886.54 -37181886.38 0.1703 0.0778
 Neptune -106511-02-02 05:59 J -37181687.51 -37181687.25 -37181686.97 0.0089 0.0006
 Jupiter -106511-03-08 01:11 J -37181653.64 -37181653.45 -37181653.26 0.0506 0.0320
 Uranus -106511-03-22 23:59 J -37181638.76 -37181638.50 -37181638.24 0.0139 0.0015
 Neptune -106510-02-04 22:47 J -37181319.77 -37181319.55 -37181319.29 0.0089 0.0040
 Uranus -106510-03-27 23:02 J -37181268.69 -37181268.54 -37181268.37 0.0139 0.0110
 Neptune -106509-02-07 15:21 J -37180951.98 -37180951.86 -37180951.69 0.0089 0.0074

Jupiter -106506-08-30 23:02 J -37179651.77 -37179651.54 -37179651.32 0.0522 0.0020
 Saturn -106503-08-01 05:45 J -37178585.49 -37178585.26 -37178585.03 0.0292 0.0036
 Jupiter -106494-09-04 10:19 J -37175264.20 -37175264.07 -37175263.93 0.0520 0.0418
 Saturn -106489-01-22 02:23 J -37173663.51 -37173663.40 -37173663.26 0.0269 0.0235
 Saturn -106474-07-26 20:23 J -37167998.78 -37167998.65 -37167998.50 0.0291 0.0233
 Uranus -106468-09-09 00:43 J -37165762.53 -37165762.47 -37165762.36 0.0138 0.0130
 Uranus -106467-09-13 08:38 J -37165393.37 -37165393.14 -37165392.91 0.0139 0.0042
 Uranus -106466-09-17 17:02 J -37165024.01 -37165023.79 -37165023.55 0.0140 0.0047
 Uranus -106465-09-21 02:38 J -37164654.42 -37164654.39 -37164654.33 0.0140 0.0137
 Saturn -106459-01-28 22:19 J -37162698.81 -37162698.57 -37162698.31 0.0268 0.0061
 Pluto -106452-08-18 08:52 J -37159940.35 -37159940.13 -37159939.89 0.0079 0.0026
 Saturn -106444-08-02 05:31 J -37157034.49 -37157034.27 -37157034.04 0.0292 0.0090
 Jupiter -106440-03-02 07:40 J -37155726.40 -37155726.18 -37155725.95 0.0504 0.0183
 Mars -106439-01-12 00:43 J -37155410.63 -37155410.47 -37155410.30 0.1813 0.1059
 Mars -106433-07-20 03:07 J -37153029.54 -37153029.37 -37153029.19 0.1699 0.0391
 Neptune -106432-07-30 05:02 J -37152654.31 -37152654.29 -37152654.26 0.0088 0.0088
 Neptune -106431-08-01 11:31 J -37152287.19 -37152287.02 -37152286.81 0.0088 0.0058
 Saturn -106430-01-23 04:19 J -37152112.50 -37152112.32 -37152112.12 0.0269 0.0183
 Neptune -106430-08-03 18:43 J -37151919.95 -37151919.72 -37151919.48 0.0088 0.0027
 Neptune -106429-08-05 01:40 J -37151552.68 -37151552.43 -37151552.18 0.0088 0.0004
 Jupiter -106428-03-07 09:50 J -37151338.29 -37151338.09 -37151337.89 0.0506 0.0272
 Uranus -106428-03-18 04:47 J -37151327.50 -37151327.30 -37151327.07 0.0140 0.0082
 Neptune -106428-08-07 08:09 J -37151185.38 -37151185.16 -37151184.92 0.0088 0.0035
 Uranus -106427-03-23 05:59 J -37150957.51 -37150957.25 -37150956.99 0.0139 0.0015
 Neptune -106427-08-09 15:07 J -37150818.03 -37150817.87 -37150817.70 0.0088 0.0065
 Uranus -106426-03-28 05:02 J -37150587.44 -37150587.29 -37150587.12 0.0139 0.0110
 Jupiter -106423-08-30 05:45 J -37149336.48 -37149336.26 -37149336.04 0.0522 0.0089
 Saturn -106415-07-27 18:28 J -37146447.91 -37146447.73 -37146447.55 0.0291 0.0183
 Jupiter -106411-09-03 18:28 J -37144948.89 -37144948.73 -37144948.57 0.0521 0.0355
 Saturn -106400-01-29 23:16 J -37141147.76 -37141147.53 -37141147.29 0.0268 0.0111

Saturn -106385-08-03 03:21 J -37135483.56 -37135483.36 -37135483.15 0.0292 0.0139
 Uranus -106384-09-09 10:19 J -37135081.15 -37135081.07 -37135080.96 0.0138 0.0127
 Uranus -106383-09-13 17:45 J -37134711.99 -37134711.76 -37134711.52 0.0139 0.0040
 Uranus -106382-09-18 02:23 J -37134342.62 -37134342.40 -37134342.16 0.0140 0.0049
 Uranus -106381-09-21 12:14 J -37133973.02 -37133972.99 -37133972.96 0.0140 0.0139
 Saturn -106371-01-24 03:35 J -37130561.56 -37130561.35 -37130561.12 0.0269 0.0135
 Mars -106360-01-15 11:16 J -37126552.16 -37126552.03 -37126551.89 0.1818 0.1353
 Jupiter -106357-03-01 15:50 J -37125411.05 -37125410.84 -37125410.62 0.0504 0.0232
 Saturn -106356-07-28 15:07 J -37124897.08 -37124896.87 -37124896.66 0.0291 0.0135
 Mars -106354-07-23 05:45 J -37124172.34 -37124172.26 -37124172.17 0.1696 0.1503
 Neptune -106349-01-28 03:35 J -37122522.48 -37122522.35 -37122522.22 0.0089 0.0077
 Neptune -106348-01-29 19:40 J -37122154.89 -37122154.68 -37122154.42 0.0089 0.0044
 Neptune -106347-02-01 13:11 J -37121787.21 -37121786.95 -37121786.68 0.0089 0.0009
 Neptune -106346-02-04 05:45 J -37121419.51 -37121419.26 -37121418.99 0.0089 0.0025
 Neptune -106345-02-06 22:47 J -37121051.74 -37121051.55 -37121051.34 0.0089 0.0059
 Jupiter -106345-03-06 11:31 J -37121023.24 -37121023.02 -37121022.79 0.0505 0.0195
 Uranus -106344-03-18 12:14 J -37120646.20 -37120645.99 -37120645.76 0.0140 0.0080
 Uranus -106343-03-23 13:26 J -37120276.20 -37120275.94 -37120275.68 0.0139 0.0017
 Uranus -106342-03-28 11:59 J -37119906.13 -37119906.00 -37119905.82 0.0139 0.0112
 Saturn -106341-01-31 22:19 J -37119596.77 -37119596.57 -37119596.36 0.0268 0.0156
 Jupiter -106340-08-29 18:57 J -37119020.93 -37119020.71 -37119020.49 0.0523 0.0135
 Jupiter -106328-09-03 08:38 J -37114633.32 -37114633.14 -37114632.96 0.0521 0.0315
 Saturn -106326-08-05 00:57 J -37113932.64 -37113932.46 -37113932.28 0.0292 0.0186
 Saturn -106312-01-25 01:40 J -37109010.67 -37109010.43 -37109010.19 0.0269 0.0090
 Mars -106307-07-16 21:21 J -37107011.67 -37107011.61 -37107011.54 0.1710 0.1581
 Uranus -106300-09-09 19:26 J -37104399.77 -37104399.69 -37104399.56 0.0138 0.0125
 Uranus -106299-09-14 03:07 J -37104030.60 -37104030.37 -37104030.13 0.0139 0.0038
 Uranus -106298-09-18 11:31 J -37103661.23 -37103661.02 -37103660.78 0.0140 0.0051
 Saturn -106297-07-29 11:31 J -37103346.24 -37103346.02 -37103345.79 0.0291 0.0088
 Pluto -106292-02-19 05:31 J -37101680.53 -37101680.27 -37101679.99 0.0065 0.0006

Saturn -106282-02-01 20:09 J -37098045.82 -37098045.66 -37098045.48 0.0268 0.0201
 Jupiter -106274-03-01 19:26 J -37095095.89 -37095095.69 -37095095.50 0.0503 0.0300
 Neptune -106267-08-01 03:21 J -37092386.48 -37092386.36 -37092386.18 0.0088 0.0071
 Saturn -106267-08-05 22:47 J -37092381.68 -37092381.55 -37092381.40 0.0292 0.0235
 Neptune -106266-08-03 10:47 J -37092019.26 -37092019.05 -37092018.82 0.0088 0.0040
 Neptune -106265-08-04 17:45 J -37091652.01 -37091651.76 -37091651.52 0.0088 0.0009
 Neptune -106264-08-07 00:14 J -37091284.71 -37091284.49 -37091284.24 0.0088 0.0022
 Neptune -106263-08-09 06:57 J -37090917.39 -37090917.21 -37090917.00 0.0088 0.0053
 Jupiter -106262-03-06 20:23 J -37090707.88 -37090707.65 -37090707.42 0.0505 0.0148
 Neptune -106262-08-11 13:55 J -37090549.99 -37090549.92 -37090549.83 0.0088 0.0083
 Uranus -106260-03-18 21:21 J -37089964.82 -37089964.61 -37089964.38 0.0140 0.0077
 Uranus -106259-03-23 22:19 J -37089594.83 -37089594.57 -37089594.31 0.0139 0.0020
 Uranus -106258-03-28 20:38 J -37089224.76 -37089224.64 -37089224.46 0.0139 0.0114
 Jupiter -106257-08-29 06:57 J -37088705.41 -37088705.21 -37088704.99 0.0523 0.0183
 Saturn -106253-01-26 23:31 J -37087459.77 -37087459.52 -37087459.27 0.0269 0.0045
 Jupiter -106245-09-02 17:16 J -37084317.97 -37084317.78 -37084317.58 0.0521 0.0254
 Saturn -106238-07-31 09:50 J -37081795.32 -37081795.09 -37081794.86 0.0291 0.0038
 Mars -106228-07-19 01:11 J -37078154.63 -37078154.45 -37078154.27 0.1707 0.0403
 Saturn -106223-02-02 18:28 J -37076494.83 -37076494.73 -37076494.62 0.0269 0.0244
 Uranus -106216-09-10 04:33 J -37073718.40 -37073718.31 -37073718.17 0.0138 0.0123
 Uranus -106215-09-14 12:14 J -37073349.22 -37073348.99 -37073348.75 0.0139 0.0036
 Uranus -106214-09-18 20:52 J -37072979.86 -37072979.63 -37072979.40 0.0140 0.0052
 Saturn -106208-08-06 23:02 J -37070830.58 -37070830.54 -37070830.50 0.0292 0.0286
 Pluto -106206-08-20 03:50 J -37070087.49 -37070087.34 -37070087.15 0.0080 0.0059
 Pluto -106205-08-21 04:33 J -37069720.41 -37069720.31 -37069720.20 0.0079 0.0071
 Saturn -106194-01-27 22:33 J -37065908.82 -37065908.56 -37065908.31 0.0270 0.0003
 Jupiter -106191-03-01 04:19 J -37064780.49 -37064780.32 -37064780.14 0.0503 0.0344
 Neptune -106184-01-29 03:07 J -37062254.56 -37062254.37 -37062254.15 0.0089 0.0058
 Neptune -106183-01-31 19:55 J -37061886.92 -37061886.67 -37061886.40 0.0089 0.0024
 Neptune -106182-02-03 12:57 J -37061519.22 -37061518.96 -37061518.69 0.0089 0.0010

Neptune -106181-02-06 05:16 J -37061151.49 -37061151.28 -37061151.03 0.0089 0.0045
 Neptune -106180-02-07 22:04 J -37060783.68 -37060783.58 -37060783.43 0.0089 0.0079
 Jupiter -106179-03-06 04:33 J -37060392.55 -37060392.31 -37060392.07 0.0505 0.0098
 Saturn -106179-08-01 10:19 J -37060244.31 -37060244.07 -37060243.84 0.0291 0.0015
 Uranus -106176-03-19 07:11 J -37059283.41 -37059283.20 -37059282.96 0.0140 0.0073
 Uranus -106175-03-24 07:55 J -37058913.42 -37058913.17 -37058912.90 0.0139 0.0024
 Uranus -106174-03-29 06:43 J -37058543.34 -37058543.22 -37058543.07 0.0139 0.0117
 Jupiter -106174-08-29 14:23 J -37058390.09 -37058389.90 -37058389.70 0.0524 0.0250
 Saturn -106165-01-22 12:43 J -37055322.10 -37055321.97 -37055321.82 0.0271 0.0225
 Jupiter -106162-09-03 03:07 J -37054002.58 -37054002.37 -37054002.16 0.0523 0.0196
 Mars -106155-01-11 12:28 J -37051680.11 -37051679.98 -37051679.84 0.1806 0.1368
 Saturn -106150-07-27 01:55 J -37049657.52 -37049657.42 -37049657.28 0.0289 0.0248
 Mars -106149-07-21 06:14 J -37049297.40 -37049297.24 -37049297.08 0.1704 0.0768
 Saturn -106135-01-28 23:31 J -37044357.77 -37044357.52 -37044357.26 0.0270 0.0049
 Uranus -106132-09-10 12:57 J -37043037.07 -37043036.96 -37043036.83 0.0138 0.0121
 Uranus -106131-09-14 20:23 J -37042667.88 -37042667.65 -37042667.41 0.0139 0.0035
 Uranus -106130-09-19 04:47 J -37042298.52 -37042298.30 -37042298.07 0.0140 0.0053
 Saturn -106120-08-02 14:09 J -37038693.14 -37038692.91 -37038692.69 0.0291 0.0074
 Jupiter -106108-02-28 07:26 J -37034465.33 -37034465.19 -37034465.05 0.0502 0.0411
 Saturn -106106-01-23 14:23 J -37033771.09 -37033770.90 -37033770.70 0.0271 0.0176
 Neptune -106103-07-31 18:43 J -37032485.77 -37032485.72 -37032485.61 0.0088 0.0084
 Neptune -106102-08-03 02:09 J -37032118.60 -37032118.41 -37032118.20 0.0088 0.0053
 Neptune -106101-08-04 09:21 J -37031751.35 -37031751.11 -37031750.87 0.0088 0.0022
 Neptune -106100-08-06 16:04 J -37031384.07 -37031383.83 -37031383.58 0.0088 0.0009
 Neptune -106099-08-08 22:47 J -37031016.76 -37031016.55 -37031016.32 0.0088 0.0040
 Neptune -106098-08-11 05:16 J -37030649.41 -37030649.28 -37030649.11 0.0088 0.0070
 Jupiter -106096-03-05 05:59 J -37030077.50 -37030077.25 -37030077.01 0.0503 0.0025
 Uranus -106092-03-19 16:04 J -37028602.04 -37028601.83 -37028601.58 0.0140 0.0069
 Uranus -106091-03-24 17:16 J -37028232.04 -37028231.78 -37028231.53 0.0139 0.0027
 Saturn -106091-07-28 08:23 J -37028106.32 -37028106.15 -37028105.96 0.0289 0.0185

Jupiter -106091-08-28 22:19 J -37028074.75 -37028074.57 -37028074.39 0.0525 0.0314
 Uranus -106090-03-29 15:35 J -37027861.96 -37027861.85 -37027861.70 0.0139 0.0120
 Jupiter -106084-03-10 05:02 J -37025689.38 -37025689.29 -37025689.19 0.0506 0.0466
 Jupiter -106079-09-02 11:59 J -37023687.21 -37023687.00 -37023686.78 0.0523 0.0137
 Mars -106076-01-14 21:07 J -37022821.80 -37022821.62 -37022821.44 0.1811 0.0929
 Saturn -106076-01-30 03:35 J -37022806.58 -37022806.35 -37022806.10 0.0270 0.0102
 Saturn -106061-08-03 20:52 J -37017141.83 -37017141.63 -37017141.41 0.0291 0.0139
 Uranus -106048-09-10 21:21 J -37012355.73 -37012355.61 -37012355.48 0.0138 0.0119
 Saturn -106047-01-24 19:26 J -37012219.92 -37012219.69 -37012219.46 0.0271 0.0122
 Uranus -106047-09-15 04:33 J -37011986.54 -37011986.31 -37011986.07 0.0139 0.0034
 Pluto -106046-02-21 01:11 J -37011827.71 -37011827.45 -37011827.18 0.0065 0.0013
 Uranus -106046-09-19 12:28 J -37011617.19 -37011616.98 -37011616.74 0.0140 0.0055
 Saturn -106032-07-29 18:28 J -37006554.94 -37006554.73 -37006554.51 0.0289 0.0115
 Jupiter -106025-02-28 08:38 J -37004150.20 -37004150.14 -37004150.07 0.0502 0.0482
 Mars -106023-07-17 22:19 J -37003279.69 -37003279.57 -37003279.44 0.1715 0.1223
 Neptune -106020-01-28 09:21 J -37002354.24 -37002354.11 -37002353.93 0.0089 0.0073
 Neptune -106019-01-31 02:09 J -37001986.63 -37001986.41 -37001986.15 0.0089 0.0039
 Neptune -106018-02-02 18:57 J -37001618.97 -37001618.71 -37001618.44 0.0089 0.0005
 Saturn -106017-02-01 10:47 J -37001255.26 -37001255.05 -37001254.84 0.0269 0.0159
 Neptune -106017-02-05 11:59 J -37001251.26 -37001251.00 -37001250.75 0.0089 0.0029
 Neptune -106016-02-07 04:19 J -37000883.48 -37000883.32 -37000883.11 0.0089 0.0064
 Jupiter -106013-03-04 08:23 J -36999762.39 -36999762.15 -36999761.91 0.0503 0.0044
 Uranus -106008-03-19 23:16 J -36997920.75 -36997920.53 -36997920.29 0.0140 0.0066
 Jupiter -106008-08-28 02:52 J -36997759.53 -36997759.38 -36997759.24 0.0525 0.0393
 Uranus -106007-03-24 23:59 J -36997550.76 -36997550.50 -36997550.24 0.0139 0.0029
 Uranus -106006-03-29 22:47 J -36997180.66 -36997180.55 -36997180.41 0.0139 0.0122
 Saturn -106002-08-06 07:11 J -36995590.36 -36995590.20 -36995590.04 0.0291 0.0209
 Jupiter -106001-03-09 08:23 J -36995374.30 -36995374.15 -36995374.00 0.0505 0.0398

106TH MILLENNIUM BCE

This is a list of transits of Earth in the 106th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-105996-09-01	14:09 J	-36993372.13	-36993371.91	-36993371.68	0.0523	0.0050	
Saturn	-105988-01-26	03:35 J	-36990668.60	-36990668.35	-36990668.10	0.0271	0.0063	
Jupiter	-105984-09-06	00:14 J	-36988984.57	-36988984.49	-36988984.40	0.0522	0.0484	
Saturn	-105973-07-31	06:43 J	-36985003.45	-36985003.22	-36985002.98	0.0289	0.0041	
Uranus	-105964-09-11	05:31 J	-36981674.39	-36981674.27	-36981674.13	0.0138	0.0116	
Uranus	-105963-09-15	12:43 J	-36981305.20	-36981304.97	-36981304.73	0.0139	0.0031	
Uranus	-105962-09-19	20:52 J	-36980935.85	-36980935.63	-36980935.40	0.0139	0.0056	
Pluto	-105959-08-23	01:11 J	-36979867.66	-36979867.45	-36979867.25	0.0079	0.0044	
Saturn	-105958-02-02	20:52 J	-36979703.76	-36979703.63	-36979703.48	0.0269	0.0221	
Mars	-105944-07-20	03:07 J	-36974422.55	-36974422.37	-36974422.19	0.1712	0.0037	
Saturn	-105943-08-07	20:23 J	-36974038.69	-36974038.65	-36974038.59	0.0292	0.0285	
Neptune	-105938-08-02	17:16 J	-36972217.93	-36972217.78	-36972217.61	0.0088	0.0066	
Neptune	-105937-08-04	00:14 J	-36971850.71	-36971850.49	-36971850.25	0.0088	0.0035	
Neptune	-105936-08-06	07:26 J	-36971483.43	-36971483.19	-36971482.94	0.0088	0.0005	
Neptune	-105935-08-08	14:09 J	-36971116.13	-36971115.91	-36971115.66	0.0088	0.0027	
Neptune	-105934-08-10	20:38 J	-36970748.80	-36970748.64	-36970748.43	0.0088	0.0058	
Neptune	-105933-08-12	03:35 J	-36970381.36	-36970381.35	-36970381.30	0.0088	0.0088	
Jupiter	-105930-03-04	08:23 J	-36969447.38	-36969447.15	-36969446.91	0.0502	0.0120	

Saturn -105929-01-28 14:09 J -36969117.17 -36969116.91 -36969116.66 0.0270 0.0002
 Jupiter -105925-08-27 01:40 J -36967444.50 -36967444.43 -36967444.35 0.0526 0.0493
 Uranus -105924-03-20 05:45 J -36967239.48 -36967239.26 -36967239.01 0.0140 0.0065
 Uranus -105923-03-25 06:57 J -36966869.46 -36966869.21 -36966868.95 0.0139 0.0031
 Uranus -105922-03-30 06:14 J -36966499.36 -36966499.24 -36966499.12 0.0139 0.0123
 Jupiter -105918-03-09 05:59 J -36965059.43 -36965059.25 -36965059.05 0.0504 0.0313
 Saturn -105914-08-02 20:52 J -36963451.86 -36963451.63 -36963451.40 0.0290 0.0036
 Jupiter -105913-08-31 15:21 J -36963057.08 -36963056.86 -36963056.63 0.0524 0.0041
 Jupiter -105901-09-05 05:16 J -36958669.41 -36958669.28 -36958669.14 0.0522 0.0410
 Saturn -105900-01-22 04:04 J -36958530.47 -36958530.33 -36958530.18 0.0271 0.0223
 Saturn -105885-07-27 11:02 J -36952865.18 -36952865.04 -36952864.89 0.0289 0.0222
 Uranus -105880-09-11 15:07 J -36950992.99 -36950992.87 -36950992.71 0.0138 0.0114
 Uranus -105879-09-15 22:33 J -36950623.79 -36950623.56 -36950623.31 0.0139 0.0029
 Uranus -105878-09-20 06:43 J -36950254.43 -36950254.22 -36950253.99 0.0139 0.0059
 Mars -105871-01-11 00:57 J -36947949.54 -36947949.46 -36947949.37 0.1799 0.1623
 Saturn -105870-01-30 02:23 J -36947565.64 -36947565.40 -36947565.15 0.0270 0.0067
 Mars -105865-07-22 07:40 J -36945565.32 -36945565.18 -36945565.04 0.1708 0.1123
 Neptune -105856-01-27 15:35 J -36942453.86 -36942453.85 -36942453.80 0.0089 0.0089
 Neptune -105855-01-30 08:09 J -36942086.36 -36942086.16 -36942085.94 0.0089 0.0054
 Saturn -105855-08-04 11:31 J -36941900.23 -36941900.02 -36941899.80 0.0290 0.0115
 Neptune -105854-02-02 00:43 J -36941718.72 -36941718.47 -36941718.20 0.0089 0.0020
 Neptune -105853-02-04 17:31 J -36941351.03 -36941350.77 -36941350.50 0.0089 0.0014
 Neptune -105852-02-06 10:04 J -36940983.30 -36940983.08 -36940982.85 0.0089 0.0048
 Neptune -105851-02-09 02:52 J -36940615.47 -36940615.38 -36940615.27 0.0089 0.0082
 Jupiter -105847-03-03 03:50 J -36939132.56 -36939132.34 -36939132.12 0.0502 0.0214
 Saturn -105841-01-24 18:43 J -36936978.93 -36936978.72 -36936978.50 0.0271 0.0152
 Uranus -105840-03-20 13:40 J -36936558.16 -36936557.93 -36936557.68 0.0140 0.0062
 Uranus -105839-03-25 14:38 J -36936188.14 -36936187.89 -36936187.63 0.0139 0.0033
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 Jupiter -105835-03-08 03:07 J -36934744.59 -36934744.37 -36934744.16 0.0504 0.0223

Jupiter -105830-08-31 18:43 J -36932741.94 -36932741.72 -36932741.50 0.0524 0.0124
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Pluto -105713-08-23 22:19 J -36890014.80 -36890014.57 -36890014.33 0.0079 0.0020
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 Jupiter -105581-08-29 07:40 J -36841796.33 -36841796.18 -36841796.01 0.0526 0.0361
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 Uranus -105376-09-14 05:16 J -36766904.44 -36766904.28 -36766904.08 0.0138 0.0093
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 Saturn -105193-01-27 13:11 J -36700294.19 -36700293.95 -36700293.70 0.0273 0.0065
 Neptune -105193-02-11 00:28 J -36700279.56 -36700279.48 -36700279.38 0.0089 0.0083
 Saturn -105178-08-01 15:21 J -36694629.08 -36694628.86 -36694628.63 0.0287 0.0086
 Jupiter -105171-03-03 08:52 J -36692223.33 -36692223.13 -36692222.93 0.0500 0.0290
 Mars -105171-07-20 21:50 J -36692083.77 -36692083.59 -36692083.40 0.1730 0.0204
 Uranus -105169-03-19 02:38 J -36691476.53 -36691476.39 -36691476.24 0.0141 0.0117
 Uranus -105168-03-24 05:45 J -36691106.52 -36691106.26 -36691106.00 0.0140 0.0023
 Uranus -105167-03-29 06:57 J -36690736.43 -36690736.21 -36690735.97 0.0140 0.0070
 Saturn -105163-02-03 03:21 J -36689329.51 -36689329.36 -36689329.18 0.0271 0.0207
 Jupiter -105159-03-08 08:23 J -36687835.39 -36687835.15 -36687834.92 0.0502 0.0143
 Jupiter -105154-09-01 18:14 J -36685831.94 -36685831.74 -36685831.53 0.0527 0.0210
 Saturn -105148-08-08 00:57 J -36683664.62 -36683664.46 -36683664.31 0.0289 0.0217
 Jupiter -105142-09-06 06:57 J -36681444.41 -36681444.21 -36681444.01 0.0525 0.0233
 Saturn -105134-01-28 16:33 J -36678743.06 -36678742.81 -36678742.55 0.0273 0.0016
 Uranus -105124-09-15 17:31 J -36674859.96 -36674859.77 -36674859.56 0.0138 0.0080
 Uranus -105123-09-20 00:28 J -36674490.72 -36674490.48 -36674490.23 0.0139 0.0002
 Uranus -105122-09-24 07:55 J -36674121.35 -36674121.17 -36674120.97 0.0139 0.0087
 Saturn -105119-08-02 23:45 J -36673077.75 -36673077.51 -36673077.28 0.0287 0.0023
 Neptune -105116-08-03 23:02 J -36671980.65 -36671980.54 -36671980.42 0.0088 0.0078
 Neptune -105115-08-06 05:45 J -36671613.45 -36671613.26 -36671613.03 0.0088 0.0047
 Neptune -105114-08-08 12:57 J -36671246.19 -36671245.96 -36671245.71 0.0088 0.0016
 Neptune -105113-08-09 20:09 J -36670878.90 -36670878.66 -36670878.41 0.0088 0.0015
 Neptune -105112-08-12 02:38 J -36670511.59 -36670511.39 -36670511.16 0.0088 0.0046

Neptune -105111-08-14 09:50 J -36670144.21 -36670144.09 -36670143.96 0.0088 0.0076
 Saturn -105105-01-22 22:33 J -36668156.65 -36668156.56 -36668156.44 0.0274 0.0248
 Saturn -105104-02-04 09:07 J -36667778.17 -36667778.12 -36667778.03 0.0271 0.0261
 Mars -105092-07-23 05:02 J -36663226.44 -36663226.29 -36663226.15 0.1726 0.1026
 Saturn -105090-07-28 14:38 J -36662490.96 -36662490.89 -36662490.79 0.0286 0.0267
 Saturn -105089-08-09 09:50 J -36662113.14 -36662113.09 -36662113.04 0.0289 0.0282
 Jupiter -105088-03-02 13:26 J -36661908.11 -36661907.94 -36661907.76 0.0500 0.0349
 Uranus -105085-03-19 17:02 J -36660794.94 -36660794.79 -36660794.61 0.0141 0.0110
 Uranus -105084-03-24 20:23 J -36660424.91 -36660424.65 -36660424.39 0.0140 0.0016
 Uranus -105083-03-29 21:21 J -36660054.82 -36660054.61 -36660054.38 0.0140 0.0077
 Jupiter -105076-03-07 10:19 J -36657520.31 -36657520.07 -36657519.83 0.0501 0.0075
 Saturn -105075-01-29 23:16 J -36657191.78 -36657191.53 -36657191.27 0.0273 0.0041
 Jupiter -105071-08-31 19:11 J -36655516.88 -36655516.70 -36655516.51 0.0528 0.0301
 Jupiter -105064-03-12 07:26 J -36653132.20 -36653132.19 -36653132.17 0.0502 0.0501
 Pluto -105062-02-27 10:04 J -36652415.32 -36652415.08 -36652414.82 0.0066 0.0026
 Pluto -105061-02-29 02:23 J -36652048.52 -36652048.40 -36652048.23 0.0066 0.0055
 Saturn -105060-08-04 10:47 J -36651526.28 -36651526.05 -36651525.82 0.0287 0.0046
 Jupiter -105059-09-05 10:04 J -36651129.29 -36651129.08 -36651128.87 0.0526 0.0154
 Saturn -105046-01-24 08:09 J -36646605.33 -36646605.16 -36646604.96 0.0274 0.0187
 Uranus -105040-09-16 06:43 J -36644178.41 -36644178.22 -36644178.00 0.0138 0.0075
 Uranus -105039-09-20 13:40 J -36643809.18 -36643808.93 -36643808.69 0.0139 0.0008
 Uranus -105038-09-24 21:07 J -36643439.79 -36643439.62 -36643439.42 0.0139 0.0092
 Neptune -105033-01-31 06:28 J -36641850.37 -36641850.23 -36641850.06 0.0089 0.0072
 Neptune -105032-02-01 23:02 J -36641482.77 -36641482.54 -36641482.29 0.0089 0.0038
 Neptune -105031-02-04 15:50 J -36641115.11 -36641114.84 -36641114.57 0.0089 0.0004
 Saturn -105031-07-30 02:09 J -36640939.57 -36640939.41 -36640939.24 0.0287 0.0198
 Neptune -105030-02-07 08:09 J -36640747.41 -36640747.16 -36640746.91 0.0089 0.0030
 Neptune -105029-02-10 00:28 J -36640379.64 -36640379.48 -36640379.27 0.0089 0.0065
 Saturn -105016-01-31 08:52 J -36635640.36 -36635640.13 -36635639.88 0.0272 0.0101
 Jupiter -105005-03-01 13:26 J -36631593.06 -36631592.94 -36631592.81 0.0499 0.0421

Uranus -105001-03-20 07:26 J -36630113.35 -36630113.19 -36630112.99 0.0141 0.0102
Saturn -105001-08-05 23:31 J -36629974.74 -36629974.52 -36629974.31 0.0288 0.011

105TH MILLENNIUM BCE

This is a list of transits of Earth in the 105th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-105000-03-25 10:33 J	-36629743.32	-36629743.06	-36629742.79	0.0140	0.0008		
Uranus	-104999-03-30 11:45 J	-36629373.22	-36629373.01	-36629372.80	0.0140	0.0084		
Jupiter	-104993-03-06 07:55 J	-36627205.42	-36627205.17	-36627204.93	0.0500	0.0011		
Jupiter	-104988-08-31 00:28 J	-36625201.63	-36625201.48	-36625201.31	0.0528	0.0376		
Saturn	-104987-01-25 21:35 J	-36625053.83	-36625053.60	-36625053.37	0.0273	0.0120		
Jupiter	-104981-03-11 06:14 J	-36622817.37	-36622817.24	-36622817.11	0.0502	0.0420		
Jupiter	-104976-09-04 13:26 J	-36620814.16	-36620813.94	-36620813.71	0.0526	0.0072		
Pluto	-104975-08-29 22:47 J	-36620454.76	-36620454.55	-36620454.34	0.0079	0.0041		
Saturn	-104972-07-31 15:07 J	-36619388.08	-36619387.87	-36619387.66	0.0287	0.0127		
Mars	-104966-07-19 13:26 J	-36617209.08	-36617208.94	-36617208.80	0.1739	0.1113		
Jupiter	-104964-09-09 01:11 J	-36616426.49	-36616426.45	-36616426.39	0.0524	0.0509		
Saturn	-104957-02-02 21:07 J	-36614088.81	-36614088.62	-36614088.40	0.0272	0.0164		
Uranus	-104956-09-16 18:28 J	-36613496.93	-36613496.73	-36613496.51	0.0138	0.0070		
Uranus	-104955-09-21 01:11 J	-36613127.70	-36613127.45	-36613127.21	0.0139	0.0012		
Uranus	-104954-09-25 08:23 J	-36612758.31	-36612758.15	-36612757.96	0.0139	0.0095		

Neptune -104951-08-05 15:35 J -36611713.01 -36611712.85 -36611712.67 0.0088 0.0064
 Neptune -104950-08-07 22:33 J -36611345.77 -36611345.56 -36611345.31 0.0088 0.0034
 Neptune -104949-08-09 05:59 J -36610978.50 -36610978.25 -36610978.01 0.0088 0.0002
 Neptune -104948-08-11 12:57 J -36610611.19 -36610610.96 -36610610.72 0.0088 0.0029
 Neptune -104947-08-13 19:26 J -36610243.85 -36610243.69 -36610243.49 0.0088 0.0060
 Saturn -104942-08-08 13:26 J -36608423.11 -36608422.94 -36608422.76 0.0288 0.0190
 Mars -104940-01-13 08:23 J -36607899.36 -36607899.15 -36607898.95 0.1783 0.0043
 Saturn -104928-01-27 12:14 J -36603502.24 -36603501.99 -36603501.74 0.0273 0.0050
 Uranus -104917-03-20 20:23 J -36599431.83 -36599431.65 -36599431.44 0.0141 0.0095
 Uranus -104916-03-25 23:59 J -36599061.77 -36599061.50 -36599061.24 0.0140 0.0002
 Uranus -104915-03-31 00:43 J -36598691.65 -36598691.47 -36598691.25 0.0140 0.0091
 Saturn -104913-08-02 03:50 J -36597836.57 -36597836.34 -36597836.11 0.0287 0.0056
 Jupiter -104910-03-06 08:38 J -36596890.38 -36596890.14 -36596889.90 0.0500 0.0083
 Jupiter -104905-08-30 00:57 J -36594886.56 -36594886.46 -36594886.36 0.0528 0.0471
 Saturn -104899-01-22 00:14 J -36592915.49 -36592915.49 -36592915.48 0.0274 0.0274
 Saturn -104898-02-04 11:16 J -36592537.17 -36592537.03 -36592536.90 0.0272 0.0230
 Jupiter -104898-03-11 06:57 J -36592502.38 -36592502.21 -36592502.03 0.0502 0.0347
 Jupiter -104893-09-03 10:47 J -36590499.27 -36590499.05 -36590498.82 0.0527 0.0035
 Mars -104887-07-21 21:07 J -36588351.81 -36588351.62 -36588351.44 0.1735 0.0137
 Saturn -104884-07-28 06:57 J -36587249.24 -36587249.21 -36587249.15 0.0286 0.0280
 Saturn -104883-08-10 02:09 J -36586871.49 -36586871.41 -36586871.30 0.0289 0.0263
 Jupiter -104881-09-08 00:28 J -36586111.61 -36586111.48 -36586111.34 0.0525 0.0415
 Uranus -104872-09-17 07:40 J -36582815.39 -36582815.18 -36582814.95 0.0138 0.0064
 Uranus -104871-09-21 14:09 J -36582446.15 -36582445.91 -36582445.66 0.0139 0.0018
 Uranus -104870-09-25 22:04 J -36582076.75 -36582076.58 -36582076.41 0.0139 0.0101
 Saturn -104869-01-30 03:35 J -36581950.60 -36581950.35 -36581950.09 0.0273 0.0020
 Neptune -104868-01-31 23:02 J -36581582.72 -36581582.54 -36581582.31 0.0089 0.0057
 Neptune -104867-02-03 15:21 J -36581215.11 -36581214.86 -36581214.59 0.0089 0.0023
 Neptune -104866-02-06 07:54 J -36580847.42 -36580847.17 -36580846.89 0.0089 0.0012
 Neptune -104865-02-09 00:28 J -36580479.69 -36580479.48 -36580479.23 0.0089 0.0046

Neptune -104864-02-10 17:02 J -36580111.89 -36580111.79 -36580111.66 0.0089 0.0080
 Saturn -104854-08-04 16:04 J -36576285.06 -36576284.83 -36576284.59 0.0288 0.0016
 Saturn -104840-01-23 14:09 J -36571364.06 -36571363.91 -36571363.73 0.0274 0.0205
 Uranus -104833-03-21 08:09 J -36568750.35 -36568750.16 -36568749.94 0.0141 0.0089
 Uranus -104832-03-26 11:30 J -36568380.28 -36568380.02 -36568379.76 0.0140 0.0005
 Uranus -104831-03-31 12:42 J -36568010.15 -36568009.97 -36568009.77 0.0140 0.0096
 Jupiter -104827-03-05 08:23 J -36566575.38 -36566575.15 -36566574.92 0.0499 0.0158
 Saturn -104825-07-29 17:30 J -36565697.92 -36565697.77 -36565697.60 0.0286 0.0212
 Pluto -104816-02-28 15:35 J -36562562.09 -36562561.85 -36562561.58 0.0066 0.0021
 Pluto -104815-03-02 08:09 J -36562195.25 -36562195.16 -36562195.04 0.0066 0.0060
 Jupiter -104815-03-10 01:26 J -36562187.65 -36562187.44 -36562187.23 0.0501 0.0249
 Saturn -104810-01-31 18:14 J -36560398.98 -36560398.74 -36560398.50 0.0272 0.0090
 Jupiter -104810-09-03 16:18 J -36560184.04 -36560183.82 -36560183.60 0.0528 0.0108
 Mars -104808-07-24 04:47 J -36559494.41 -36559494.30 -36559494.19 0.1731 0.1373
 Jupiter -104798-09-08 06:14 J -36555796.41 -36555796.24 -36555796.07 0.0525 0.0340
 Saturn -104795-08-06 01:54 J -36554733.64 -36554733.42 -36554733.19 0.0288 0.0083
 Uranus -104789-09-13 15:06 J -36552502.87 -36552502.87 -36552502.86 0.0137 0.0137
 Uranus -104788-09-17 20:38 J -36552133.86 -36552133.64 -36552133.42 0.0138 0.0058
 Neptune -104787-08-04 23:59 J -36551812.57 -36551812.50 -36551812.38 0.0088 0.0081
 Uranus -104787-09-22 03:06 J -36551764.62 -36551764.37 -36551764.13 0.0138 0.0023
 Neptune -104786-08-07 07:26 J -36551445.38 -36551445.19 -36551444.97 0.0088 0.0050
 Uranus -104786-09-26 10:33 J -36551395.21 -36551395.06 -36551394.89 0.0139 0.0105
 Neptune -104785-08-08 14:52 J -36551078.11 -36551077.88 -36551077.63 0.0088 0.0020
 Neptune -104784-08-10 22:04 J -36550710.82 -36550710.58 -36550710.33 0.0088 0.0012
 Neptune -104783-08-13 04:47 J -36550343.50 -36550343.30 -36550343.07 0.0088 0.0043
 Neptune -104782-08-15 11:30 J -36549976.13 -36549976.02 -36549975.86 0.0088 0.0074
 Saturn -104781-01-26 03:06 J -36549812.58 -36549812.37 -36549812.14 0.0273 0.0138
 Saturn -104766-08-01 01:54 J -36544146.62 -36544146.42 -36544146.21 0.0287 0.0147
 Saturn -104751-02-02 06:42 J -36538847.42 -36538847.22 -36538847.00 0.0272 0.0155
 Uranus -104749-03-21 19:40 J -36538068.88 -36538068.68 -36538068.45 0.0141 0.0084

Uranus -104748-03-26 23:16 J -36537698.79 -36537698.53 -36537698.27 0.0141 0.0010
 Uranus -104747-04-01 00:28 J -36537328.64 -36537328.48 -36537328.28 0.0140 0.0102
 Jupiter -104744-03-04 05:30 J -36536260.48 -36536260.27 -36536260.06 0.0499 0.0247
 Saturn -104736-08-07 09:21 J -36533182.31 -36533182.11 -36533181.90 0.0288 0.0145
 Jupiter -104732-03-09 04:18 J -36531872.54 -36531872.32 -36531872.09 0.0501 0.0182
 Pluto -104730-08-30 08:23 J -36530968.21 -36530968.15 -36530968.05 0.0079 0.0075
 Pluto -104729-08-31 08:23 J -36530601.30 -36530601.15 -36530600.95 0.0079 0.0056
 Jupiter -104727-09-02 20:52 J -36529868.83 -36529868.63 -36529868.42 0.0528 0.0187
 Saturn -104722-01-27 13:40 J -36528261.17 -36528260.93 -36528260.68 0.0273 0.0074
 Jupiter -104715-09-07 06:57 J -36525481.40 -36525481.21 -36525481.01 0.0526 0.0249
 Saturn -104707-08-02 06:57 J -36522595.43 -36522595.21 -36522594.98 0.0287 0.0088
 Uranus -104705-09-14 05:45 J -36521821.31 -36521821.26 -36521821.16 0.0137 0.0130
 Neptune -104704-01-30 22:33 J -36521682.67 -36521682.56 -36521682.40 0.0089 0.0076
 Uranus -104704-09-18 11:45 J -36521452.24 -36521452.01 -36521451.79 0.0138 0.0051
 Neptune -104703-02-02 15:06 J -36521315.09 -36521314.87 -36521314.62 0.0089 0.0042
 Uranus -104703-09-22 17:59 J -36521082.98 -36521082.75 -36521082.51 0.0138 0.0029
 Neptune -104702-02-05 07:40 J -36520947.45 -36520947.18 -36520946.91 0.0089 0.0008
 Uranus -104702-09-27 01:26 J -36520713.56 -36520713.44 -36520713.28 0.0139 0.0112
 Neptune -104701-02-07 23:59 J -36520579.76 -36520579.50 -36520579.24 0.0089 0.0026
 Neptune -104700-02-09 15:50 J -36520212.01 -36520211.84 -36520211.62 0.0089 0.0061
 Saturn -104692-02-03 16:18 J -36517295.96 -36517295.82 -36517295.66 0.0272 0.0216
 Mars -104682-07-20 11:16 J -36513477.20 -36513477.03 -36513476.87 0.1745 0.0796
 Saturn -104677-08-08 13:40 J -36511631.08 -36511630.93 -36511630.75 0.0288 0.0202
 Uranus -104665-03-22 09:21 J -36507387.33 -36507387.11 -36507386.89 0.0141 0.0077
 Uranus -104664-03-27 12:28 J -36507017.24 -36507016.98 -36507016.71 0.0141 0.0017
 Saturn -104663-01-28 20:52 J -36506709.89 -36506709.63 -36506709.38 0.0273 0.0016
 Uranus -104663-04-01 13:54 J -36506647.06 -36506646.92 -36506646.73 0.0140 0.0108
 Jupiter -104661-03-03 11:30 J -36505945.21 -36505945.02 -36505944.82 0.0499 0.0301
 Mars -104656-01-13 05:30 J -36504168.47 -36504168.27 -36504168.06 0.1776 0.0095
 Jupiter -104649-03-08 09:06 J -36501557.36 -36501557.12 -36501556.89 0.0500 0.0121

Saturn -104648-08-03 09:06 J -36501044.35 -36501044.12 -36501043.88 0.0287 0.0035
 Jupiter -104644-09-02 00:14 J -36499553.68 -36499553.49 -36499553.29 0.0528 0.0270
 Saturn -104634-01-23 11:16 J -36496123.15 -36496123.03 -36496122.88 0.0275 0.0229
 Saturn -104633-02-05 22:18 J -36495744.58 -36495744.57 -36495744.54 0.0272 0.0271
 Jupiter -104632-09-06 16:47 J -36495166.01 -36495165.80 -36495165.59 0.0527 0.0191
 Neptune -104622-08-06 14:52 J -36491545.01 -36491544.88 -36491544.70 0.0088 0.0069
 Neptune -104621-08-07 22:18 J -36491177.78 -36491177.57 -36491177.33 0.0088 0.0038
 Uranus -104621-09-14 20:38 J -36491139.74 -36491139.64 -36491139.53 0.0137 0.0123
 Neptune -104620-08-10 05:59 J -36490810.49 -36490810.25 -36490810.00 0.0088 0.0006
 Uranus -104620-09-19 02:09 J -36490770.64 -36490770.41 -36490770.18 0.0138 0.0045
 Saturn -104619-07-28 21:35 J -36490457.63 -36490457.60 -36490457.54 0.0285 0.0279
 Neptune -104619-08-12 13:11 J -36490443.18 -36490442.95 -36490442.71 0.0088 0.0025
 Uranus -104619-09-23 08:38 J -36490401.37 -36490401.14 -36490400.90 0.0138 0.0036
 Saturn -104618-08-10 15:06 J -36490079.97 -36490079.87 -36490079.74 0.0288 0.0253
 Neptune -104618-08-14 20:09 J -36490075.84 -36490075.66 -36490075.46 0.0088 0.0056
 Uranus -104618-09-27 16:18 J -36490031.95 -36490031.82 -36490031.69 0.0139 0.0118
 Neptune -104617-08-16 02:52 J -36489708.41 -36489708.38 -36489708.31 0.0088 0.0087
 Saturn -104604-01-30 00:42 J -36485158.72 -36485158.47 -36485158.22 0.0273 0.0036
 Mars -104603-07-22 19:26 J -36484619.87 -36484619.69 -36484619.51 0.1741 0.0463
 Saturn -104589-08-04 08:52 J -36479493.37 -36479493.13 -36479492.90 0.0287 0.0015
 Uranus -104581-03-22 23:16 J -36476705.76 -36476705.53 -36476705.30 0.0141 0.0070
 Uranus -104580-03-28 02:38 J -36476335.64 -36476335.39 -36476335.12 0.0141 0.0024
 Uranus -104579-04-02 04:47 J -36475965.45 -36475965.30 -36475965.15 0.0140 0.0114
 Jupiter -104578-03-03 12:28 J -36475630.14 -36475629.98 -36475629.82 0.0498 0.0375
 Saturn -104575-01-24 13:54 J -36474572.10 -36474571.92 -36474571.72 0.0275 0.0179
 Pluto -104570-03-03 00:42 J -36472708.72 -36472708.47 -36472708.19 0.0066 0.0009
 Jupiter -104566-03-08 10:33 J -36471242.31 -36471242.06 -36471241.82 0.0500 0.0048
 Jupiter -104561-09-01 12:14 J -36469238.16 -36469237.99 -36469237.81 0.0529 0.0318
 Saturn -104560-07-29 21:35 J -36468906.72 -36468906.60 -36468906.45 0.0285 0.0231
 Jupiter -104554-03-13 09:50 J -36466854.15 -36466854.09 -36466854.02 0.0502 0.0480

Jupiter -104549-09-06 03:21 J -36464850.58 -36464850.36 -36464850.14 0.0527 0.0137
 Saturn -104545-02-01 01:54 J -36463607.66 -36463607.42 -36463607.17 0.0273 0.0083
 Neptune -104539-02-01 14:52 J -36461415.06 -36461414.88 -36461414.67 0.0089 0.0061
 Neptune -104538-02-04 07:11 J -36461047.44 -36461047.20 -36461046.93 0.0089 0.0027
 Neptune -104537-02-06 23:45 J -36460679.78 -36460679.51 -36460679.24 0.0089 0.0007
 Uranus -104537-09-15 11:59 J -36460458.11 -36460458.00 -36460457.85 0.0137 0.0116
 Neptune -104536-02-08 15:50 J -36460312.08 -36460311.84 -36460311.60 0.0089 0.0041
 Uranus -104536-09-19 17:45 J -36460088.98 -36460088.76 -36460088.51 0.0138 0.0038
 Neptune -104535-02-11 08:23 J -36459944.29 -36459944.15 -36459944.01 0.0089 0.0075
 Uranus -104535-09-24 00:14 J -36459719.72 -36459719.49 -36459719.25 0.0138 0.0043
 Uranus -104534-09-28 07:54 J -36459350.27 -36459350.17 -36459350.06 0.0139 0.0124
 Saturn -104530-08-06 06:42 J -36457942.45 -36457942.22 -36457941.99 0.0287 0.0059
 Mars -104524-07-25 03:50 J -36455762.37 -36455762.34 -36455762.31 0.1737 0.1709
 Saturn -104516-01-25 13:54 J -36453021.13 -36453020.92 -36453020.69 0.0275 0.0134
 Saturn -104501-07-30 20:23 J -36447355.82 -36447355.65 -36447355.46 0.0285 0.0185
 Uranus -104497-03-23 15:35 J -36446024.08 -36446023.85 -36446023.60 0.0141 0.0060
 Uranus -104496-03-28 18:57 J -36445653.96 -36445653.71 -36445653.44 0.0141 0.0033
 Jupiter -104495-03-02 20:38 J -36445314.76 -36445314.64 -36445314.50 0.0498 0.0420
 Uranus -104495-04-02 20:38 J -36445283.74 -36445283.64 -36445283.49 0.0140 0.0123
 Saturn -104486-02-02 01:11 J -36442056.66 -36442056.45 -36442056.21 0.0273 0.0127
 Pluto -104484-08-31 22:47 J -36441114.74 -36441114.55 -36441114.35 0.0079 0.0049
 Jupiter -104483-03-07 20:09 J -36440926.90 -36440926.66 -36440926.42 0.0500 0.0006
 Jupiter -104478-09-01 20:09 J -36438922.81 -36438922.66 -36438922.50 0.0529 0.0383
 Jupiter -104471-03-12 18:28 J -36436538.84 -36436538.73 -36436538.60 0.0501 0.0434
 Saturn -104471-08-07 04:04 J -36436391.55 -36436391.33 -36436391.11 0.0287 0.0103
 Jupiter -104466-09-06 10:47 J -36434535.28 -36434535.05 -36434534.83 0.0528 0.0071
 Neptune -104458-08-05 22:18 J -36431644.60 -36431644.57 -36431644.49 0.0088 0.0087
 Saturn -104457-01-27 12:28 J -36431470.21 -36431469.98 -36431469.74 0.0275 0.0091
 Neptune -104457-08-07 05:45 J -36431277.43 -36431277.26 -36431277.05 0.0088 0.0056
 Neptune -104456-08-09 13:11 J -36430910.17 -36430909.95 -36430909.70 0.0088 0.0025

Neptune -104455-08-11 20:38 J -36430542.88 -36430542.64 -36430542.39 0.0088 0.0007
 Neptune -104454-08-14 03:50 J -36430175.55 -36430175.34 -36430175.11 0.0088 0.0038
 Jupiter -104454-09-11 01:26 J -36430147.45 -36430147.44 -36430147.40 0.0526 0.0523
 Neptune -104453-08-15 10:47 J -36429808.19 -36429808.05 -36429807.88 0.0088 0.0069
 Uranus -104453-09-16 02:52 J -36429776.51 -36429776.38 -36429776.22 0.0137 0.0109
 Uranus -104452-09-20 08:23 J -36429407.38 -36429407.15 -36429406.91 0.0138 0.0031
 Uranus -104451-09-24 14:38 J -36429038.12 -36429037.89 -36429037.66 0.0138 0.0049
 Uranus -104450-09-28 21:35 J -36428668.66 -36428668.60 -36428668.49 0.0139 0.0131
 Saturn -104442-08-01 19:26 J -36425804.89 -36425804.69 -36425804.48 0.0285 0.0140
 Saturn -104427-02-02 23:30 J -36420505.71 -36420505.52 -36420505.31 0.0273 0.0169
 Uranus -104413-03-24 05:59 J -36415342.49 -36415342.25 -36415342.00 0.0141 0.0052
 Jupiter -104412-03-02 06:14 J -36414999.32 -36414999.24 -36414999.14 0.0498 0.0462
 Uranus -104412-03-29 09:35 J -36414972.34 -36414972.10 -36414971.83 0.0141 0.0041
 Saturn -104412-08-08 01:40 J -36414840.63 -36414840.43 -36414840.22 0.0287 0.0146
 Uranus -104411-04-03 11:59 J -36414602.09 -36414602.00 -36414601.90 0.0140 0.0130
 Jupiter -104400-03-07 00:42 J -36410611.71 -36410611.47 -36410611.23 0.0499 0.0053
 Saturn -104398-01-28 10:47 J -36409919.30 -36409919.05 -36409918.80 0.0275 0.0050
 Mars -104398-07-21 08:09 J -36409745.34 -36409745.16 -36409744.98 0.1750 0.0489
 Jupiter -104395-09-01 05:02 J -36408607.40 -36408607.29 -36408607.16 0.0530 0.0443
 Jupiter -104388-03-11 22:33 J -36406223.71 -36406223.56 -36406223.39 0.0500 0.0371
 Saturn -104383-08-02 19:26 J -36404253.92 -36404253.69 -36404253.47 0.0285 0.0093
 Jupiter -104383-09-05 22:18 J -36404219.79 -36404219.57 -36404219.35 0.0528 0.0024
 Neptune -104375-01-31 13:54 J -36401515.00 -36401514.92 -36401514.77 0.0089 0.0081
 Neptune -104374-02-03 06:28 J -36401147.43 -36401147.23 -36401146.98 0.0089 0.0047
 Neptune -104373-02-05 23:02 J -36400779.81 -36400779.54 -36400779.28 0.0089 0.0012
 Mars -104372-01-13 04:47 J -36400437.50 -36400437.30 -36400437.10 0.1769 0.0097
 Neptune -104372-02-07 15:06 J -36400412.12 -36400411.87 -36400411.60 0.0089 0.0022
 Neptune -104371-02-10 07:11 J -36400044.39 -36400044.20 -36400043.97 0.0089 0.0056
 Jupiter -104371-09-10 13:40 J -36399832.02 -36399831.93 -36399831.83 0.0526 0.0476
 Uranus -104369-09-16 17:16 J -36399094.92 -36399094.78 -36399094.60 0.0137 0.0102

Saturn -104368-02-03 22:04 J -36398954.73 -36398954.58 -36398954.40 0.0273 0.0211
 Uranus -104368-09-20 22:47 J -36398725.78 -36398725.55 -36398725.30 0.0138 0.0024
 Uranus -104367-09-25 04:33 J -36398356.52 -36398356.31 -36398356.07 0.0138 0.0056
 Uranus -104366-09-29 11:59 J -36397987.03 -36397987.00 -36397986.94 0.0139 0.0136
 Saturn -104353-08-09 01:26 J -36393289.61 -36393289.44 -36393289.26 0.0287 0.0192
 Saturn -104339-01-29 09:06 J -36388368.37 -36388368.12 -36388367.86 0.0275 0.0011
 Uranus -104330-03-20 14:38 J -36385030.94 -36385030.89 -36385030.82 0.0142 0.0138
 Uranus -104329-03-24 19:54 J -36384660.91 -36384660.67 -36384660.41 0.0141 0.0044
 Uranus -104328-03-29 23:59 J -36384290.75 -36384290.50 -36384290.25 0.0141 0.0048
 Uranus -104327-04-04 02:09 J -36383920.45 -36383920.41 -36383920.36 0.0140 0.0137
 Pluto -104324-03-04 08:09 J -36382855.43 -36382855.16 -36382854.88 0.0066 0.0001
 Saturn -104324-08-03 20:52 J -36382702.87 -36382702.63 -36382702.40 0.0285 0.0044
 Mars -104319-07-23 16:18 J -36380887.99 -36380887.82 -36380887.66 0.1746 0.0767
 Jupiter -104317-03-06 07:40 J -36380296.42 -36380296.18 -36380295.94 0.0498 0.0102
 Jupiter -104312-08-31 16:33 J -36378291.89 -36378291.81 -36378291.72 0.0530 0.0490
 Saturn -104310-01-23 08:38 J -36377782.24 -36377782.14 -36377782.02 0.0276 0.0247
 Saturn -104309-02-05 22:47 J -36377403.64 -36377403.55 -36377403.45 0.0273 0.0254
 Jupiter -104305-03-11 06:28 J -36375908.41 -36375908.23 -36375908.05 0.0500 0.0324
 Jupiter -104300-09-05 06:14 J -36373904.46 -36373904.24 -36373904.02 0.0528 0.0040
 Saturn -104295-07-29 11:45 J -36372116.04 -36372116.01 -36372115.95 0.0284 0.0277
 Saturn -104294-08-11 03:06 J -36371738.49 -36371738.37 -36371738.24 0.0287 0.0241
 Mars -104293-01-17 04:04 J -36371579.38 -36371579.33 -36371579.27 0.1774 0.1707
 Neptune -104293-08-06 13:11 J -36371377.06 -36371376.95 -36371376.79 0.0088 0.0074
 Neptune -104292-08-08 20:38 J -36371009.85 -36371009.64 -36371009.41 0.0088 0.0043
 Neptune -104291-08-11 04:04 J -36370642.57 -36370642.33 -36370642.08 0.0088 0.0012
 Neptune -104290-08-13 11:16 J -36370275.27 -36370275.03 -36370274.78 0.0088 0.0019
 Neptune -104289-08-14 18:28 J -36369907.92 -36369907.73 -36369907.52 0.0088 0.0051
 Neptune -104288-08-17 01:11 J -36369540.51 -36369540.45 -36369540.32 0.0088 0.0082
 Jupiter -104288-09-09 19:54 J -36369516.81 -36369516.67 -36369516.52 0.0527 0.0406
 Uranus -104285-09-17 07:26 J -36368413.34 -36368413.19 -36368412.99 0.0137 0.0096

Uranus -104284-09-21 12:57 J -36368044.20 -36368043.96 -36368043.72 0.0138 0.0017
 Uranus -104283-09-25 18:42 J -36367674.93 -36367674.72 -36367674.49 0.0138 0.0062
 Saturn -104280-01-30 09:35 J -36366817.35 -36366817.10 -36366816.85 0.0275 0.0035
 Saturn -104265-08-05 01:26 J -36361151.67 -36361151.44 -36361151.20 0.0285 0.0011
 Saturn -104251-01-24 11:16 J -36356231.20 -36356231.03 -36356230.85 0.0276 0.0199
 Uranus -104246-03-21 01:26 J -36354349.52 -36354349.44 -36354349.34 0.0142 0.0132
 Uranus -104245-03-25 06:57 J -36353979.46 -36353979.21 -36353978.95 0.0141 0.0039
 Uranus -104244-03-30 11:02 J -36353609.28 -36353609.04 -36353608.79 0.0141 0.0053
 Pluto -104238-09-03 10:04 J -36351261.31 -36351261.08 -36351260.85 0.0079 0.0032
 Saturn -104236-07-30 16:47 J -36350564.94 -36350564.80 -36350564.65 0.0284 0.0222
 Jupiter -104234-03-06 14:38 J -36349981.12 -36349980.89 -36349980.65 0.0498 0.0153
 Jupiter -104222-03-11 10:33 J -36345593.26 -36345593.06 -36345592.85 0.0499 0.0265
 Saturn -104221-02-01 12:28 J -36345266.22 -36345265.98 -36345265.73 0.0275 0.0083
 Jupiter -104217-09-04 09:50 J -36343589.31 -36343589.09 -36343588.88 0.0530 0.0120
 Neptune -104210-02-02 06:14 J -36341247.39 -36341247.24 -36341247.03 0.0089 0.0066
 Neptune -104209-02-04 22:47 J -36340879.78 -36340879.55 -36340879.28 0.0089 0.0032
 Neptune -104208-02-06 15:21 J -36340512.13 -36340511.86 -36340511.59 0.0089 0.0003
 Neptune -104207-02-09 07:26 J -36340144.42 -36340144.19 -36340143.94 0.0089 0.0037
 Neptune -104206-02-11 23:30 J -36339776.66 -36339776.52 -36339776.34 0.0089 0.0071
 Saturn -104206-08-07 08:23 J -36339600.38 -36339600.15 -36339599.92 0.0285 0.0068
 Jupiter -104205-09-09 01:40 J -36339201.60 -36339201.43 -36339201.26 0.0528 0.0338
 Uranus -104201-09-17 22:18 J -36337731.74 -36337731.57 -36337731.36 0.0137 0.0088
 Uranus -104200-09-22 03:35 J -36337362.59 -36337362.35 -36337362.10 0.0138 0.0011
 Uranus -104199-09-26 09:21 J -36336993.31 -36336993.11 -36336992.89 0.0138 0.0068
 Mars -104193-07-18 17:02 J -36334870.88 -36334870.79 -36334870.70 0.1760 0.1546
 Saturn -104192-01-25 16:47 J -36334680.01 -36334679.80 -36334679.58 0.0276 0.0146
 Saturn -104177-08-01 00:28 J -36329013.67 -36329013.48 -36329013.28 0.0284 0.0163
 Saturn -104162-02-02 18:14 J -36323714.96 -36323714.74 -36323714.51 0.0274 0.0135
 Uranus -104162-03-21 13:40 J -36323668.03 -36323667.93 -36323667.79 0.0142 0.0126
 Uranus -104161-03-25 19:26 J -36323297.94 -36323297.69 -36323297.43 0.0141 0.0033

Uranus -104160-03-30 23:16 J -36322927.75 -36322927.53 -36322927.28 0.0141 0.0059
 Jupiter -104151-03-05 17:02 J -36319666.00 -36319665.79 -36319665.57 0.0497 0.0215
 Saturn -104147-08-08 17:59 J -36318048.95 -36318048.75 -36318048.53 0.0285 0.0131
 Jupiter -104139-03-10 11:30 J -36315278.24 -36315278.02 -36315277.80 0.0499 0.0193
 Jupiter -104134-09-04 16:47 J -36313274.01 -36313273.80 -36313273.59 0.0530 0.0185
 Saturn -104133-01-28 01:26 J -36313128.67 -36313128.44 -36313128.19 0.0276 0.0088
 Neptune -104128-08-08 04:18 J -36311109.49 -36311109.32 -36311109.13 0.0088 0.0061
 Neptune -104127-08-10 11:30 J -36310742.25 -36310742.02 -36310741.78 0.0088 0.0030
 Neptune -104126-08-12 18:57 J -36310374.96 -36310374.71 -36310374.46 0.0088 0.0001
 Neptune -104125-08-14 01:54 J -36310007.64 -36310007.42 -36310007.18 0.0088 0.0032
 Neptune -104124-08-16 08:38 J -36309640.29 -36309640.14 -36309639.94 0.0088 0.0064
 Jupiter -104122-09-09 06:28 J -36308886.42 -36308886.23 -36308886.03 0.0528 0.0262
 Saturn -104118-08-03 10:33 J -36307462.28 -36307462.06 -36307461.84 0.0284 0.0100
 Uranus -104117-09-18 13:11 J -36307050.13 -36307049.95 -36307049.73 0.0137 0.0081
 Uranus -104116-09-22 18:28 J -36306680.97 -36306680.73 -36306680.48 0.0138 0.0004
 Uranus -104115-09-26 23:59 J -36306311.69 -36306311.50 -36306311.28 0.0138 0.0075
 Mars -104114-07-22 03:06 J -36306013.55 -36306013.37 -36306013.18 0.1756 0.0215
 Saturn -104103-02-04 03:06 J -36302163.55 -36302163.37 -36302163.18 0.0274 0.0191
 Mars -104088-01-13 04:04 J -36296706.53 -36296706.33 -36296706.13 0.1762 0.0093
 Saturn -104088-08-10 05:45 J -36296497.42 -36296497.26 -36296497.08 0.0286 0.0198
 Pluto -104078-03-06 17:59 J -36293002.00 -36293001.75 -36293001.47 0.0066 0.0015
 Uranus -104078-03-22 00:42 J -36292986.58 -36292986.47 -36292986.30 0.0142 0.0122
 Uranus -104077-03-26 06:42 J -36292616.47 -36292616.22 -36292615.95 0.0142 0.0028
 Uranus -104076-03-31 10:33 J -36292246.28 -36292246.06 -36292245.81 0.0141 0.0064
 Saturn -104074-01-29 13:26 J -36291577.20 -36291576.94 -36291576.69 0.0275 0.0025
 Jupiter -104068-03-04 16:33 J -36289351.00 -36289350.81 -36289350.61 0.0497 0.0291
 Saturn -104059-08-04 22:18 J -36285910.81 -36285910.57 -36285910.34 0.0285 0.0033
 Jupiter -104056-03-09 13:40 J -36284963.16 -36284962.93 -36284962.69 0.0499 0.0125
 Jupiter -104051-09-03 17:30 J -36282958.96 -36282958.77 -36282958.58 0.0530 0.0277
 Neptune -104046-02-01 06:28 J -36281347.28 -36281347.23 -36281347.12 0.0089 0.0085

Saturn -104045-01-23 23:30 J -36280990.63 -36280990.52 -36280990.41 0.0276 0.0246
 Neptune -104045-02-03 22:47 J -36280979.75 -36280979.55 -36280979.31 0.0089 0.0051
 Neptune -104044-02-05 15:35 J -36280612.11 -36280611.85 -36280611.58 0.0089 0.0016
 Saturn -104044-02-05 14:09 J -36280611.99 -36280611.91 -36280611.79 0.0274 0.0252 *
 Neptune -104043-02-08 07:40 J -36280244.43 -36280244.18 -36280243.91 0.0089 0.0018
 Neptune -104042-02-10 23:59 J -36279876.71 -36279876.50 -36279876.28 0.0089 0.0052
 Neptune -104041-02-13 16:18 J -36279508.87 -36279508.82 -36279508.75 0.0089 0.0086
 Jupiter -104039-09-08 04:18 J -36278571.53 -36278571.32 -36278571.11 0.0529 0.0160
 Mars -104035-07-24 12:14 J -36277156.14 -36277155.99 -36277155.85 0.1752 0.1060
 Uranus -104033-09-19 04:33 J -36276368.51 -36276368.31 -36276368.10 0.0137 0.0074
 Uranus -104032-09-23 09:35 J -36275999.34 -36275999.10 -36275998.85 0.0138 0.0002
 Uranus -104031-09-27 15:06 J -36275630.05 -36275629.87 -36275629.66 0.0138 0.0081
 Saturn -104030-07-31 03:21 J -36275323.47 -36275323.36 -36275323.23 0.0283 0.0244
 Saturn -104029-08-11 18:14 J -36274945.82 -36274945.74 -36274945.65 0.0286 0.0265
 Saturn -104015-01-31 03:21 J -36270025.61 -36270025.36 -36270025.10 0.0275 0.0042
 Mars -104009-01-17 02:52 J -36267848.45 -36267848.38 -36267848.31 0.1767 0.1644

104TH MILLENNIUM BCE

This is a list of transits of Earth in the 104th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Saturn -104000-08-06 10:33 J -36264359.29 -36264359.06 -36264358.82 0.0285 0.0035

Uranus -103994-03-22 15:35 J -36262304.99 -36262304.85 -36262304.67 0.0142 0.0114
 Uranus -103993-03-26 21:21 J -36261934.87 -36261934.61 -36261934.35 0.0142 0.0021
 Uranus -103992-04-01 01:11 J -36261564.68 -36261564.45 -36261564.22 0.0141 0.0070
 Pluto -103992-09-05 01:26 J -36261407.69 -36261407.44 -36261407.20 0.0079 0.0002
 Saturn -103986-01-25 12:57 J -36259439.14 -36259438.96 -36259438.76 0.0276 0.0179
 Jupiter -103985-03-03 18:28 J -36259035.89 -36259035.73 -36259035.55 0.0496 0.0356
 Jupiter -103973-03-08 13:40 J -36254648.17 -36254647.93 -36254647.69 0.0498 0.0052
 Saturn -103971-08-01 15:21 J -36253772.04 -36253771.86 -36253771.67 0.0284 0.0176
 Jupiter -103968-09-02 15:21 J -36252644.01 -36252643.86 -36252643.70 0.0531 0.0380
 Neptune -103964-08-07 12:42 J -36251209.08 -36251208.97 -36251208.85 0.0088 0.0078
 Neptune -103963-08-09 19:40 J -36250841.86 -36250841.68 -36250841.44 0.0088 0.0048
 Neptune -103962-08-12 03:21 J -36250474.59 -36250474.36 -36250474.11 0.0088 0.0016
 Jupiter -103961-03-13 05:59 J -36250260.34 -36250260.25 -36250260.14 0.0499 0.0454
 Neptune -103961-08-13 10:47 J -36250107.30 -36250107.05 -36250106.81 0.0088 0.0015
 Neptune -103960-08-15 17:45 J -36249739.96 -36249739.76 -36249739.54 0.0088 0.0046
 Neptune -103959-08-18 00:42 J -36249372.58 -36249372.47 -36249372.33 0.0088 0.0077
 Saturn -103956-02-01 18:28 J -36248473.96 -36248473.73 -36248473.49 0.0275 0.0110
 Jupiter -103956-09-07 08:52 J -36248256.35 -36248256.13 -36248255.91 0.0529 0.0083
 Uranus -103949-09-19 19:11 J -36245686.90 -36245686.70 -36245686.47 0.0137 0.0068
 Uranus -103948-09-24 00:28 J -36245317.73 -36245317.48 -36245317.24 0.0138 0.0009
 Uranus -103947-09-28 05:59 J -36244948.43 -36244948.25 -36244948.05 0.0138 0.0087
 Saturn -103941-08-07 22:18 J -36242807.79 -36242807.57 -36242807.34 0.0285 0.0101
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 Jupiter -103902-03-03 14:09 J -36228721.01 -36228720.91 -36228720.81 0.0496 0.0447
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 Saturn -103338-01-28 03:50 J -36022754.57 -36022754.34 -36022754.10 0.0278 0.0104

Saturn -103323-08-04 07:54 J -36017087.39 -36017087.17 -36017086.95 0.0282 0.0113
 Uranus -103322-03-26 02:52 J -36016853.59 -36016853.38 -36016853.14 0.0142 0.0076
 Uranus -103321-03-30 08:52 J -36016483.39 -36016483.13 -36016482.86 0.0142 0.0015
 Uranus -103320-04-04 13:11 J -36016113.12 -36016112.95 -36016112.77 0.0141 0.0103
 Mars -103315-01-10 18:14 J -36014370.86 -36014370.74 -36014370.62 0.1737 0.1350
 Jupiter -103309-03-03 23:59 J -36012126.62 -36012126.50 -36012126.36 0.0494 0.0415
 Saturn -103308-02-04 06:14 J -36011789.44 -36011789.24 -36011789.04 0.0276 0.0170
 Neptune -103306-08-09 20:38 J -36010872.72 -36010872.64 -36010872.52 0.0088 0.0081
 Neptune -103305-08-11 04:18 J -36010505.51 -36010505.32 -36010505.10 0.0088 0.0050
 Neptune -103304-08-13 12:14 J -36010138.23 -36010137.99 -36010137.74 0.0088 0.0018
 Neptune -103303-08-15 19:54 J -36009770.92 -36009770.67 -36009770.43 0.0088 0.0013
 Neptune -103302-08-18 03:06 J -36009403.58 -36009403.37 -36009403.15 0.0088 0.0044
 Neptune -103301-08-19 10:04 J -36009036.20 -36009036.08 -36009035.93 0.0088 0.0075
 Jupiter -103297-03-08 19:11 J -36007738.95 -36007738.70 -36007738.46 0.0495 0.0017
 Saturn -103293-08-10 21:50 J -36006122.78 -36006122.59 -36006122.39 0.0283 0.0161
 Jupiter -103292-09-03 10:18 J -36005734.16 -36005734.07 -36005733.97 0.0534 0.0476
 Jupiter -103285-03-13 13:11 J -36003351.10 -36003350.95 -36003350.80 0.0497 0.0387
 Jupiter -103280-09-08 05:02 J -36001346.52 -36001346.29 -36001346.07 0.0532 0.0009
 Saturn -103279-01-29 08:38 J -36001203.39 -36001203.14 -36001202.89 0.0278 0.0054
 Uranus -103278-09-20 23:16 J -36000603.69 -36000603.53 -36000603.35 0.0136 0.0098
 Uranus -103277-09-24 03:06 J -36000234.61 -36000234.37 -36000234.13 0.0137 0.0026
 Uranus -103276-09-28 07:26 J -35999865.40 -35999865.19 -35999864.95 0.0137 0.0049
 Uranus -103275-10-02 13:11 J -35999496.05 -35999495.95 -35999495.83 0.0138 0.0123
 Jupiter -103268-09-12 19:54 J -35996958.79 -35996958.67 -35996958.55 0.0530 0.0440
 Saturn -103264-08-05 14:38 J -35995536.12 -35995535.89 -35995535.66 0.0282 0.0058
 Mars -103262-07-24 06:14 J -35994818.42 -35994818.24 -35994818.06 0.1775 0.0530
 Pluto -103255-09-09 16:04 J -35992213.97 -35992213.83 -35992213.66 0.0079 0.0061
 Pluto -103254-09-11 16:04 J -35991846.94 -35991846.83 -35991846.69 0.0078 0.0068
 Saturn -103250-01-23 16:18 J -35990616.87 -35990616.82 -35990616.78 0.0279 0.0273
 Saturn -103249-02-06 11:02 J -35990238.19 -35990238.04 -35990237.88 0.0276 0.0218

Uranus -103238-03-26 11:45 J -35986172.23 -35986172.01 -35986171.77 0.0142 0.0071
 Uranus -103237-03-30 17:45 J -35985802.02 -35985801.76 -35985801.49 0.0142 0.0019
 Mars -103236-01-13 13:26 J -35985513.14 -35985512.94 -35985512.75 0.1742 0.0167
 Uranus -103236-04-04 22:04 J -35985431.74 -35985431.58 -35985431.40 0.0141 0.0106
 Saturn -103235-07-31 18:57 J -35984948.78 -35984948.71 -35984948.61 0.0281 0.0261
 Saturn -103234-08-13 05:59 J -35984571.40 -35984571.25 -35984571.10 0.0283 0.0217
 Jupiter -103226-03-04 02:09 J -35981811.46 -35981811.41 -35981811.35 0.0494 0.0480
 Neptune -103223-02-03 22:04 J -35980743.74 -35980743.58 -35980743.41 0.0089 0.0069
 Neptune -103222-02-06 13:40 J -35980376.17 -35980375.93 -35980375.68 0.0089 0.0035
 Neptune -103221-02-09 05:59 J -35980008.52 -35980008.25 -35980007.98 0.0089 0.0001
 Saturn -103220-01-30 17:16 J -35979652.04 -35979651.78 -35979651.53 0.0277 0.0004
 Neptune -103220-02-10 21:50 J -35979640.83 -35979640.59 -35979640.33 0.0089 0.0033
 Neptune -103219-02-13 13:54 J -35979273.08 -35979272.92 -35979272.73 0.0089 0.0067
 Jupiter -103214-03-08 21:21 J -35977423.85 -35977423.61 -35977423.37 0.0495 0.0080
 Saturn -103205-08-06 23:16 J -35973984.77 -35973984.53 -35973984.29 0.0283 0.0002
 Jupiter -103202-03-13 17:30 J -35973035.94 -35973035.77 -35973035.58 0.0497 0.0330
 Jupiter -103197-09-07 07:11 J -35971031.41 -35971031.20 -35971030.97 0.0532 0.0094
 Uranus -103194-09-21 10:04 J -35969922.25 -35969922.08 -35969921.90 0.0136 0.0095
 Uranus -103193-09-24 13:54 J -35969553.16 -35969552.92 -35969552.68 0.0137 0.0022
 Uranus -103192-09-28 18:14 J -35969183.96 -35969183.74 -35969183.51 0.0137 0.0051
 Saturn -103191-01-25 00:42 J -35969065.61 -35969065.47 -35969065.30 0.0278 0.0217
 Uranus -103191-10-02 23:30 J -35968814.60 -35968814.52 -35968814.41 0.0138 0.0126
 Saturn -103190-02-07 18:57 J -35968686.73 -35968686.71 -35968686.65 0.0276 0.0272
 Jupiter -103185-09-11 18:57 J -35966643.88 -35966643.71 -35966643.54 0.0531 0.0346
 Saturn -103176-08-02 05:02 J -35963397.45 -35963397.29 -35963397.11 0.0281 0.0200
 Saturn -103175-08-14 16:33 J -35963019.85 -35963019.81 -35963019.76 0.0284 0.0278
 Saturn -103161-02-02 04:18 J -35958100.56 -35958100.32 -35958100.07 0.0277 0.0063
 Mars -103157-01-17 09:06 J -35956655.15 -35956655.12 -35956655.08 0.1746 0.1710
 Uranus -103154-03-26 19:40 J -35955490.90 -35955490.68 -35955490.44 0.0142 0.0068
 Uranus -103153-03-31 01:40 J -35955120.69 -35955120.43 -35955120.16 0.0142 0.0021

Uranus -103152-04-05 05:45 J -35954750.41 -35954750.26 -35954750.07 0.0141 0.0109
 Saturn -103146-08-09 09:35 J -35952433.33 -35952433.10 -35952432.86 0.0283 0.0061
 Neptune -103141-08-10 17:45 J -35950604.93 -35950604.76 -35950604.59 0.0088 0.0064
 Neptune -103140-08-13 01:11 J -35950237.68 -35950237.45 -35950237.21 0.0088 0.0033
 Neptune -103139-08-15 08:52 J -35949870.38 -35949870.13 -35949869.88 0.0088 0.0002
 Neptune -103138-08-17 16:04 J -35949503.05 -35949502.83 -35949502.59 0.0088 0.0030
 Neptune -103137-08-18 23:16 J -35949135.69 -35949135.53 -35949135.33 0.0088 0.0061
 Saturn -103132-01-26 12:28 J -35947514.18 -35947513.98 -35947513.76 0.0278 0.0155
 Jupiter -103131-03-08 00:42 J -35947108.70 -35947108.47 -35947108.24 0.0495 0.0138
 Jupiter -103119-03-12 18:57 J -35942720.91 -35942720.71 -35942720.50 0.0496 0.0262
 Saturn -103117-08-03 16:04 J -35941846.04 -35941845.83 -35941845.62 0.0282 0.0138
 Jupiter -103114-09-07 05:30 J -35940716.47 -35940716.27 -35940716.06 0.0533 0.0192
 Uranus -103110-09-21 20:52 J -35939240.80 -35939240.63 -35939240.44 0.0136 0.0091
 Uranus -103109-09-25 00:28 J -35938871.72 -35938871.48 -35938871.23 0.0137 0.0019
 Uranus -103108-09-29 04:47 J -35938502.51 -35938502.30 -35938502.06 0.0137 0.0055
 Uranus -103107-10-03 10:04 J -35938133.14 -35938133.08 -35938132.97 0.0138 0.0129
 Saturn -103102-02-03 18:13 J -35936548.96 -35936548.74 -35936548.51 0.0277 0.0126
 Jupiter -103102-09-11 23:59 J -35936328.69 -35936328.50 -35936328.30 0.0531 0.0272
 Pluto -103095-03-12 10:33 J -35933955.29 -35933955.06 -35933954.78 0.0066 0.0022
 Pluto -103094-03-14 03:35 J -35933588.43 -35933588.35 -35933588.23 0.0066 0.0062
 Saturn -103087-08-10 21:21 J -35930881.82 -35930881.61 -35930881.39 0.0283 0.0124
 Saturn -103073-01-29 01:54 J -35925962.65 -35925962.42 -35925962.17 0.0278 0.0091
 Uranus -103070-03-27 01:40 J -35924809.64 -35924809.43 -35924809.18 0.0142 0.0068
 Uranus -103069-03-31 07:54 J -35924439.42 -35924439.17 -35924438.90 0.0142 0.0023
 Uranus -103068-04-05 12:28 J -35924069.14 -35924068.98 -35924068.81 0.0141 0.0109
 Neptune -103059-02-03 03:21 J -35920843.42 -35920843.36 -35920843.27 0.0089 0.0085
 Neptune -103058-02-05 19:25 J -35920475.90 -35920475.69 -35920475.46 0.0089 0.0051
 Saturn -103058-08-06 03:21 J -35920294.59 -35920294.36 -35920294.13 0.0282 0.0074
 Neptune -103057-02-08 11:30 J -35920108.28 -35920108.02 -35920107.75 0.0089 0.0017
 Mars -103057-07-21 08:52 J -35919944.31 -35919944.13 -35919943.96 0.1786 0.0623

Neptune -103056-02-10 03:35 J -35919740.61 -35919740.35 -35919740.08 0.0089 0.0017
 Neptune -103055-02-12 19:40 J -35919372.90 -35919372.68 -35919372.46 0.0089 0.0051
 Neptune -103054-02-15 11:45 J -35919005.08 -35919005.01 -35919004.94 0.0089 0.0085
 Jupiter -103048-03-06 21:21 J -35916793.82 -35916793.61 -35916793.39 0.0494 0.0225
 Saturn -103043-02-05 09:35 J -35914997.28 -35914997.10 -35914996.92 0.0276 0.0192
 Jupiter -103036-03-11 16:18 J -35912406.04 -35912405.82 -35912405.59 0.0496 0.0177
 Mars -103031-01-11 03:49 J -35910639.49 -35910639.34 -35910639.19 0.1731 0.1113
 Jupiter -103031-09-06 10:18 J -35910401.26 -35910401.07 -35910400.88 0.0533 0.0269
 Saturn -103028-08-12 08:52 J -35909330.31 -35909330.13 -35909329.95 0.0283 0.0187
 Uranus -103026-09-22 07:25 J -35908559.37 -35908559.19 -35908559.00 0.0136 0.0088
 Uranus -103025-09-25 11:01 J -35908190.28 -35908190.04 -35908189.79 0.0137 0.0016
 Uranus -103024-09-29 15:35 J -35907821.07 -35907820.85 -35907820.63 0.0137 0.0057
 Uranus -103023-10-03 20:37 J -35907451.70 -35907451.64 -35907451.55 0.0138 0.0131
 Jupiter -103019-09-11 01:25 J -35906013.65 -35906013.44 -35906013.23 0.0531 0.0182
 Saturn -103014-01-30 16:33 J -35904411.06 -35904410.81 -35904410.55 0.0277 0.0025
 Pluto -103009-09-11 03:49 J -35902360.54 -35902360.34 -35902360.11 0.0079 0.0039

103RD MILLENNIUM BCE

This is a list of transits of Earth in the 103rd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Saturn -102999-08-07 14:09 J -35898743.15 -35898742.91 -35898742.68 0.0282 0.0012

Uranus -102986-03-27 09:06 J -35894128.35 -35894128.12 -35894127.88 0.0142 0.0065
 Saturn -102985-01-25 06:57 J -35893824.35 -35893824.21 -35893824.05 0.0279 0.0226
 Uranus -102985-03-31 15:06 J -35893758.13 -35893757.87 -35893757.60 0.0142 0.0024
 Saturn -102984-02-07 00:42 J -35893445.55 -35893445.47 -35893445.37 0.0276 0.0257
 Uranus -102984-04-05 19:11 J -35893387.85 -35893387.70 -35893387.53 0.0141 0.0111
 Mars -102978-07-24 21:49 J -35891086.75 -35891086.59 -35891086.42 0.1782 0.0768
 Neptune -102977-08-10 07:11 J -35890704.31 -35890704.20 -35890704.08 0.0088 0.0078
 Neptune -102976-08-12 14:52 J -35890337.09 -35890336.88 -35890336.67 0.0088 0.0047
 Neptune -102975-08-14 22:18 J -35889969.81 -35889969.57 -35889969.32 0.0088 0.0016
 Neptune -102974-08-17 05:45 J -35889602.50 -35889602.26 -35889602.01 0.0088 0.0015
 Neptune -102973-08-18 12:57 J -35889235.16 -35889234.96 -35889234.74 0.0088 0.0047
 Neptune -102972-08-20 20:09 J -35888867.76 -35888867.66 -35888867.52 0.0088 0.0078
 Saturn -102970-08-02 07:40 J -35888156.31 -35888156.18 -35888156.02 0.0281 0.0225
 Saturn -102969-08-13 19:25 J -35887778.80 -35887778.69 -35887778.58 0.0284 0.0248
 Jupiter -102965-03-05 22:47 J -35886478.74 -35886478.55 -35886478.35 0.0494 0.0292
 Saturn -102955-02-01 06:13 J -35882859.49 -35882859.24 -35882858.98 0.0277 0.0039
 Jupiter -102953-03-10 19:11 J -35882090.93 -35882090.70 -35882090.46 0.0496 0.0115
 Mars -102952-01-13 20:52 J -35881781.82 -35881781.63 -35881781.43 0.1735 0.0337
 Jupiter -102948-09-05 07:25 J -35880086.35 -35880086.19 -35880086.03 0.0533 0.0375
 Uranus -102942-09-22 17:59 J -35877877.93 -35877877.75 -35877877.55 0.0136 0.0085
 Uranus -102941-09-25 21:35 J -35877508.83 -35877508.60 -35877508.35 0.0137 0.0014
 Saturn -102940-08-08 22:33 J -35877191.79 -35877191.56 -35877191.32 0.0283 0.0048
 Uranus -102940-09-30 01:54 J -35877139.63 -35877139.42 -35877139.19 0.0137 0.0060
 Uranus -102939-10-04 07:40 J -35876770.24 -35876770.18 -35876770.12 0.0138 0.0133
 Jupiter -102936-09-09 23:30 J -35875698.74 -35875698.52 -35875698.30 0.0532 0.0080
 Saturn -102926-01-26 21:06 J -35872272.82 -35872272.62 -35872272.41 0.0279 0.0160
 Saturn -102911-08-03 16:18 J -35866605.01 -35866604.82 -35866604.63 0.0281 0.0167
 Uranus -102902-03-27 16:33 J -35863447.04 -35863446.81 -35863446.56 0.0142 0.0064
 Uranus -102901-03-31 22:18 J -35863076.83 -35863076.57 -35863076.30 0.0142 0.0025
 Uranus -102900-04-06 02:23 J -35862706.55 -35862706.40 -35862706.23 0.0141 0.0111

Saturn -102896-02-02 18:13 J -35861307.97 -35861307.74 -35861307.50 0.0277 0.0101
 Neptune -102894-02-05 01:25 J -35860575.59 -35860575.44 -35860575.24 0.0089 0.0067
 Neptune -102893-02-07 17:45 J -35860207.99 -35860207.76 -35860207.49 0.0089 0.0033
 Neptune -102892-02-09 10:04 J -35859840.34 -35859840.08 -35859839.81 0.0089 0.0002
 Neptune -102891-02-12 01:54 J -35859472.65 -35859472.42 -35859472.16 0.0089 0.0036
 Neptune -102890-02-14 17:59 J -35859104.89 -35859104.75 -35859104.57 0.0089 0.0070
 Jupiter -102882-03-06 01:54 J -35856163.59 -35856163.42 -35856163.25 0.0494 0.0355
 Saturn -102881-08-10 05:01 J -35855640.51 -35855640.29 -35855640.06 0.0283 0.0103
 Jupiter -102870-03-10 16:18 J -35851776.06 -35851775.82 -35851775.58 0.0495 0.0029
 Saturn -102867-01-28 08:37 J -35850721.37 -35850721.14 -35850720.90 0.0278 0.0100
 Jupiter -102865-09-04 12:28 J -35849771.09 -35849770.98 -35849770.86 0.0534 0.0451
 Jupiter -102858-03-15 11:59 J -35847388.11 -35847388.00 -35847387.88 0.0496 0.0433
 Uranus -102858-09-23 04:04 J -35847196.51 -35847196.33 -35847196.12 0.0136 0.0083
 Uranus -102857-09-26 08:09 J -35846827.40 -35846827.16 -35846826.91 0.0137 0.0011
 Uranus -102856-09-30 12:28 J -35846458.19 -35846457.98 -35846457.75 0.0137 0.0062
 Uranus -102855-10-04 17:59 J -35846088.79 -35846088.75 -35846088.70 0.0138 0.0135
 Jupiter -102853-09-09 07:11 J -35845383.42 -35845383.20 -35845382.98 0.0533 0.0016
 Saturn -102852-08-04 22:33 J -35845053.78 -35845053.56 -35845053.34 0.0281 0.0113
 Pluto -102849-03-13 13:11 J -35844102.20 -35844101.95 -35844101.69 0.0066 0.0023
 Pluto -102848-03-15 05:59 J -35843735.36 -35843735.25 -35843735.13 0.0066 0.0060
 Jupiter -102841-09-13 22:47 J -35840995.64 -35840995.55 -35840995.43 0.0531 0.0467
 Saturn -102837-02-05 03:49 J -35839756.55 -35839756.34 -35839756.13 0.0277 0.0157
 Saturn -102822-08-12 08:52 J -35834089.32 -35834089.13 -35834088.93 0.0283 0.0154
 Uranus -102818-03-28 01:40 J -35832765.66 -35832765.43 -35832765.18 0.0142 0.0060
 Uranus -102817-04-01 07:11 J -35832395.45 -35832395.20 -35832394.93 0.0142 0.0028
 Uranus -102816-04-06 11:01 J -35832025.18 -35832025.04 -35832024.87 0.0141 0.0114
 Neptune -102812-08-12 05:01 J -35830436.45 -35830436.29 -35830436.09 0.0088 0.0061
 Neptune -102811-08-14 12:42 J -35830069.19 -35830068.97 -35830068.72 0.0088 0.0030
 Neptune -102810-08-16 20:37 J -35829701.89 -35829701.64 -35829701.39 0.0088 0.0002
 Neptune -102809-08-18 03:49 J -35829334.57 -35829334.34 -35829334.11 0.0088 0.0033

Saturn -102808-01-29 17:30 J -35829170.02 -35829169.77 -35829169.52 0.0278 0.0044
 Neptune -102808-08-20 11:01 J -35828967.20 -35828967.04 -35828966.86 0.0088 0.0064
 Jupiter -102799-03-05 02:09 J -35825848.52 -35825848.41 -35825848.28 0.0493 0.0427
 Saturn -102793-08-06 02:37 J -35823502.62 -35823502.39 -35823502.16 0.0281 0.0063
 Jupiter -102787-03-09 21:21 J -35821460.85 -35821460.61 -35821460.37 0.0495 0.0027
 Jupiter -102782-09-04 20:09 J -35819455.71 -35819455.66 -35819455.60 0.0534 0.0514
 Saturn -102779-01-23 14:52 J -35818583.93 -35818583.88 -35818583.84 0.0280 0.0274
 Saturn -102778-02-06 10:04 J -35818205.23 -35818205.08 -35818204.90 0.0277 0.0209
 Jupiter -102775-03-14 18:13 J -35817072.89 -35817072.74 -35817072.59 0.0496 0.0382
 Uranus -102774-09-23 14:23 J -35816515.09 -35816514.90 -35816514.70 0.0136 0.0079
 Mars -102773-07-21 22:18 J -35816212.75 -35816212.57 -35816212.39 0.1793 0.0420
 Uranus -102773-09-26 18:13 J -35816145.99 -35816145.74 -35816145.50 0.0137 0.0009
 Uranus -102772-09-30 22:33 J -35815776.78 -35815776.56 -35815776.34 0.0137 0.0064
 Uranus -102771-10-05 04:04 J -35815407.34 -35815407.33 -35815407.30 0.0138 0.0137
 Jupiter -102770-09-09 10:04 J -35815068.30 -35815068.08 -35815067.86 0.0533 0.0068
 Saturn -102764-07-31 23:45 J -35812915.58 -35812915.51 -35812915.43 0.0280 0.0265
 Saturn -102763-08-13 10:33 J -35812538.22 -35812538.06 -35812537.89 0.0283 0.0200
 Pluto -102763-09-13 08:23 J -35812507.35 -35812507.15 -35812506.92 0.0079 0.0041
 Jupiter -102758-09-14 01:54 J -35810680.57 -35810680.42 -35810680.26 0.0531 0.0384
 Saturn -102749-01-31 22:47 J -35807618.81 -35807618.55 -35807618.30 0.0278 0.0006
 Mars -102747-01-11 13:54 J -35806908.09 -35806907.92 -35806907.75 0.1725 0.0869
 Uranus -102734-03-28 10:04 J -35802084.31 -35802084.08 -35802083.82 0.0142 0.0058
 Saturn -102734-08-08 04:18 J -35801951.56 -35801951.32 -35801951.09 0.0281 0.0017
 Uranus -102733-04-01 15:35 J -35801714.10 -35801713.85 -35801713.58 0.0142 0.0030
 Uranus -102732-04-06 19:25 J -35801343.82 -35801343.69 -35801343.52 0.0141 0.0116
 Neptune -102730-02-04 08:37 J -35800675.22 -35800675.14 -35800675.02 0.0089 0.0082
 Neptune -102729-02-07 00:42 J -35800307.68 -35800307.47 -35800307.23 0.0089 0.0048
 Neptune -102728-02-08 16:47 J -35799940.06 -35799939.80 -35799939.53 0.0089 0.0014
 Neptune -102727-02-11 08:52 J -35799572.39 -35799572.13 -35799571.87 0.0089 0.0020
 Neptune -102726-02-14 00:42 J -35799204.66 -35799204.47 -35799204.24 0.0089 0.0055

Saturn -102720-01-24 18:28 J -35797032.87 -35797032.73 -35797032.57 0.0280 0.0226
 Saturn -102719-02-07 13:54 J -35796654.00 -35796653.92 -35796653.81 0.0277 0.0256
 Jupiter -102716-03-04 09:49 J -35795533.15 -35795533.09 -35795533.02 0.0493 0.0472
 Saturn -102705-08-01 23:45 J -35791364.65 -35791364.51 -35791364.36 0.0280 0.0222
 Jupiter -102704-03-09 04:33 J -35791145.55 -35791145.31 -35791145.07 0.0494 0.0075
 Saturn -102704-08-14 10:18 J -35790987.18 -35790987.07 -35790986.94 0.0283 0.0243
 Mars -102694-07-25 12:42 J -35787355.12 -35787354.97 -35787354.81 0.1788 0.0992
 Jupiter -102692-03-13 20:37 J -35786757.82 -35786757.64 -35786757.45 0.0495 0.0316
 Saturn -102690-02-02 00:57 J -35786067.71 -35786067.46 -35786067.21 0.0278 0.0050
 Uranus -102690-09-23 23:16 J -35785833.72 -35785833.53 -35785833.32 0.0136 0.0077
 Uranus -102689-09-27 03:06 J -35785464.61 -35785464.37 -35785464.12 0.0137 0.0007
 Uranus -102688-10-01 07:40 J -35785095.39 -35785095.18 -35785094.96 0.0137 0.0066
 Jupiter -102687-09-08 17:45 J -35784752.97 -35784752.76 -35784752.54 0.0534 0.0131
 Saturn -102675-08-09 04:47 J -35780400.53 -35780400.30 -35780400.06 0.0281 0.0028
 Jupiter -102675-09-13 12:42 J -35780365.14 -35780364.97 -35780364.79 0.0532 0.0336
 Mars -102668-01-14 06:13 J -35778050.43 -35778050.24 -35778050.06 0.1729 0.0526
 Saturn -102661-01-26 19:40 J -35775481.86 -35775481.68 -35775481.48 0.0280 0.0182
 Uranus -102651-03-23 10:33 J -35771773.06 -35771773.06 -35771773.04 0.0143 0.0143
 Uranus -102650-03-28 17:30 J -35771403.01 -35771402.77 -35771402.52 0.0142 0.0055
 Uranus -102649-04-01 22:47 J -35771032.80 -35771032.55 -35771032.28 0.0142 0.0033
 Uranus -102648-04-07 02:52 J -35770662.50 -35770662.38 -35770662.22 0.0141 0.0118
 Neptune -102648-08-11 19:54 J -35770535.79 -35770535.67 -35770535.51 0.0088 0.0074
 Neptune -102647-08-14 03:35 J -35770168.55 -35770168.35 -35770168.12 0.0088 0.0043
 Saturn -102646-08-03 22:33 J -35769813.73 -35769813.56 -35769813.37 0.0280 0.0181
 Neptune -102646-08-16 11:16 J -35769801.27 -35769801.03 -35769800.78 0.0088 0.0012
 Saturn -102645-08-15 08:37 J -35769436.14 -35769436.14 -35769436.11 0.0283 0.0282
 Neptune -102645-08-17 18:57 J -35769433.95 -35769433.71 -35769433.47 0.0088 0.0020
 Neptune -102644-08-20 02:09 J -35769066.61 -35769066.41 -35769066.20 0.0088 0.0051
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 Saturn -102631-02-03 00:57 J -35764516.70 -35764516.46 -35764516.22 0.0278 0.0091

Jupiter -102621-03-08 09:49 J -35760830.33 -35760830.09 -35760829.86 0.0494 0.0128
 Saturn -102616-08-10 04:47 J -35758849.53 -35758849.30 -35758849.07 0.0281 0.0069
 Jupiter -102609-03-13 04:47 J -35756442.50 -35756442.30 -35756442.10 0.0495 0.0271
 Uranus -102606-09-24 08:23 J -35755152.35 -35755152.15 -35755151.94 0.0136 0.0074
 Uranus -102605-09-27 12:13 J -35754783.23 -35754782.99 -35754782.74 0.0137 0.0004
 Jupiter -102604-09-08 05:30 J -35754437.48 -35754437.27 -35754437.06 0.0534 0.0176
 Uranus -102604-10-01 16:47 J -35754414.01 -35754413.80 -35754413.59 0.0137 0.0068
 Pluto -102603-03-15 14:52 J -35754249.11 -35754248.88 -35754248.61 0.0066 0.0026
 Saturn -102602-01-27 19:25 J -35753930.90 -35753930.69 -35753930.47 0.0280 0.0140
 Pluto -102602-03-17 07:54 J -35753882.29 -35753882.17 -35753882.03 0.0066 0.0058
 Jupiter -102592-09-12 20:37 J -35750049.82 -35750049.64 -35750049.44 0.0532 0.0274
 Saturn -102587-08-04 22:04 J -35748262.78 -35748262.58 -35748262.37 0.0280 0.0139
 Saturn -102572-02-03 23:45 J -35742965.73 -35742965.51 -35742965.29 0.0278 0.0130
 Mars -102568-07-19 17:59 J -35741338.79 -35741338.75 -35741338.70 0.1804 0.1741
 Uranus -102567-03-23 16:33 J -35741091.85 -35741091.81 -35741091.78 0.0143 0.0141
 Uranus -102566-03-28 23:01 J -35740721.77 -35740721.54 -35740721.28 0.0142 0.0054
 Neptune -102565-02-06 08:09 J -35740407.32 -35740407.16 -35740406.95 0.0089 0.0063
 Uranus -102565-04-02 04:33 J -35740351.56 -35740351.31 -35740351.04 0.0142 0.0034
 Neptune -102564-02-08 00:13 J -35740039.72 -35740039.49 -35740039.22 0.0089 0.0029
 Uranus -102564-04-07 08:37 J -35739981.25 -35739981.14 -35739980.97 0.0141 0.0119
 Neptune -102563-02-10 16:47 J -35739672.07 -35739671.80 -35739671.53 0.0089 0.0006
 Neptune -102562-02-13 08:37 J -35739304.37 -35739304.14 -35739303.89 0.0089 0.0040
 Neptune -102561-02-16 00:28 J -35738936.60 -35738936.48 -35738936.31 0.0089 0.0074
 Saturn -102557-08-11 04:47 J -35737298.51 -35737298.30 -35737298.07 0.0281 0.0111
 Saturn -102543-01-28 18:42 J -35732379.95 -35732379.72 -35732379.48 0.0280 0.0100
 Jupiter -102538-03-08 18:42 J -35730514.95 -35730514.72 -35730514.49 0.0494 0.0169
 Saturn -102528-08-05 21:35 J -35726711.82 -35726711.60 -35726711.38 0.0280 0.0097
 Jupiter -102526-03-13 14:09 J -35726127.12 -35726126.91 -35726126.69 0.0495 0.0232
 Uranus -102522-09-24 17:01 J -35724470.98 -35724470.79 -35724470.57 0.0136 0.0073
 Jupiter -102521-09-07 11:45 J -35724122.21 -35724122.01 -35724121.81 0.0534 0.0246

Uranus -102521-09-27 21:06 J -35724101.86 -35724101.62 -35724101.37 0.0137 0.0002
 Uranus -102520-10-02 01:25 J -35723732.64 -35723732.44 -35723732.22 0.0137 0.0070
 Pluto -102517-09-14 13:25 J -35722654.13 -35722653.94 -35722653.71 0.0079 0.0042
 Saturn -102513-02-05 22:33 J -35721414.76 -35721414.56 -35721414.36 0.0278 0.0168
 Jupiter -102509-09-12 03:06 J -35719734.57 -35719734.37 -35719734.16 0.0533 0.0208
 Saturn -102498-08-13 06:13 J -35715747.43 -35715747.24 -35715747.03 0.0281 0.0155
 Mars -102489-07-22 10:04 J -35712481.27 -35712481.08 -35712480.90 0.1799 0.0249
 Saturn -102484-01-29 18:28 J -35710828.97 -35710828.73 -35710828.48 0.0280 0.0059
 Neptune -102484-08-11 11:16 J -35710635.06 -35710635.03 -35710634.97 0.0088 0.0087
 Uranus -102483-03-23 21:06 J -35710410.64 -35710410.62 -35710410.55 0.0143 0.0141
 Neptune -102483-08-13 18:57 J -35710267.89 -35710267.71 -35710267.50 0.0088 0.0056
 Uranus -102482-03-29 04:33 J -35710040.56 -35710040.31 -35710040.06 0.0142 0.0053
 Neptune -102482-08-16 02:37 J -35709900.62 -35709900.39 -35709900.14 0.0088 0.0025
 Uranus -102481-04-02 10:04 J -35709670.33 -35709670.08 -35709669.82 0.0142 0.0034
 Neptune -102481-08-17 10:18 J -35709533.32 -35709533.07 -35709532.82 0.0088 0.0007
 Uranus -102480-04-07 14:23 J -35709300.02 -35709299.90 -35709299.74 0.0141 0.0119
 Neptune -102480-08-19 17:30 J -35709165.98 -35709165.77 -35709165.54 0.0088 0.0038
 Neptune -102479-08-22 00:42 J -35708798.61 -35708798.47 -35708798.30 0.0088 0.0069
 Saturn -102469-08-06 22:47 J -35705160.78 -35705160.55 -35705160.31 0.0280 0.0054
 Mars -102463-01-12 00:57 J -35703176.64 -35703176.46 -35703176.28 0.1718 0.0617
 Saturn -102455-01-23 23:30 J -35700242.55 -35700242.52 -35700242.46 0.0281 0.0276
 Jupiter -102455-03-08 01:54 J -35700199.63 -35700199.42 -35700199.19 0.0493 0.0212
 Saturn -102454-02-06 21:49 J -35699863.76 -35699863.59 -35699863.42 0.0278 0.0207
 Jupiter -102443-03-12 20:23 J -35695811.87 -35695811.65 -35695811.42 0.0494 0.0182
 Saturn -102440-08-02 01:11 J -35694573.54 -35694573.45 -35694573.33 0.0278 0.0249
 Saturn -102439-08-14 09:06 J -35694196.28 -35694196.12 -35694195.95 0.0281 0.0200
 Jupiter -102438-09-07 17:59 J -35693806.93 -35693806.75 -35693806.56 0.0535 0.0310
 Uranus -102438-09-25 02:09 J -35693789.60 -35693789.41 -35693789.18 0.0136 0.0071
 Uranus -102437-09-28 06:28 J -35693420.48 -35693420.23 -35693419.99 0.0137 0.0001
 Uranus -102436-10-02 10:33 J -35693051.26 -35693051.06 -35693050.84 0.0137 0.0071

Jupiter -102426-09-12 13:54 J -35689419.13 -35689418.92 -35689418.71 0.0534 0.0159
 Saturn -102425-01-31 20:09 J -35689277.92 -35689277.66 -35689277.41 0.0280 0.0015
 Mars -102410-07-26 01:11 J -35683623.60 -35683623.45 -35683623.31 0.1795 0.1182
 Saturn -102410-08-09 02:09 J -35683609.65 -35683609.41 -35683609.17 0.0280 0.0007
 Neptune -102401-02-05 16:04 J -35680506.93 -35680506.83 -35680506.67 0.0089 0.0078
 Neptune -102400-02-07 08:23 J -35680139.38 -35680139.15 -35680138.92 0.0089 0.0044
 Neptune -102399-02-10 00:28 J -35679771.75 -35679771.48 -35679771.22 0.0089 0.0009
 Uranus -102399-03-24 03:21 J -35679729.41 -35679729.36 -35679729.30 0.0143 0.0139
 Neptune -102398-02-12 16:04 J -35679404.07 -35679403.83 -35679403.56 0.0089 0.0025
 Uranus -102398-03-29 10:18 J -35679359.31 -35679359.07 -35679358.81 0.0142 0.0052
 Neptune -102397-02-15 08:09 J -35679036.35 -35679036.16 -35679035.95 0.0089 0.0059
 Uranus -102397-04-02 16:04 J -35678989.08 -35678988.83 -35678988.57 0.0142 0.0035
 Saturn -102396-01-25 00:57 J -35678691.59 -35678691.46 -35678691.31 0.0281 0.0232
 Uranus -102396-04-07 20:37 J -35678618.76 -35678618.64 -35678618.49 0.0141 0.0119
 Saturn -102395-02-07 22:47 J -35678312.65 -35678312.55 -35678312.43 0.0278 0.0249
 Mars -102384-01-14 15:21 J -35674319.04 -35674318.86 -35674318.68 0.1722 0.0716
 Saturn -102381-08-03 06:13 J -35673022.40 -35673022.24 -35673022.07 0.0279 0.0200
 Saturn -102380-08-15 14:09 J -35672645.01 -35672644.91 -35672644.80 0.0281 0.0249
 Jupiter -102372-03-07 06:57 J -35669884.41 -35669884.21 -35669884.00 0.0492 0.0266
 Saturn -102366-02-01 23:59 J -35667726.75 -35667726.50 -35667726.24 0.0279 0.0033
 Jupiter -102360-03-12 01:25 J -35665496.68 -35665496.44 -35665496.20 0.0494 0.0128
 Pluto -102357-03-16 16:04 J -35664396.05 -35664395.83 -35664395.57 0.0066 0.0031
 Pluto -102356-03-18 08:37 J -35664029.26 -35664029.14 -35664028.94 0.0066 0.0054
 Jupiter -102355-09-07 01:11 J -35663491.60 -35663491.45 -35663491.28 0.0535 0.0375
 Uranus -102354-09-25 11:30 J -35663108.22 -35663108.02 -35663107.79 0.0136 0.0069
 Uranus -102353-09-28 15:35 J -35662739.09 -35662738.85 -35662738.61 0.0137 0.0002
 Uranus -102352-10-02 19:54 J -35662369.87 -35662369.67 -35662369.45 0.0137 0.0072
 Saturn -102351-08-10 07:25 J -35662058.42 -35662058.19 -35662057.95 0.0280 0.0043
 Jupiter -102343-09-11 17:59 J -35659103.97 -35659103.75 -35659103.53 0.0534 0.0082
 Saturn -102337-01-27 05:16 J -35657140.46 -35657140.28 -35657140.08 0.0280 0.0183

Jupiter -102331-09-16 06:42 J -35654716.26 -35654716.22 -35654716.18 0.0533 0.0522
 Saturn -102322-08-05 13:11 J -35651471.15 -35651470.95 -35651470.74 0.0279 0.0147
 Neptune -102319-08-13 10:18 J -35650367.22 -35650367.07 -35650366.90 0.0088 0.0069
 Neptune -102318-08-15 17:59 J -35649999.96 -35649999.75 -35649999.51 0.0088 0.0038
 Neptune -102317-08-17 01:54 J -35649632.66 -35649632.42 -35649632.17 0.0088 0.0006
 Neptune -102316-08-19 09:21 J -35649265.34 -35649265.11 -35649264.87 0.0088 0.0025
 Uranus -102315-03-24 10:33 J -35649048.12 -35649048.06 -35649047.97 0.0143 0.0137
 Neptune -102315-08-21 16:47 J -35648897.99 -35648897.80 -35648897.60 0.0088 0.0056
 Uranus -102314-03-29 17:16 J -35648678.01 -35648677.78 -35648677.51 0.0142 0.0051
 Neptune -102314-08-23 23:59 J -35648530.53 -35648530.50 -35648530.44 0.0088 0.0087
 Uranus -102313-04-02 23:16 J -35648307.78 -35648307.53 -35648307.26 0.0142 0.0037
 Uranus -102312-04-08 04:04 J -35647937.45 -35647937.33 -35647937.18 0.0141 0.0120
 Saturn -102307-02-03 07:11 J -35646175.44 -35646175.20 -35646174.95 0.0279 0.0084
 Saturn -102292-08-11 15:21 J -35640507.09 -35640506.86 -35640506.64 0.0281 0.0097
 Jupiter -102289-03-06 11:59 J -35639569.17 -35639569.00 -35639568.81 0.0492 0.0319
 Mars -102284-07-20 01:54 J -35637607.49 -35637607.42 -35637607.34 0.1811 0.1646
 Saturn -102278-01-28 12:42 J -35635589.19 -35635588.97 -35635588.74 0.0280 0.0130
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 Jupiter -102272-09-05 23:16 J -35633176.62 -35633176.53 -35633176.42 0.0536 0.0474
 Pluto -102271-09-16 14:37 J -35632801.05 -35632800.89 -35632800.68 0.0079 0.0053
 Uranus -102271-09-21 17:59 J -35632795.77 -35632795.75 -35632795.70 0.0136 0.0134
 Pluto -102270-09-18 14:23 J -35632433.93 -35632433.90 -35632433.82 0.0078 0.0077
 Uranus -102270-09-25 20:52 J -35632426.83 -35632426.63 -35632426.40 0.0136 0.0066
 Uranus -102269-09-29 00:57 J -35632057.71 -35632057.46 -35632057.22 0.0137 0.0003
 Uranus -102268-10-03 05:16 J -35631688.48 -35631688.28 -35631688.07 0.0137 0.0074
 Jupiter -102265-03-16 00:13 J -35630793.56 -35630793.49 -35630793.41 0.0495 0.0469
 Saturn -102263-08-06 21:49 J -35629919.81 -35629919.59 -35629919.36 0.0279 0.0091
 Jupiter -102260-09-10 17:45 J -35628788.99 -35628788.76 -35628788.54 0.0535 0.0009
 Mars -102258-01-09 21:49 J -35628302.64 -35628302.59 -35628302.54 0.1708 0.1643
 Saturn -102248-02-04 17:30 J -35624623.99 -35624623.77 -35624623.56 0.0279 0.0140

Jupiter -102248-09-15 13:11 J -35624401.06 -35624400.95 -35624400.83 0.0533 0.0455
 Neptune -102236-02-06 16:47 J -35620238.98 -35620238.80 -35620238.58 0.0089 0.0058
 Neptune -102235-02-09 08:37 J -35619871.39 -35619871.14 -35619870.88 0.0089 0.0024
 Neptune -102234-02-12 00:28 J -35619503.74 -35619503.48 -35619503.21 0.0089 0.0010
 Neptune -102233-02-14 16:18 J -35619136.05 -35619135.82 -35619135.58 0.0089 0.0044
 Saturn -102233-08-13 00:28 J -35618955.67 -35618955.48 -35618955.28 0.0281 0.0153
 Neptune -102232-02-16 08:37 J -35618768.26 -35618768.14 -35618768.02 0.0089 0.0079
 Uranus -102231-03-24 18:42 J -35618366.78 -35618366.72 -35618366.60 0.0143 0.0134
 Uranus -102230-03-30 02:23 J -35617996.65 -35617996.40 -35617996.15 0.0142 0.0047
 Uranus -102229-04-03 07:54 J -35617626.41 -35617626.17 -35617625.91 0.0142 0.0039
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 Saturn -102219-01-29 23:30 J -35614037.76 -35614037.52 -35614037.27 0.0280 0.0073
 Jupiter -102206-03-06 15:35 J -35609254.00 -35609253.85 -35609253.69 0.0492 0.0376
 Mars -102205-07-22 19:54 J -35608749.86 -35608749.67 -35608749.48 0.1806 0.0106
 Saturn -102204-08-08 07:54 J -35608368.41 -35608368.17 -35608367.94 0.0280 0.0033
 Jupiter -102194-03-11 05:16 J -35604866.52 -35604866.28 -35604866.03 0.0493 0.0005
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 Saturn -102189-02-07 05:59 J -35603072.41 -35603072.25 -35603072.07 0.0279 0.0201
 Uranus -102187-09-22 02:23 J -35602114.43 -35602114.40 -35602114.32 0.0136 0.0132
 Uranus -102186-09-26 05:30 J -35601745.47 -35601745.27 -35601745.04 0.0136 0.0065
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 Uranus -102184-10-03 13:54 J -35601007.13 -35601006.92 -35601006.72 0.0137 0.0075
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 Mars -102179-01-12 12:28 J -35599445.17 -35599444.98 -35599444.79 0.1712 0.0365
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 Saturn -102175-08-03 02:52 J -35597781.51 -35597781.38 -35597781.25 0.0279 0.0233
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 Saturn -102160-01-31 12:28 J -35592486.23 -35592485.98 -35592485.73 0.0279 0.0012
 Neptune -102155-08-13 00:57 J -35590466.54 -35590466.46 -35590466.36 0.0088 0.0082

Neptune -102154-08-15 09:06 J -35590099.32 -35590099.12 -35590098.91 0.0088 0.0051
 Neptune -102153-08-16 16:47 J -35589732.04 -35589731.80 -35589731.55 0.0088 0.0020
 Neptune -102152-08-19 00:28 J -35589364.72 -35589364.48 -35589364.23 0.0088 0.0012
 Neptune -102151-08-21 08:09 J -35588997.37 -35588997.16 -35588996.94 0.0088 0.0043
 Neptune -102150-08-23 15:21 J -35588629.98 -35588629.86 -35588629.71 0.0088 0.0074
 Uranus -102147-03-25 03:21 J -35587685.45 -35587685.36 -35587685.23 0.0143 0.0130
 Uranus -102146-03-30 10:33 J -35587315.30 -35587315.06 -35587314.80 0.0142 0.0044
 Uranus -102145-04-03 16:33 J -35586945.06 -35586944.81 -35586944.55 0.0142 0.0042
 Saturn -102145-08-09 17:59 J -35586816.99 -35586816.75 -35586816.51 0.0280 0.0026
 Uranus -102144-04-08 20:52 J -35586574.73 -35586574.63 -35586574.49 0.0141 0.0125
 Saturn -102131-01-26 00:42 J -35581899.62 -35581899.47 -35581899.29 0.0281 0.0209
 Saturn -102130-02-08 21:06 J -35581520.69 -35581520.62 -35581520.53 0.0278 0.0263
 Mars -102126-07-26 11:45 J -35579892.13 -35579892.01 -35579891.88 0.1802 0.1348
 Jupiter -102123-03-05 13:40 J -35578939.01 -35578938.93 -35578938.83 0.0491 0.0454
 Saturn -102116-08-04 13:11 J -35576230.13 -35576229.95 -35576229.75 0.0279 0.0175
 Saturn -102115-08-16 22:18 J -35575852.63 -35575852.57 -35575852.51 0.0282 0.0270
 Jupiter -102111-03-10 07:11 J -35574551.44 -35574551.20 -35574550.96 0.0493 0.0067
 Pluto -102111-03-18 18:28 J -35574542.96 -35574542.73 -35574542.49 0.0066 0.0032
 Pluto -102110-03-20 11:01 J -35574176.18 -35574176.04 -35574175.84 0.0066 0.0052
 Uranus -102103-09-22 11:45 J -35571433.08 -35571433.01 -35571432.94 0.0136 0.0129
 Uranus -102102-09-26 14:09 J -35571064.12 -35571063.91 -35571063.68 0.0136 0.0062
 Saturn -102101-02-03 02:37 J -35570934.64 -35570934.39 -35570934.14 0.0279 0.0051
 Uranus -102101-09-29 17:59 J -35570695.00 -35570694.75 -35570694.51 0.0137 0.0006
 Mars -102100-01-15 02:09 J -35570587.58 -35570587.41 -35570587.25 0.1716 0.0923
 Uranus -102100-10-03 21:49 J -35570325.77 -35570325.59 -35570325.37 0.0137 0.0077
 Jupiter -102099-03-15 02:23 J -35570163.58 -35570163.40 -35570163.22 0.0494 0.0331
 Jupiter -102094-09-09 18:28 J -35568158.94 -35568158.73 -35568158.52 0.0535 0.0193
 Saturn -102086-08-12 04:18 J -35565265.55 -35565265.32 -35565265.09 0.0281 0.0084
 Jupiter -102082-09-14 11:30 J -35563771.21 -35563771.02 -35563770.83 0.0534 0.0262
 Saturn -102072-01-27 16:33 J -35560348.02 -35560347.81 -35560347.59 0.0280 0.0143

Neptune -102072-02-06 01:25 J -35560338.59 -35560338.44 -35560338.28 0.0089 0.0073
 Neptune -102071-02-08 17:01 J -35559971.02 -35559970.79 -35559970.54 0.0089 0.0039
 Neptune -102070-02-11 08:37 J -35559603.40 -35559603.14 -35559602.87 0.0089 0.0005
 Neptune -102069-02-14 00:13 J -35559235.72 -35559235.49 -35559235.22 0.0089 0.0030
 Neptune -102068-02-15 16:04 J -35558868.00 -35558867.83 -35558867.63 0.0089 0.0064
 Uranus -102063-03-25 10:18 J -35557004.16 -35557004.07 -35557003.92 0.0143 0.0127
 Uranus -102062-03-30 17:59 J -35556634.00 -35556633.75 -35556633.49 0.0142 0.0041
 Uranus -102061-04-03 23:59 J -35556263.75 -35556263.50 -35556263.25 0.0142 0.0044
 Uranus -102060-04-09 04:18 J -35555893.41 -35555893.32 -35555893.19 0.0141 0.0127
 Saturn -102057-08-05 23:16 J -35554678.74 -35554678.53 -35554678.31 0.0279 0.0117
 Saturn -102042-02-04 17:01 J -35549383.02 -35549382.79 -35549382.56 0.0279 0.0114
 Jupiter -102028-03-09 09:21 J -35544236.34 -35544236.11 -35544235.87 0.0492 0.0131
 Saturn -102027-08-13 12:57 J -35543714.17 -35543713.96 -35543713.76 0.0281 0.0141
 Pluto -102025-09-17 20:37 J -35542947.82 -35542947.64 -35542947.44 0.0079 0.0050
 Uranus -102019-09-22 19:25 J -35540751.76 -35540751.69 -35540751.59 0.0136 0.0127
 Uranus -102018-09-26 22:18 J -35540382.78 -35540382.57 -35540382.34 0.0136 0.0060
 Uranus -102017-09-30 01:54 J -35540013.66 -35540013.42 -35540013.18 0.0137 0.0008
 Jupiter -102016-03-13 23:01 J -35539848.75 -35539848.54 -35539848.33 0.0493 0.0245
 Uranus -102016-10-04 05:59 J -35539644.44 -35539644.25 -35539644.04 0.0137 0.0077
 Saturn -102013-01-30 07:40 J -35538796.42 -35538796.18 -35538795.94 0.0280 0.0079
 Jupiter -102011-09-08 22:04 J -35537843.77 -35537843.58 -35537843.38 0.0536 0.0274

102ND MILLENNIUM BCE

This is a list of transits of Earth in the 102nd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Mars	-102000-07-20	08:09 J	-35533876.25	-35533876.16	-35533876.06	0.1818	0.1574	
Jupiter	-101999-09-13	17:16 J	-35533455.98	-35533455.78	-35533455.56	0.0534	0.0193	
Saturn	-101998-08-08	08:23 J	-35533127.38	-35533127.15	-35533126.91	0.0279	0.0061	
Neptune	-101990-08-15	00:13 J	-35530198.66	-35530198.49	-35530198.32	0.0088	0.0064	
Neptune	-101989-08-16	07:54 J	-35529831.40	-35529831.17	-35529830.93	0.0088	0.0033	
Neptune	-101988-08-18	15:49 J	-35529464.09	-35529463.84	-35529463.59	0.0088	0.0002	
Neptune	-101987-08-20	23:16 J	-35529096.75	-35529096.53	-35529096.28	0.0088	0.0030	
Neptune	-101986-08-23	06:57 J	-35528729.38	-35528729.21	-35528729.02	0.0088	0.0061	
Saturn	-101983-02-06	05:59 J	-35527831.45	-35527831.25	-35527831.05	0.0279	0.0174	
Uranus	-101979-03-25	16:47 J	-35526322.90	-35526322.80	-35526322.65	0.0143	0.0125	
Uranus	-101978-03-31	00:13 J	-35525952.73	-35525952.49	-35525952.22	0.0142	0.0039	
Uranus	-101977-04-04	06:13 J	-35525582.48	-35525582.24	-35525581.98	0.0142	0.0046	
Uranus	-101976-04-09	10:33 J	-35525212.14	-35525212.06	-35525211.92	0.0141	0.0128	
Mars	-101974-01-10	11:30 J	-35524571.14	-35524571.02	-35524570.90	0.1702	0.1336	
Saturn	-101969-08-02	10:33 J	-35522540.16	-35522540.06	-35522539.94	0.0279	0.0246	
Saturn	-101968-08-14	19:40 J	-35522162.84	-35522162.68	-35522162.50	0.0281	0.0194	
Saturn	-101954-01-31	20:23 J	-35517244.90	-35517244.65	-35517244.40	0.0280	0.0019	
Jupiter	-101945-03-08	08:23 J	-35513921.37	-35513921.15	-35513920.93	0.0492	0.0207	
Saturn	-101939-08-09	15:21 J	-35511576.10	-35511575.86	-35511575.62	0.0279	0.0009	
Uranus	-101935-09-23	04:18 J	-35510070.40	-35510070.32	-35510070.22	0.0136	0.0125	
Uranus	-101934-09-27	06:57 J	-35509701.42	-35509701.21	-35509700.98	0.0136	0.0058	
Jupiter	-101933-03-13	02:09 J	-35509533.64	-35509533.41	-35509533.18	0.0493	0.0183	
Uranus	-101933-09-30	10:33 J	-35509332.30	-35509332.06	-35509331.81	0.0137	0.0009	
Uranus	-101932-10-04	14:37 J	-35508963.08	-35508962.89	-35508962.68	0.0137	0.0079	
Jupiter	-101928-09-08	03:06 J	-35507528.54	-35507528.37	-35507528.20	0.0536	0.0347	
Saturn	-101925-01-25	19:11 J	-35506658.82	-35506658.70	-35506658.56	0.0281	0.0239	

Saturn -101924-02-07 16:47 J -35506279.93 -35506279.80 -35506279.65 0.0279 0.0231
 Mars -101921-07-23 03:06 J -35505018.56 -35505018.37 -35505018.18 0.1813 0.0015
 Jupiter -101916-09-12 17:30 J -35503140.99 -35503140.77 -35503140.55 0.0534 0.0098
 Saturn -101910-08-04 15:49 J -35500989.00 -35500988.84 -35500988.66 0.0279 0.0196
 Saturn -101909-08-16 00:57 J -35500611.57 -35500611.46 -35500611.34 0.0281 0.0243
 Neptune -101908-02-05 09:06 J -35500438.15 -35500438.12 -35500438.05 0.0089 0.0088
 Neptune -101907-02-08 00:57 J -35500070.67 -35500070.46 -35500070.24 0.0089 0.0053
 Neptune -101906-02-10 16:33 J -35499703.06 -35499702.81 -35499702.54 0.0089 0.0019
 Neptune -101905-02-13 08:09 J -35499335.41 -35499335.16 -35499334.89 0.0089 0.0015
 Neptune -101904-02-14 23:45 J -35498967.71 -35498967.51 -35498967.27 0.0089 0.0049
 Neptune -101903-02-17 15:21 J -35498599.93 -35498599.86 -35498599.74 0.0089 0.0083
 Mars -101895-01-13 00:28 J -35495713.67 -35495713.48 -35495713.28 0.1706 0.0112
 Saturn -101895-02-02 06:13 J -35495693.49 -35495693.24 -35495692.99 0.0280 0.0036
 Uranus -101895-03-25 23:16 J -35495641.64 -35495641.53 -35495641.38 0.0143 0.0123
 Uranus -101894-03-31 06:42 J -35495271.47 -35495271.22 -35495270.95 0.0142 0.0038
 Uranus -101893-04-04 12:28 J -35494901.22 -35494900.98 -35494900.72 0.0142 0.0047
 Uranus -101892-04-09 17:16 J -35494530.88 -35494530.78 -35494530.67 0.0141 0.0129
 Saturn -101880-08-10 20:23 J -35490024.89 -35490024.65 -35490024.42 0.0279 0.0041
 Saturn -101866-01-27 03:06 J -35485107.55 -35485107.37 -35485107.18 0.0281 0.0186
 Pluto -101865-03-19 18:42 J -35484689.91 -35484689.72 -35484689.47 0.0066 0.0039
 Pluto -101864-03-21 11:45 J -35484323.18 -35484323.01 -35484322.79 0.0066 0.0046
 Jupiter -101862-03-08 13:54 J -35483606.12 -35483605.92 -35483605.71 0.0492 0.0259
 Saturn -101851-08-05 18:42 J -35479437.91 -35479437.72 -35479437.50 0.0279 0.0150
 Uranus -101851-09-23 12:57 J -35479389.05 -35479388.96 -35479388.85 0.0136 0.0123
 Jupiter -101850-03-13 07:40 J -35479218.42 -35479218.18 -35479217.95 0.0493 0.0129
 Uranus -101850-09-27 15:35 J -35479020.06 -35479019.85 -35479019.62 0.0136 0.0057
 Uranus -101849-09-30 19:11 J -35478650.94 -35478650.70 -35478650.46 0.0137 0.0011
 Uranus -101848-10-04 23:16 J -35478281.72 -35478281.53 -35478281.32 0.0137 0.0080
 Jupiter -101845-09-07 04:18 J -35477213.45 -35477213.32 -35477213.19 0.0536 0.0437
 Mars -101842-07-26 21:49 J -35476160.69 -35476160.59 -35476160.48 0.1809 0.1504

Saturn -101836-02-03 12:42 J -35474142.21 -35474141.97 -35474141.73 0.0280 0.0085
 Jupiter -101833-09-11 23:16 J -35472825.75 -35472825.53 -35472825.31 0.0536 0.0028
 Neptune -101826-08-14 13:54 J -35470298.01 -35470297.92 -35470297.77 0.0088 0.0078
 Neptune -101825-08-15 22:04 J -35469930.77 -35469930.58 -35469930.35 0.0088 0.0047
 Neptune -101824-08-18 05:59 J -35469563.49 -35469563.25 -35469562.99 0.0088 0.0015
 Neptune -101823-08-20 13:54 J -35469196.16 -35469195.92 -35469195.67 0.0088 0.0016
 Neptune -101822-08-22 21:21 J -35468828.81 -35468828.61 -35468828.39 0.0088 0.0047
 Saturn -101821-08-11 23:30 J -35468473.74 -35468473.52 -35468473.29 0.0279 0.0086
 Neptune -101821-08-24 04:47 J -35468461.39 -35468461.30 -35468461.16 0.0088 0.0078
 Jupiter -101821-09-16 18:57 J -35468437.79 -35468437.71 -35468437.62 0.0534 0.0492
 Mars -101816-01-15 14:09 J -35466856.05 -35466855.91 -35466855.76 0.1710 0.1150
 Uranus -101811-03-26 06:42 J -35464960.35 -35464960.22 -35464960.07 0.0143 0.0121
 Uranus -101810-03-31 13:54 J -35464590.17 -35464589.92 -35464589.65 0.0142 0.0036
 Uranus -101809-04-04 19:40 J -35464219.92 -35464219.68 -35464219.42 0.0142 0.0048
 Uranus -101808-04-10 00:13 J -35463849.58 -35463849.49 -35463849.38 0.0141 0.0129
 Saturn -101807-01-28 07:40 J -35463556.39 -35463556.18 -35463555.95 0.0281 0.0139
 Saturn -101792-08-06 20:09 J -35457886.87 -35457886.66 -35457886.43 0.0279 0.0107
 Jupiter -101779-03-07 17:30 J -35453290.95 -35453290.77 -35453290.58 0.0491 0.0316
 Pluto -101779-09-19 23:16 J -35453094.68 -35453094.53 -35453094.36 0.0079 0.0059
 Pluto -101778-09-21 22:18 J -35452727.65 -35452727.57 -35452727.43 0.0078 0.0071
 Saturn -101777-02-05 15:35 J -35452591.06 -35452590.85 -35452590.61 0.0280 0.0130
 Jupiter -101767-03-12 11:16 J -35448903.27 -35448903.03 -35448902.79 0.0492 0.0071
 Uranus -101767-09-23 22:18 J -35448707.66 -35448707.57 -35448707.44 0.0136 0.0121
 Uranus -101766-09-28 01:25 J -35448338.67 -35448338.44 -35448338.22 0.0136 0.0055
 Uranus -101765-10-01 04:47 J -35447969.54 -35447969.30 -35447969.06 0.0137 0.0012
 Uranus -101764-10-05 08:52 J -35447600.31 -35447600.13 -35447599.92 0.0137 0.0081
 Saturn -101762-08-14 00:57 J -35446922.66 -35446922.46 -35446922.24 0.0279 0.0128
 Jupiter -101762-09-07 12:57 J -35446898.04 -35446897.96 -35446897.86 0.0537 0.0492
 Jupiter -101755-03-17 05:01 J -35444515.37 -35444515.29 -35444515.20 0.0494 0.0462
 Jupiter -101750-09-12 09:21 J -35442510.33 -35442510.11 -35442509.89 0.0536 0.0023

Saturn -101748-01-29 09:35 J -35442005.33 -35442005.10 -35442004.85 0.0281 0.0095
 Neptune -101743-02-07 08:37 J -35440170.30 -35440170.14 -35440169.97 0.0089 0.0068
 Neptune -101742-02-10 00:28 J -35439802.73 -35439802.48 -35439802.24 0.0089 0.0034
 Neptune -101741-02-12 16:04 J -35439435.10 -35439434.83 -35439434.56 0.0089 0.0000
 Neptune -101740-02-14 07:25 J -35439067.42 -35439067.19 -35439066.93 0.0089 0.0034
 Neptune -101739-02-16 23:01 J -35438699.69 -35438699.54 -35438699.35 0.0089 0.0068
 Jupiter -101738-09-17 01:11 J -35438122.58 -35438122.45 -35438122.31 0.0534 0.0423
 Saturn -101733-08-07 20:09 J -35436335.89 -35436335.66 -35436335.43 0.0279 0.0066
 Uranus -101727-03-26 15:21 J -35434278.99 -35434278.86 -35434278.69 0.0143 0.0118
 Uranus -101726-03-31 22:33 J -35433908.81 -35433908.56 -35433908.29 0.0142 0.0033
 Uranus -101725-04-05 04:18 J -35433538.56 -35433538.32 -35433538.07 0.0142 0.0050
 Uranus -101724-04-10 08:37 J -35433168.22 -35433168.14 -35433168.03 0.0141 0.0132
 Saturn -101718-02-06 16:33 J -35431040.01 -35431039.81 -35431039.60 0.0280 0.0169
 Mars -101716-07-20 14:09 J -35430145.02 -35430144.91 -35430144.81 0.1825 0.1504
 Saturn -101704-08-02 19:25 J -35425748.77 -35425748.69 -35425748.60 0.0277 0.0258
 Saturn -101703-08-15 01:54 J -35425371.61 -35425371.42 -35425371.23 0.0279 0.0169
 Jupiter -101696-03-07 01:40 J -35422975.60 -35422975.43 -35422975.27 0.0491 0.0358
 Mars -101690-01-11 03:06 J -35420839.53 -35420839.37 -35420839.22 0.1696 0.1010
 Saturn -101689-01-31 09:49 J -35420454.33 -35420454.09 -35420453.84 0.0281 0.0055
 Jupiter -101684-03-11 19:40 J -35418587.92 -35418587.68 -35418587.44 0.0492 0.0030
 Uranus -101683-09-24 07:25 J -35418026.29 -35418026.19 -35418026.06 0.0136 0.0119
 Uranus -101682-09-28 10:18 J -35417657.28 -35417657.07 -35417656.84 0.0136 0.0053
 Uranus -101681-10-01 13:54 J -35417288.16 -35417287.92 -35417287.67 0.0137 0.0014
 Uranus -101680-10-05 18:13 J -35416918.93 -35416918.74 -35416918.54 0.0137 0.0083
 Saturn -101674-08-09 19:40 J -35414784.91 -35414784.68 -35414784.44 0.0279 0.0027
 Jupiter -101672-03-16 14:09 J -35414200.03 -35414199.91 -35414199.78 0.0494 0.0421
 Jupiter -101667-09-11 14:52 J -35412195.10 -35412194.88 -35412194.66 0.0536 0.0095
 Neptune -101661-08-15 12:28 J -35410030.15 -35410029.98 -35410029.78 0.0088 0.0060
 Saturn -101660-01-24 15:35 J -35409867.93 -35409867.85 -35409867.75 0.0282 0.0264
 Neptune -101660-08-17 20:37 J -35409662.87 -35409662.64 -35409662.40 0.0088 0.0029

Saturn -101659-02-07 15:21 J -35409489.02 -35409488.86 -35409488.68 0.0280 0.0206
 Neptune -101659-08-20 04:18 J -35409295.57 -35409295.32 -35409295.07 0.0088 0.0003
 Neptune -101658-08-22 11:45 J -35408928.23 -35408928.01 -35408927.77 0.0088 0.0034
 Neptune -101657-08-23 19:25 J -35408560.85 -35408560.69 -35408560.51 0.0088 0.0065
 Jupiter -101655-09-16 07:25 J -35407807.35 -35407807.19 -35407807.02 0.0535 0.0360
 Saturn -101645-08-03 20:09 J -35404197.81 -35404197.66 -35404197.51 0.0277 0.0217
 Saturn -101644-08-16 01:54 J -35403820.57 -35403820.42 -35403820.25 0.0279 0.0208
 Uranus -101643-03-27 01:54 J -35403597.57 -35403597.42 -35403597.26 0.0143 0.0113
 Uranus -101642-04-01 08:37 J -35403227.39 -35403227.14 -35403226.87 0.0142 0.0030
 Uranus -101641-04-05 14:09 J -35402857.14 -35402856.91 -35402856.65 0.0142 0.0054
 Uranus -101640-04-10 18:42 J -35402486.78 -35402486.72 -35402486.63 0.0141 0.0134
 Mars -101637-07-23 09:49 J -35401287.28 -35401287.09 -35401286.90 0.1820 0.0090
 Saturn -101630-02-01 09:49 J -35398903.34 -35398903.09 -35398902.84 0.0281 0.0016
 Pluto -101619-03-21 18:28 J -35394836.88 -35394836.73 -35394836.51 0.0066 0.0048
 Pluto -101618-03-23 11:45 J -35394470.22 -35394470.01 -35394469.76 0.0066 0.0037
 Saturn -101615-08-10 19:40 J -35393233.92 -35393233.68 -35393233.44 0.0279 0.0013
 Jupiter -101613-03-06 11:16 J -35392660.17 -35392660.03 -35392659.89 0.0491 0.0395
 Mars -101611-01-13 15:06 J -35391982.06 -35391981.87 -35391981.67 0.1700 0.0177
 Saturn -101601-01-26 13:54 J -35388317.06 -35388316.92 -35388316.77 0.0282 0.0226
 Jupiter -101601-03-11 03:21 J -35388272.60 -35388272.36 -35388272.11 0.0491 0.0013
 Saturn -101600-02-08 13:40 J -35387938.05 -35387937.93 -35387937.80 0.0280 0.0242
 Uranus -101599-09-24 17:16 J -35387344.89 -35387344.78 -35387344.64 0.0136 0.0116
 Uranus -101598-09-28 20:09 J -35386975.88 -35386975.66 -35386975.42 0.0136 0.0050
 Uranus -101597-10-01 23:45 J -35386606.75 -35386606.51 -35386606.27 0.0137 0.0017
 Uranus -101596-10-06 03:49 J -35386237.51 -35386237.34 -35386237.13 0.0137 0.0086
 Jupiter -101589-03-15 20:52 J -35383884.78 -35383884.63 -35383884.46 0.0492 0.0376
 Saturn -101586-08-05 21:06 J -35382646.79 -35382646.62 -35382646.42 0.0277 0.0176
 Saturn -101585-08-17 03:06 J -35382269.47 -35382269.37 -35382269.25 0.0279 0.0248
 Jupiter -101584-09-10 22:18 J -35381879.78 -35381879.57 -35381879.36 0.0537 0.0153
 Neptune -101579-02-06 14:52 J -35380269.94 -35380269.88 -35380269.77 0.0089 0.0084

Neptune -101578-02-09 06:42 J -35379902.43 -35379902.22 -35379902.00 0.0089 0.0050
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 Neptune -101574-02-18 21:21 J -35378431.66 -35378431.61 -35378431.53 0.0089 0.0086
 Jupiter -101572-09-15 19:11 J -35377491.88 -35377491.70 -35377491.52 0.0535 0.0315
 Saturn -101571-02-02 09:21 J -35377352.36 -35377352.11 -35377351.86 0.0281 0.0024
 Uranus -101559-03-27 11:16 J -35372916.19 -35372916.03 -35372915.85 0.0143 0.0109
 Uranus -101558-04-01 18:13 J -35372546.00 -35372545.74 -35372545.47 0.0142 0.0025
 Mars -101558-07-27 06:13 J -35372429.32 -35372429.24 -35372429.16 0.1816 0.1640
 Uranus -101557-04-06 00:13 J -35372175.73 -35372175.49 -35372175.25 0.0142 0.0057
 Uranus -101556-04-11 04:33 J -35371805.34 -35371805.31 -35371805.24 0.0141 0.0138
 Saturn -101556-08-11 20:09 J -35371682.90 -35371682.66 -35371682.43 0.0279 0.0052
 Saturn -101542-01-27 13:11 J -35366766.12 -35366765.95 -35366765.75 0.0282 0.0188
 Saturn -101541-02-10 13:11 J -35366386.96 -35366386.95 -35366386.93 0.0280 0.0279
 Pluto -101533-09-21 02:09 J -35363241.53 -35363241.41 -35363241.27 0.0079 0.0066
 Mars -101532-01-16 03:35 J -35363124.46 -35363124.35 -35363124.24 0.1704 0.1391
 Pluto -101532-09-23 01:25 J -35362874.56 -35362874.44 -35362874.27 0.0078 0.0064
 Jupiter -101530-03-06 19:25 J -35362344.79 -35362344.69 -35362344.57 0.0490 0.0433
 Saturn -101527-08-06 23:16 J -35361095.73 -35361095.53 -35361095.31 0.0277 0.0134
 Jupiter -101518-03-11 10:18 J -35357957.31 -35357957.07 -35357956.82 0.0491 0.0059
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 Uranus -101513-10-02 08:52 J -35355925.37 -35355925.13 -35355924.89 0.0137 0.0019
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 Jupiter -101506-03-16 04:18 J -35353569.50 -35353569.32 -35353569.14 0.0492 0.0329
 Jupiter -101501-09-10 06:57 J -35351564.42 -35351564.21 -35351564.01 0.0537 0.0211
 Saturn -101497-08-12 22:47 J -35350131.78 -35350131.55 -35350131.33 0.0279 0.0095
 Neptune -101497-08-15 01:54 J -35350129.53 -35350129.42 -35350129.26 0.0088 0.0074

Neptune -101496-08-17 10:04 J -35349762.29 -35349762.08 -35349761.85 0.0088 0.0042
 Neptune -101495-08-19 17:59 J -35349394.99 -35349394.75 -35349394.50 0.0088 0.0011
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 Jupiter -101489-09-15 00:28 J -35347176.68 -35347176.48 -35347176.28 0.0535 0.0244
 Saturn -101483-01-28 14:23 J -35345215.11 -35345214.90 -35345214.68 0.0282 0.0145
 Uranus -101475-03-27 20:23 J -35342234.82 -35342234.65 -35342234.46 0.0143 0.0105
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 Saturn -101468-08-08 03:21 J -35339544.58 -35339544.36 -35339544.13 0.0277 0.0087
 Saturn -101453-02-05 13:54 J -35334250.14 -35334249.92 -35334249.67 0.0281 0.0111
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 Saturn -101438-08-15 02:52 J -35328580.58 -35328580.38 -35328580.17 0.0279 0.0141
 Jupiter -101435-03-10 17:45 J -35327641.99 -35327641.76 -35327641.52 0.0491 0.0103
 Mars -101432-07-20 18:42 J -35326413.83 -35326413.72 -35326413.60 0.1832 0.1446
 Uranus -101431-09-25 12:28 J -35325982.11 -35325981.98 -35325981.82 0.0135 0.0110
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 Saturn -101424-01-29 17:59 J -35323663.98 -35323663.75 -35323663.51 0.0282 0.0100
 Jupiter -101423-03-15 11:30 J -35323254.22 -35323254.02 -35323253.82 0.0492 0.0285
 Jupiter -101418-09-10 06:28 J -35321249.41 -35321249.23 -35321249.04 0.0538 0.0302
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 Saturn -101409-08-09 09:21 J -35317993.34 -35317993.11 -35317992.87 0.0278 0.0038

Mars -101406-01-11 20:23 J -35317107.82 -35317107.65 -35317107.47 0.1691 0.0662
 Jupiter -101406-09-15 02:23 J -35316861.61 -35316861.40 -35316861.18 0.0537 0.0164
 Saturn -101394-02-06 20:37 J -35312698.84 -35312698.64 -35312698.43 0.0281 0.0159
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 Saturn -101379-08-16 09:06 J -35307029.28 -35307029.12 -35307028.93 0.0279 0.0190
 Pluto -101373-03-22 15:06 J -35304983.91 -35304983.87 -35304983.76 0.0066 0.0063
 Pluto -101372-03-24 08:52 J -35304617.38 -35304617.13 -35304616.87 0.0066 0.0021
 Saturn -101365-02-01 00:57 J -35302112.71 -35302112.46 -35302112.21 0.0282 0.0049
 Mars -101353-07-23 16:18 J -35297556.01 -35297555.82 -35297555.63 0.1828 0.0187
 Jupiter -101352-03-09 23:30 J -35297326.75 -35297326.52 -35297326.29 0.0490 0.0151
 Saturn -101350-08-11 16:47 J -35296442.04 -35296441.80 -35296441.56 0.0278 0.0014
 Uranus -101347-09-25 22:18 J -35295300.71 -35295300.57 -35295300.41 0.0135 0.0107
 Uranus -101346-09-30 01:11 J -35294931.67 -35294931.45 -35294931.21 0.0136 0.0042
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 Saturn -101336-01-25 06:57 J -35291526.31 -35291526.21 -35291526.08 0.0283 0.0249
 Saturn -101335-02-08 05:59 J -35291147.40 -35291147.25 -35291147.07 0.0280 0.0213
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 Neptune -101333-08-14 14:37 J -35290228.89 -35290228.89 -35290228.85 0.0088 0.0088
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 Neptune -101331-08-19 06:57 J -35289494.45 -35289494.21 -35289493.97 0.0088 0.0026
 Neptune -101330-08-21 14:37 J -35289127.14 -35289126.89 -35289126.64 0.0088 0.0006
 Neptune -101329-08-22 22:18 J -35288759.79 -35288759.57 -35288759.33 0.0088 0.0036
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 Jupiter -101323-09-14 08:37 J -35286546.36 -35286546.14 -35286545.92 0.0536 0.0096

Saturn -101321-08-05 11:45 J -35285855.18 -35285855.01 -35285854.81 0.0277 0.0177
 Saturn -101320-08-17 17:59 J -35285477.86 -35285477.75 -35285477.62 0.0279 0.0242
 Uranus -101307-03-28 13:25 J -35280872.11 -35280871.94 -35280871.73 0.0143 0.0099
 Saturn -101306-02-02 10:33 J -35280561.31 -35280561.06 -35280560.81 0.0281 0.0006
 Uranus -101306-04-02 21:06 J -35280501.88 -35280501.62 -35280501.35 0.0142 0.0016
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 Saturn -101291-08-13 01:40 J -35274890.66 -35274890.43 -35274890.19 0.0278 0.0068
 Pluto -101286-09-24 23:16 J -35273021.73 -35273021.53 -35273021.30 0.0078 0.0040
 Saturn -101277-01-27 19:40 J -35269974.86 -35269974.68 -35269974.49 0.0282 0.0190
 Saturn -101276-02-09 18:28 J -35269595.80 -35269595.73 -35269595.66 0.0280 0.0268
 Mars -101274-07-27 13:54 J -35268697.96 -35268697.92 -35268697.88 0.1823 0.1768
 Jupiter -101269-03-08 23:45 J -35267011.72 -35267011.51 -35267011.29 0.0490 0.0222
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 Saturn -101262-08-07 21:21 J -35264303.82 -35264303.61 -35264303.39 0.0277 0.0122
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 Jupiter -101257-03-13 16:18 J -35262624.05 -35262623.82 -35262623.59 0.0491 0.0159
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 Neptune -101249-02-10 08:37 J -35259734.34 -35259734.14 -35259733.90 0.0089 0.0049
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 Saturn -101232-08-14 11:16 J -35253339.23 -35253339.03 -35253338.81 0.0279 0.0123
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 Jupiter -101186-03-09 03:21 J -35236696.55 -35236696.36 -35236696.15 0.0490 0.0278
 Uranus -101179-09-26 20:52 J -35233937.79 -35233937.63 -35233937.46 0.0135 0.0100
 Uranus -101178-09-30 23:30 J -35233568.75 -35233568.52 -35233568.28 0.0136 0.0036
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 Saturn -101174-08-04 14:09 J -35232165.03 -35232164.91 -35232164.79 0.0277 0.0237
 Saturn -101173-08-15 21:06 J -35231787.80 -35231787.62 -35231787.43 0.0279 0.0177
 Neptune -101168-08-16 10:47 J -35229961.19 -35229961.05 -35229960.90 0.0088 0.0072
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 Jupiter -101162-03-18 07:54 J -35227921.25 -35227921.17 -35227921.10 0.0492 0.0464
 Saturn -101159-01-31 01:25 J -35226871.68 -35226871.44 -35226871.19 0.0282 0.0066
 Jupiter -101157-09-12 07:40 J -35225916.40 -35225916.18 -35225915.96 0.0538 0.0094
 Mars -101148-07-20 22:18 J -35222682.69 -35222682.57 -35222682.45 0.1839 0.1404
 Jupiter -101145-09-17 03:35 J -35221528.50 -35221528.35 -35221528.18 0.0536 0.0371
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 Uranus -101138-04-03 19:25 J -35219138.95 -35219138.69 -35219138.42 0.0143 0.0007
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 Saturn -101115-08-05 22:47 J -35210613.72 -35210613.55 -35210613.37 0.0277 0.0184
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 Saturn -101070-02-09 15:06 J -35194354.98 -35194354.87 -35194354.72 0.0280 0.0240
 Mars -101069-07-23 20:37 J -35193824.83 -35193824.64 -35193824.45 0.1835 0.0251
 Jupiter -101062-09-17 01:25 J -35191213.63 -35191213.44 -35191213.25 0.0536 0.0268
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 Uranus -101055-03-30 00:28 J -35188827.68 -35188827.48 -35188827.25 0.0143 0.0084
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Mars -101043-01-15 01:11 J -35184518.62 -35184518.45 -35184518.28 0.1689 0.0802
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 Pluto -101040-09-25 19:25 J -35183168.93 -35183168.69 -35183168.44 0.0078 0.0013
 Saturn -101026-08-14 10:04 J -35178098.30 -35178098.08 -35178097.84 0.0278 0.0091
 Jupiter -101020-03-07 04:47 J -35176066.42 -35176066.30 -35176066.17 0.0489 0.0414
 Saturn -101012-01-28 03:49 J -35173182.54 -35173182.34 -35173182.13 0.0283 0.0160
 Uranus -101011-09-27 20:09 J -35172574.84 -35172574.66 -35172574.48 0.0135 0.0092
 Uranus -101010-10-01 22:33 J -35172205.80 -35172205.56 -35172205.32 0.0136 0.0029
 Uranus -101009-10-05 01:40 J -35171836.66 -35171836.43 -35171836.19 0.0137 0.0036
 Jupiter -101008-03-11 21:35 J -35171678.84 -35171678.60 -35171678.36 0.0490 0.0036
 Uranus -101008-10-09 05:16 J -35171467.42 -35171467.28 -35171467.09 0.0137 0.0102
 Neptune -101004-08-15 20:37 J -35170060.66 -35170060.64 -35170060.60 0.0088 0.0088
 Neptune -101003-08-18 05:01 J -35169693.46 -35169693.29 -35169693.08 0.0088 0.0057
 Neptune -101002-08-20 13:11 J -35169326.18 -35169325.95 -35169325.70 0.0088 0.0026
 Neptune -101001-08-21 21:35 J -35168958.85 -35168958.60 -35168958.35 0.0088 0.0006

101ST MILLENNIUM BCE

This is a list of transits of Earth in the 101st millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Neptune	-101000-08-24	05:01	J	-35168591.50	-35168591.29	-35168591.05	0.0088	0.0038
Neptune	-100999-08-26	12:28	J	-35168224.11	-35168223.98	-35168223.79	0.0088	0.0069

Saturn -100997-08-08 11:45 J -35167511.24 -35167511.01 -35167510.78 0.0278 0.0085
 Jupiter -100996-03-16 14:09 J -35167291.09 -35167290.91 -35167290.74 0.0492 0.0342
 Jupiter -100991-09-11 09:06 J -35165286.31 -35165286.12 -35165285.92 0.0538 0.0273
 Saturn -100982-02-05 16:18 J -35162217.05 -35162216.82 -35162216.58 0.0281 0.0106
 Jupiter -100979-09-16 05:16 J -35160898.49 -35160898.28 -35160898.07 0.0537 0.0192
 Uranus -100971-03-30 13:11 J -35158146.16 -35158145.95 -35158145.72 0.0143 0.0078
 Uranus -100970-04-04 21:06 J -35157775.89 -35157775.62 -35157775.36 0.0143 0.0005
 Uranus -100969-04-09 03:06 J -35157405.56 -35157405.37 -35157405.14 0.0142 0.0085
 Saturn -100968-08-03 09:35 J -35156924.14 -35156924.10 -35156924.04 0.0276 0.0269
 Saturn -100967-08-15 15:49 J -35156547.05 -35156546.84 -35156546.63 0.0278 0.0137
 Saturn -100953-01-30 12:57 J -35151631.19 -35151630.96 -35151630.72 0.0282 0.0108
 Saturn -100938-08-10 15:21 J -35145960.10 -35145959.86 -35145959.62 0.0278 0.0041
 Jupiter -100937-03-06 10:18 J -35145751.13 -35145751.07 -35145750.99 0.0489 0.0466
 Uranus -100927-09-28 08:09 J -35141893.33 -35141893.16 -35141892.96 0.0135 0.0088
 Uranus -100926-10-02 10:47 J -35141524.29 -35141524.05 -35141523.80 0.0136 0.0024
 Jupiter -100925-03-10 23:30 J -35141363.76 -35141363.52 -35141363.29 0.0490 0.0100
 Uranus -100925-10-05 13:54 J -35141155.15 -35141154.92 -35141154.68 0.0137 0.0040
 Uranus -100924-10-09 17:30 J -35140785.91 -35140785.77 -35140785.60 0.0137 0.0105
 Saturn -100923-02-06 23:59 J -35140665.71 -35140665.50 -35140665.29 0.0281 0.0155
 Neptune -100921-02-08 16:47 J -35139933.87 -35139933.80 -35139933.69 0.0089 0.0083
 Neptune -100920-02-10 07:40 J -35139566.38 -35139566.18 -35139565.94 0.0089 0.0050
 Neptune -100919-02-12 23:01 J -35139198.79 -35139198.54 -35139198.27 0.0089 0.0016
 Neptune -100918-02-15 14:23 J -35138831.15 -35138830.90 -35138830.63 0.0089 0.0018
 Mars -100917-01-11 00:57 J -35138501.61 -35138501.46 -35138501.30 0.1677 0.1021
 Neptune -100917-02-18 05:45 J -35138463.46 -35138463.26 -35138463.03 0.0089 0.0052
 Neptune -100916-02-19 21:06 J -35138095.66 -35138095.62 -35138095.53 0.0089 0.0086
 Jupiter -100913-03-15 15:49 J -35136976.03 -35136975.84 -35136975.63 0.0491 0.0278
 Saturn -100909-08-04 14:09 J -35135373.04 -35135372.91 -35135372.76 0.0276 0.0224
 Saturn -100908-08-16 19:54 J -35134995.84 -35134995.67 -35134995.48 0.0278 0.0181
 Jupiter -100908-09-10 16:18 J -35134970.99 -35134970.82 -35134970.64 0.0539 0.0333

Jupiter -100896-09-15 13:25 J -35130583.16 -35130582.94 -35130582.73 0.0537 0.0134
 Saturn -100894-01-31 18:57 J -35130079.95 -35130079.71 -35130079.46 0.0282 0.0060
 Uranus -100887-03-31 00:42 J -35127464.69 -35127464.47 -35127464.23 0.0143 0.0072
 Uranus -100886-04-05 08:37 J -35127094.41 -35127094.14 -35127093.88 0.0143 0.0010
 Uranus -100885-04-09 14:52 J -35126724.08 -35126723.88 -35126723.67 0.0142 0.0089
 Pluto -100880-03-26 18:13 J -35124911.96 -35124911.74 -35124911.47 0.0066 0.0028
 Pluto -100879-03-28 11:16 J -35124545.13 -35124545.03 -35124544.86 0.0067 0.0058
 Saturn -100879-08-11 17:16 J -35124409.02 -35124408.78 -35124408.54 0.0278 0.0004
 Saturn -100865-01-26 04:47 J -35119493.40 -35119493.30 -35119493.20 0.0283 0.0256
 Saturn -100864-02-08 04:47 J -35119114.48 -35119114.30 -35119114.12 0.0281 0.0198
 Mars -100864-07-20 23:59 J -35118951.63 -35118951.50 -35118951.38 0.1846 0.1395
 Saturn -100850-08-06 17:01 J -35113821.96 -35113821.79 -35113821.60 0.0276 0.0182
 Saturn -100849-08-17 22:18 J -35113444.71 -35113444.57 -35113444.42 0.0278 0.0221
 Uranus -100843-09-28 19:40 J -35111211.86 -35111211.68 -35111211.47 0.0135 0.0084
 Jupiter -100842-03-11 06:13 J -35111048.47 -35111048.24 -35111048.01 0.0489 0.0146
 Uranus -100842-10-02 22:04 J -35110842.81 -35110842.58 -35110842.33 0.0136 0.0021
 Uranus -100841-10-06 00:57 J -35110473.68 -35110473.46 -35110473.21 0.0136 0.0044
 Uranus -100840-10-10 05:01 J -35110104.43 -35110104.29 -35110104.13 0.0137 0.0107
 Neptune -100839-08-17 14:37 J -35109793.02 -35109792.89 -35109792.74 0.0088 0.0073
 Mars -100838-01-13 10:47 J -35109644.25 -35109644.05 -35109643.86 0.1680 0.0070
 Neptune -100838-08-19 23:01 J -35109425.76 -35109425.54 -35109425.31 0.0088 0.0042
 Neptune -100837-08-21 07:11 J -35109058.44 -35109058.20 -35109057.95 0.0088 0.0010
 Neptune -100836-08-23 15:21 J -35108691.10 -35108690.86 -35108690.61 0.0088 0.0021
 Saturn -100835-02-01 22:33 J -35108528.81 -35108528.56 -35108528.30 0.0282 0.0017
 Neptune -100835-08-25 22:47 J -35108323.72 -35108323.55 -35108323.32 0.0088 0.0053
 Neptune -100834-08-28 06:42 J -35107956.29 -35107956.22 -35107956.12 0.0088 0.0083
 Jupiter -100830-03-15 23:16 J -35106660.75 -35106660.53 -35106660.32 0.0491 0.0233
 Jupiter -100825-09-09 21:49 J -35104655.73 -35104655.59 -35104655.43 0.0539 0.0403
 Saturn -100820-08-12 18:28 J -35102857.96 -35102857.73 -35102857.49 0.0278 0.0040
 Jupiter -100813-09-14 17:01 J -35100268.02 -35100267.79 -35100267.57 0.0537 0.0057

Saturn -100806-01-27 05:59 J -35097942.41 -35097942.25 -35097942.09 0.0283 0.0216
 Saturn -100805-02-10 06:28 J -35097563.36 -35097563.23 -35097563.09 0.0281 0.0238
 Uranus -100803-03-31 11:59 J -35096783.22 -35096783.00 -35096782.75 0.0143 0.0068
 Uranus -100802-04-05 19:54 J -35096412.93 -35096412.67 -35096412.41 0.0143 0.0014
 Uranus -100801-04-10 02:23 J -35096042.60 -35096042.40 -35096042.20 0.0142 0.0093
 Jupiter -100801-09-19 10:33 J -35095880.12 -35095880.06 -35095879.98 0.0537 0.0510
 Pluto -100794-09-27 10:18 J -35093316.28 -35093316.07 -35093315.83 0.0078 0.0031
 Saturn -100791-08-07 18:57 J -35092270.91 -35092270.71 -35092270.50 0.0276 0.0141
 Saturn -100790-08-19 23:45 J -35091893.59 -35091893.51 -35091893.42 0.0278 0.0260
 Mars -100785-07-23 23:16 J -35090093.72 -35090093.53 -35090093.34 0.1842 0.0291
 Saturn -100776-02-02 23:59 J -35086977.75 -35086977.50 -35086977.24 0.0282 0.0025
 Saturn -100761-08-13 18:28 J -35081306.95 -35081306.73 -35081306.49 0.0277 0.0078
 Mars -100759-01-15 19:40 J -35080786.82 -35080786.68 -35080786.53 0.1684 0.1122
 Jupiter -100759-03-10 15:06 J -35080733.10 -35080732.87 -35080732.65 0.0489 0.0186
 Uranus -100759-09-29 09:06 J -35080530.32 -35080530.12 -35080529.92 0.0135 0.0079
 Uranus -100758-10-03 11:16 J -35080161.27 -35080161.03 -35080160.78 0.0136 0.0017
 Uranus -100757-10-06 14:09 J -35079792.13 -35079791.91 -35079791.67 0.0136 0.0048
 Neptune -100756-02-09 10:04 J -35079666.23 -35079666.08 -35079665.89 0.0089 0.0068
 Uranus -100756-10-10 17:45 J -35079422.88 -35079422.76 -35079422.60 0.0137 0.0112
 Neptune -100755-02-12 01:25 J -35079298.67 -35079298.44 -35079298.18 0.0089 0.0034
 Neptune -100754-02-14 16:47 J -35078931.06 -35078930.80 -35078930.53 0.0089 0.0000
 Neptune -100753-02-17 07:40 J -35078563.41 -35078563.18 -35078562.92 0.0089 0.0034
 Neptune -100752-02-18 23:01 J -35078195.70 -35078195.54 -35078195.36 0.0089 0.0067
 Saturn -100747-01-28 05:30 J -35076391.46 -35076391.27 -35076391.07 0.0283 0.0177
 Jupiter -100747-03-15 05:59 J -35076345.47 -35076345.25 -35076345.02 0.0490 0.0189
 Saturn -100746-02-11 06:13 J -35076012.28 -35076012.24 -35076012.17 0.0281 0.0275
 Jupiter -100742-09-10 01:25 J -35074340.53 -35074340.44 -35074340.32 0.0540 0.0477
 Saturn -100732-08-08 20:23 J -35070719.87 -35070719.65 -35070719.42 0.0276 0.0101
 Jupiter -100730-09-15 00:13 J -35069952.71 -35069952.49 -35069952.26 0.0539 0.0007
 Uranus -100719-03-31 23:30 J -35066101.74 -35066101.52 -35066101.27 0.0143 0.0063

Uranus -100718-04-06 07:25 J -35065731.45 -35065731.19 -35065730.93 0.0143 0.0018
 Jupiter -100718-09-19 22:18 J -35065564.68 -35065564.57 -35065564.46 0.0537 0.0464
 Saturn -100717-02-05 00:13 J -35065426.74 -35065426.49 -35065426.25 0.0282 0.0063
 Uranus -100717-04-10 13:25 J -35065361.11 -35065360.94 -35065360.73 0.0142 0.0098
 Mars -100712-01-08 13:54 J -35063626.95 -35063626.92 -35063626.89 0.1669 0.1644
 Saturn -100702-08-15 18:57 J -35059755.93 -35059755.71 -35059755.49 0.0277 0.0115
 Saturn -100688-01-29 03:49 J -35054840.54 -35054840.34 -35054840.11 0.0283 0.0142
 Jupiter -100676-03-09 23:30 J -35050417.74 -35050417.52 -35050417.31 0.0489 0.0223
 Uranus -100675-09-29 21:35 J -35049848.79 -35049848.60 -35049848.39 0.0135 0.0075
 Neptune -100674-08-19 06:57 J -35049525.39 -35049525.21 -35049525.01 0.0088 0.0059
 Uranus -100674-10-03 23:59 J -35049479.74 -35049479.50 -35049479.26 0.0136 0.0012
 Saturn -100673-08-09 21:49 J -35049168.82 -35049168.59 -35049168.35 0.0276 0.0061
 Neptune -100673-08-20 15:21 J -35049158.09 -35049157.86 -35049157.62 0.0088 0.0027
 Uranus -100673-10-07 02:37 J -35049110.61 -35049110.39 -35049110.15 0.0136 0.0051
 Neptune -100672-08-22 23:45 J -35048790.76 -35048790.51 -35048790.26 0.0088 0.0004
 Uranus -100672-10-11 06:28 J -35048741.35 -35048741.23 -35048741.09 0.0137 0.0115
 Neptune -100671-08-25 07:25 J -35048423.40 -35048423.19 -35048422.94 0.0088 0.0035
 Neptune -100670-08-27 16:04 J -35048056.00 -35048055.83 -35048055.67 0.0088 0.0066
 Jupiter -100664-03-14 13:54 J -35046030.15 -35046029.92 -35046029.69 0.0490 0.0146
 Jupiter -100659-09-09 12:28 J -35044025.02 -35044024.98 -35044024.91 0.0540 0.0522
 Saturn -100658-02-05 23:59 J -35043875.73 -35043875.50 -35043875.26 0.0282 0.0101
 Jupiter -100647-09-14 09:21 J -35039637.34 -35039637.11 -35039636.89 0.0538 0.0058
 Saturn -100644-08-04 14:52 J -35038581.97 -35038581.88 -35038581.75 0.0275 0.0244
 Saturn -100643-08-16 19:40 J -35038204.87 -35038204.68 -35038204.47 0.0277 0.0153
 Uranus -100636-03-27 03:06 J -35035790.42 -35035790.37 -35035790.28 0.0144 0.0139
 Uranus -100635-04-01 12:13 J -35035420.23 -35035419.99 -35035419.74 0.0144 0.0058
 Jupiter -100635-09-19 03:49 J -35035249.48 -35035249.34 -35035249.19 0.0537 0.0396
 Pluto -100634-03-28 07:11 J -35035059.26 -35035059.20 -35035059.08 0.0066 0.0062
 Uranus -100634-04-06 19:40 J -35035049.93 -35035049.68 -35035049.41 0.0143 0.0023
 Mars -100633-01-11 21:35 J -35034769.78 -35034769.60 -35034769.42 0.1672 0.0640

Pluto -100633-03-29 00:28 J -35034692.72 -35034692.48 -35034692.22 0.0066 0.0023
 Uranus -100633-04-11 02:23 J -35034679.58 -35034679.40 -35034679.21 0.0142 0.0102
 Saturn -100629-01-31 03:21 J -35033289.60 -35033289.36 -35033289.13 0.0283 0.0104
 Saturn -100614-08-12 00:13 J -35027617.73 -35027617.49 -35027617.25 0.0276 0.0020
 Saturn -100599-02-07 00:42 J -35022324.68 -35022324.47 -35022324.24 0.0282 0.0140
 Jupiter -100593-03-09 06:57 J -35020102.41 -35020102.21 -35020102.00 0.0489 0.0266
 Neptune -100592-02-08 12:28 J -35019766.02 -35019765.98 -35019765.89 0.0089 0.0086
 Uranus -100592-09-26 10:04 J -35019536.12 -35019536.08 -35019535.99 0.0135 0.0130
 Neptune -100591-02-11 03:21 J -35019398.55 -35019398.36 -35019398.12 0.0089 0.0053
 Uranus -100591-09-30 11:45 J -35019167.21 -35019167.01 -35019166.79 0.0135 0.0069
 Neptune -100590-02-13 18:42 J -35019030.97 -35019030.72 -35019030.45 0.0089 0.0019
 Uranus -100590-10-04 14:09 J -35018798.15 -35018797.91 -35018797.66 0.0136 0.0008
 Neptune -100589-02-16 09:49 J -35018663.35 -35018663.09 -35018662.82 0.0089 0.0015
 Uranus -100589-10-07 17:16 J -35018429.00 -35018428.78 -35018428.55 0.0136 0.0056
 Neptune -100588-02-18 00:42 J -35018295.67 -35018295.47 -35018295.23 0.0089 0.0049
 Uranus -100588-10-11 20:37 J -35018059.73 -35018059.64 -35018059.50 0.0137 0.0120
 Neptune -100587-02-20 15:49 J -35017927.90 -35017927.84 -35017927.71 0.0089 0.0083
 Saturn -100585-08-05 17:01 J -35017030.94 -35017030.79 -35017030.61 0.0275 0.0203
 Saturn -100584-08-17 21:49 J -35016653.76 -35016653.59 -35016653.41 0.0277 0.0193
 Jupiter -100581-03-13 22:47 J -35015714.79 -35015714.55 -35015714.31 0.0490 0.0107
 Mars -100580-07-20 22:04 J -35015220.70 -35015220.58 -35015220.46 0.1853 0.1448
 Saturn -100570-02-01 03:35 J -35011738.59 -35011738.35 -35011738.10 0.0283 0.0064
 Jupiter -100569-03-18 15:06 J -35011326.89 -35011326.87 -35011326.83 0.0490 0.0487
 Jupiter -100564-09-13 10:04 J -35009322.29 -35009322.08 -35009321.86 0.0539 0.0142
 Saturn -100555-08-13 03:21 J -35006066.60 -35006066.36 -35006066.12 0.0276 0.0022
 Mars -100554-01-14 05:59 J -35005912.43 -35005912.25 -35005912.06 0.1675 0.0404
 Uranus -100552-03-27 17:30 J -35005108.86 -35005108.77 -35005108.65 0.0144 0.0132
 Jupiter -100552-09-18 07:25 J -35004934.36 -35004934.19 -35004934.00 0.0538 0.0326
 Uranus -100551-04-02 02:37 J -35004738.64 -35004738.39 -35004738.15 0.0144 0.0051
 Uranus -100550-04-07 10:04 J -35004368.34 -35004368.08 -35004367.82 0.0143 0.0029

Uranus -100549-04-11 16:18 J -35003997.98 -35003997.82 -35003997.64 0.0142 0.0107
 Pluto -100547-09-29 23:30 J -35003096.69 -35003096.52 -35003096.31 0.0078 0.0051
 Saturn -100541-01-26 03:21 J -35001152.43 -35001152.36 -35001152.26 0.0284 0.0266
 Saturn -100540-02-08 03:49 J -35000773.53 -35000773.34 -35000773.14 0.0282 0.0181
 Saturn -100526-08-07 20:52 J -34995479.82 -34995479.63 -34995479.43 0.0276 0.0160
 Saturn -100525-08-19 01:25 J -34995102.55 -34995102.44 -34995102.30 0.0278 0.0235
 Saturn -100511-02-02 06:13 J -34990187.49 -34990187.24 -34990186.99 0.0283 0.0022
 Jupiter -100510-03-09 15:21 J -34989787.04 -34989786.86 -34989786.66 0.0488 0.0303
 Neptune -100510-08-18 13:54 J -34989625.02 -34989624.92 -34989624.77 0.0088 0.0077
 Neptune -100509-08-19 22:33 J -34989257.75 -34989257.56 -34989257.32 0.0088 0.0046
 Neptune -100508-08-22 06:57 J -34988890.45 -34988890.21 -34988889.96 0.0088 0.0014
 Uranus -100508-09-26 23:59 J -34988854.58 -34988854.50 -34988854.40 0.0135 0.0124
 Neptune -100507-08-24 15:06 J -34988523.11 -34988522.87 -34988522.61 0.0088 0.0017
 Uranus -100507-10-01 01:11 J -34988485.65 -34988485.45 -34988485.22 0.0135 0.0065
 Neptune -100506-08-26 23:01 J -34988155.73 -34988155.54 -34988155.32 0.0088 0.0049
 Uranus -100506-10-05 03:49 J -34988116.58 -34988116.34 -34988116.10 0.0136 0.0002
 Neptune -100505-08-28 06:57 J -34987788.30 -34987788.21 -34987788.08 0.0088 0.0079
 Uranus -100505-10-08 06:42 J -34987747.43 -34987747.22 -34987747.00 0.0136 0.0060
 Uranus -100504-10-12 10:18 J -34987378.15 -34987378.07 -34987377.95 0.0137 0.0124
 Mars -100501-07-23 23:30 J -34986362.71 -34986362.52 -34986362.33 0.1849 0.0292
 Jupiter -100498-03-14 06:13 J -34985399.48 -34985399.24 -34985398.99 0.0489 0.0067
 Saturn -100496-08-14 08:09 J -34984515.39 -34984515.16 -34984514.92 0.0277 0.0068
 Jupiter -100486-03-18 19:25 J -34981011.79 -34981011.69 -34981011.56 0.0490 0.0432
 Saturn -100482-01-27 08:52 J -34979601.27 -34979601.13 -34979600.96 0.0284 0.0219
 Saturn -100481-02-10 09:06 J -34979222.26 -34979222.12 -34979221.96 0.0282 0.0226
 Jupiter -100481-09-12 18:13 J -34979006.94 -34979006.74 -34979006.53 0.0540 0.0200
 Mars -100475-01-16 14:37 J -34977054.99 -34977054.89 -34977054.80 0.1678 0.1436
 Jupiter -100469-09-17 15:06 J -34974619.06 -34974618.87 -34974618.67 0.0538 0.0264
 Uranus -100468-03-28 07:11 J -34974427.31 -34974427.20 -34974427.05 0.0144 0.0125
 Uranus -100467-04-02 16:18 J -34974057.06 -34974056.82 -34974056.56 0.0144 0.0045

Saturn -100467-08-09 02:23 J -34973928.62 -34973928.40 -34973928.18 0.0276 0.0114
 Uranus -100466-04-07 23:45 J -34973686.75 -34973686.51 -34973686.24 0.0143 0.0036
 Uranus -100465-04-12 06:42 J -34973316.37 -34973316.22 -34973316.05 0.0142 0.0114
 Saturn -100452-02-03 12:13 J -34968636.24 -34968635.99 -34968635.74 0.0283 0.0025
 Saturn -100438-08-04 09:21 J -34963341.11 -34963341.11 -34963341.10 0.0275 0.0275
 Saturn -100437-08-15 14:37 J -34962964.11 -34962963.89 -34962963.67 0.0277 0.0114
 Mars -100428-01-09 11:45 J -34959895.14 -34959895.01 -34959894.89 0.1664 0.1243
 Neptune -100427-02-10 04:33 J -34959498.44 -34959498.31 -34959498.12 0.0089 0.0072
 Jupiter -100427-03-08 18:42 J -34959471.87 -34959471.72 -34959471.55 0.0488 0.0362
 Neptune -100426-02-12 19:40 J -34959130.90 -34959130.68 -34959130.42 0.0089 0.0038
 Neptune -100425-02-15 11:01 J -34958763.30 -34958763.04 -34958762.77 0.0089 0.0004
 Neptune -100424-02-17 01:54 J -34958395.66 -34958395.42 -34958395.16 0.0089 0.0030
 Uranus -100424-09-27 14:23 J -34958173.00 -34958172.90 -34958172.77 0.0135 0.0118
 Saturn -100423-01-28 17:45 J -34958049.95 -34958049.76 -34958049.55 0.0284 0.0167
 Neptune -100423-02-19 16:47 J -34958027.96 -34958027.80 -34958027.59 0.0089 0.0064
 Uranus -100423-10-01 15:49 J -34957804.04 -34957803.84 -34957803.60 0.0135 0.0058
 Saturn -100422-02-11 17:45 J -34957670.81 -34957670.76 -34957670.71 0.0282 0.0275
 Uranus -100422-10-05 18:28 J -34957434.98 -34957434.73 -34957434.49 0.0136 0.0004
 Uranus -100421-10-08 21:35 J -34957065.81 -34957065.60 -34957065.39 0.0136 0.0066
 Uranus -100420-10-13 00:57 J -34956696.52 -34956696.46 -34956696.36 0.0137 0.0129
 Jupiter -100415-03-13 09:35 J -34955084.35 -34955084.10 -34955083.86 0.0489 0.0010
 Saturn -100408-08-10 09:49 J -34952377.32 -34952377.09 -34952376.86 0.0276 0.0066
 Jupiter -100403-03-18 00:57 J -34950696.61 -34950696.46 -34950696.30 0.0490 0.0379
 Jupiter -100398-09-12 21:06 J -34948691.81 -34948691.62 -34948691.42 0.0539 0.0279
 Saturn -100393-02-05 20:52 J -34947084.87 -34947084.63 -34947084.39 0.0283 0.0076
 Pluto -100387-03-30 11:30 J -34944840.27 -34944840.02 -34944839.75 0.0066 0.0017
 Jupiter -100386-09-17 11:59 J -34944304.21 -34944304.00 -34944303.78 0.0539 0.0162
 Uranus -100384-03-28 21:21 J -34943745.74 -34943745.61 -34943745.44 0.0144 0.0118
 Uranus -100383-04-03 06:13 J -34943375.48 -34943375.24 -34943374.97 0.0144 0.0038
 Uranus -100382-04-08 14:23 J -34943005.15 -34943004.90 -34943004.64 0.0143 0.0042

Uranus -100381-04-12 20:52 J -34942634.75 -34942634.63 -34942634.47 0.0142 0.0121
 Saturn -100379-08-05 16:33 J -34941789.94 -34941789.81 -34941789.67 0.0276 0.0226
 Saturn -100378-08-17 22:04 J -34941412.76 -34941412.58 -34941412.38 0.0277 0.0164
 Saturn -100364-01-30 05:45 J -34936498.48 -34936498.26 -34936498.02 0.0283 0.0111
 Mars -100349-01-12 17:30 J -34931037.95 -34931037.77 -34931037.58 0.1667 0.0278
 Saturn -100349-08-11 18:13 J -34930825.98 -34930825.74 -34930825.50 0.0276 0.0016
 Neptune -100345-08-19 05:16 J -34929357.43 -34929357.28 -34929357.08 0.0088 0.0063
 Jupiter -100344-03-07 22:47 J -34929156.68 -34929156.55 -34929156.43 0.0488 0.0416
 Neptune -100344-08-21 13:40 J -34928990.14 -34928989.93 -34928989.67 0.0088 0.0033
 Neptune -100343-08-23 22:18 J -34928622.82 -34928622.57 -34928622.32 0.0088 0.0001
 Neptune -100342-08-26 06:13 J -34928255.46 -34928255.24 -34928254.99 0.0088 0.0031
 Neptune -100341-08-27 14:09 J -34927888.07 -34927887.91 -34927887.71 0.0088 0.0062
 Uranus -100340-09-28 04:18 J -34927491.44 -34927491.32 -34927491.17 0.0135 0.0112
 Uranus -100339-10-02 05:59 J -34927122.46 -34927122.25 -34927122.01 0.0135 0.0052
 Uranus -100338-10-06 08:23 J -34926753.39 -34926753.15 -34926752.90 0.0136 0.0009
 Uranus -100337-10-09 11:01 J -34926384.23 -34926384.04 -34926383.82 0.0136 0.0071
 Uranus -100336-10-13 15:06 J -34926014.92 -34926014.87 -34926014.82 0.0137 0.0133
 Saturn -100334-02-07 08:09 J -34925533.37 -34925533.16 -34925532.93 0.0282 0.0130
 Jupiter -100332-03-12 14:23 J -34924769.14 -34924768.90 -34924768.66 0.0489 0.0045
 Jupiter -100320-03-17 05:01 J -34920381.47 -34920381.29 -34920381.10 0.0490 0.0323
 Saturn -100320-08-07 01:25 J -34920238.62 -34920238.44 -34920238.25 0.0276 0.0175
 Saturn -100319-08-19 07:25 J -34919861.34 -34919861.19 -34919861.04 0.0278 0.0214
 Jupiter -100315-09-11 16:47 J -34918376.95 -34918376.80 -34918376.64 0.0540 0.0387
 Saturn -100305-02-01 19:25 J -34914946.93 -34914946.69 -34914946.44 0.0283 0.0054
 Jupiter -100303-09-16 15:49 J -34913989.06 -34913988.84 -34913988.62 0.0539 0.0085
 Pluto -100301-09-30 08:52 J -34913244.37 -34913244.13 -34913243.88 0.0078 0.0011
 Uranus -100300-03-29 09:06 J -34913064.27 -34913064.12 -34913063.94 0.0144 0.0112
 Uranus -100299-04-03 18:28 J -34912693.98 -34912693.73 -34912693.47 0.0144 0.0032
 Uranus -100298-04-09 02:23 J -34912323.64 -34912323.40 -34912323.14 0.0143 0.0048
 Uranus -100297-04-13 09:21 J -34911953.22 -34911953.11 -34911952.97 0.0142 0.0125

Mars -100296-07-20 17:01 J -34911489.89 -34911489.79 -34911489.68 0.1860 0.1557
 Saturn -100290-08-14 03:35 J -34909274.58 -34909274.35 -34909274.11 0.0276 0.0036
 Saturn -100276-01-25 21:21 J -34904360.70 -34904360.61 -34904360.48 0.0284 0.0254
 Saturn -100275-02-08 21:49 J -34903981.78 -34903981.59 -34903981.40 0.0282 0.0186
 Mars -100270-01-15 01:54 J -34902180.59 -34902180.42 -34902180.25 0.1670 0.0742
 Neptune -100262-02-11 20:52 J -34899230.81 -34899230.63 -34899230.41 0.0089 0.0057
 Neptune -100261-02-14 12:13 J -34898863.24 -34898862.99 -34898862.73 0.0089 0.0023
 Jupiter -100261-03-07 02:23 J -34898841.45 -34898841.40 -34898841.33 0.0488 0.0472
 Saturn -100261-08-08 10:18 J -34898687.28 -34898687.07 -34898686.85 0.0276 0.0124
 Neptune -100260-02-16 03:06 J -34898495.63 -34898495.37 -34898495.10 0.0089 0.0011
 Saturn -100260-08-20 16:18 J -34898309.89 -34898309.82 -34898309.75 0.0278 0.0264
 Neptune -100259-02-18 18:13 J -34898127.96 -34898127.74 -34898127.50 0.0089 0.0044
 Neptune -100258-02-21 08:52 J -34897760.23 -34897760.13 -34897759.98 0.0089 0.0078
 Uranus -100256-09-28 18:57 J -34896809.84 -34896809.71 -34896809.53 0.0134 0.0106
 Uranus -100255-10-02 20:52 J -34896440.85 -34896440.63 -34896440.39 0.0135 0.0046
 Uranus -100254-10-06 23:16 J -34896071.77 -34896071.53 -34896071.29 0.0136 0.0015
 Uranus -100253-10-10 01:54 J -34895702.61 -34895702.42 -34895702.20 0.0136 0.0077
 Jupiter -100249-03-11 13:25 J -34894454.18 -34894453.94 -34894453.70 0.0488 0.0119
 Saturn -100246-02-03 10:47 J -34893395.30 -34893395.05 -34893394.80 0.0283 0.0006
 Jupiter -100237-03-16 04:18 J -34890066.53 -34890066.32 -34890066.11 0.0489 0.0248
 Jupiter -100232-09-10 21:35 J -34888061.72 -34888061.60 -34888061.49 0.0540 0.0459
 Saturn -100231-08-15 13:25 J -34887723.16 -34887722.94 -34887722.70 0.0277 0.0088
 Jupiter -100220-09-15 17:59 J -34883673.98 -34883673.75 -34883673.53 0.0539 0.0010
 Saturn -100217-01-28 11:16 J -34882809.19 -34882809.03 -34882808.84 0.0284 0.0196
 Mars -100217-07-23 20:37 J -34882631.84 -34882631.64 -34882631.45 0.1856 0.0238
 Saturn -100216-02-10 11:30 J -34882430.13 -34882430.02 -34882429.88 0.0282 0.0243
 Uranus -100216-03-29 22:04 J -34882382.74 -34882382.58 -34882382.38 0.0144 0.0106
 Uranus -100215-04-04 07:25 J -34882012.45 -34882012.19 -34882011.93 0.0144 0.0026
 Uranus -100214-04-09 15:35 J -34881642.09 -34881641.85 -34881641.59 0.0143 0.0053
 Uranus -100213-04-13 22:33 J -34881271.64 -34881271.56 -34881271.43 0.0142 0.0131

Jupiter -100208-09-20 08:52 J -34879286.25 -34879286.13 -34879286.00 0.0538 0.0440
 Saturn -100202-08-10 19:11 J -34877135.93 -34877135.70 -34877135.47 0.0276 0.0074
 Saturn -100187-02-05 01:54 J -34871843.66 -34871843.42 -34871843.18 0.0283 0.0064
 Neptune -100181-08-18 11:16 J -34869457.10 -34869457.03 -34869456.91 0.0088 0.0082
 Neptune -100180-08-20 19:40 J -34869089.87 -34869089.68 -34869089.45 0.0088 0.0051
 Neptune -100179-08-23 04:18 J -34868722.56 -34868722.32 -34868722.07 0.0088 0.0019
 Neptune -100178-08-25 12:42 J -34868355.21 -34868354.97 -34868354.72 0.0088 0.0012
 Neptune -100177-08-26 20:23 J -34867987.85 -34867987.65 -34867987.41 0.0088 0.0044
 Neptune -100176-08-29 05:01 J -34867620.43 -34867620.29 -34867620.15 0.0088 0.0074
 Saturn -100173-08-04 17:16 J -34866548.88 -34866548.78 -34866548.67 0.0275 0.0247
 Saturn -100172-08-16 22:47 J -34866171.75 -34866171.55 -34866171.34 0.0277 0.0137
 Uranus -100172-09-29 09:49 J -34866128.23 -34866128.09 -34866127.90 0.0134 0.0100
 Uranus -100171-10-03 11:45 J -34865759.24 -34865759.01 -34865758.77 0.0135 0.0040
 Uranus -100170-10-07 13:40 J -34865390.16 -34865389.93 -34865389.68 0.0135 0.0021
 Uranus -100169-10-10 16:33 J -34865021.00 -34865020.81 -34865020.61 0.0136 0.0081
 Jupiter -100166-03-11 15:49 J -34864139.07 -34864138.84 -34864138.61 0.0488 0.0180
 Saturn -100158-01-30 01:11 J -34861257.66 -34861257.45 -34861257.23 0.0284 0.0138
 Jupiter -100154-03-16 07:25 J -34859751.41 -34859751.19 -34859750.96 0.0489 0.0191
 Mars -100144-01-10 10:04 J -34856163.25 -34856163.08 -34856162.92 0.1660 0.0842
 Saturn -100143-08-12 02:52 J -34855584.62 -34855584.38 -34855584.14 0.0277 0.0026
 Pluto -100140-04-01 10:33 J -34854621.30 -34854621.06 -34854620.78 0.0066 0.0019
 Jupiter -100137-09-14 14:09 J -34853359.13 -34853358.91 -34853358.69 0.0539 0.0104
 Uranus -100132-03-30 09:49 J -34851701.27 -34851701.09 -34851700.90 0.0144 0.0101
 Uranus -100131-04-04 19:11 J -34851330.96 -34851330.70 -34851330.44 0.0144 0.0021
 Uranus -100130-04-10 03:21 J -34850960.59 -34850960.36 -34850960.10 0.0143 0.0058
 Uranus -100129-04-14 10:47 J -34850590.12 -34850590.05 -34850589.95 0.0142 0.0135
 Saturn -100128-02-06 15:21 J -34850292.08 -34850291.86 -34850291.62 0.0283 0.0120
 Jupiter -100125-09-19 11:16 J -34848971.19 -34848971.03 -34848970.86 0.0539 0.0360
 Saturn -100114-08-07 01:54 J -34844997.58 -34844997.42 -34844997.25 0.0275 0.0198
 Saturn -100113-08-18 06:57 J -34844620.37 -34844620.21 -34844620.02 0.0277 0.0185

Saturn -100099-01-31 13:11 J -34839706.18 -34839705.95 -34839705.71 0.0284 0.0084
 Neptune -100098-02-10 22:04 J -34839330.69 -34839330.58 -34839330.42 0.0089 0.0076
 Neptune -100097-02-13 13:25 J -34838963.17 -34838962.94 -34838962.71 0.0089 0.0042
 Neptune -100096-02-15 04:18 J -34838595.58 -34838595.32 -34838595.05 0.0089 0.0009
 Neptune -100095-02-17 19:11 J -34838227.95 -34838227.70 -34838227.44 0.0089 0.0025
 Neptune -100094-02-20 09:49 J -34837860.26 -34837860.09 -34837859.86 0.0089 0.0059
 Uranus -100088-09-30 01:11 J -34835446.60 -34835446.45 -34835446.25 0.0134 0.0094
 Uranus -100087-10-04 03:06 J -34835077.60 -34835077.37 -34835077.13 0.0135 0.0034
 Uranus -100086-10-08 05:01 J -34834708.53 -34834708.29 -34834708.05 0.0136 0.0026
 Uranus -100085-10-11 07:40 J -34834339.36 -34834339.18 -34834338.99 0.0136 0.0086
 Saturn -100084-08-13 09:06 J -34834033.36 -34834033.12 -34834032.88 0.0277 0.0021
 Jupiter -100083-03-10 19:54 J -34833823.88 -34833823.67 -34833823.46 0.0488 0.0235
 Jupiter -100071-03-15 07:54 J -34829436.41 -34829436.17 -34829435.94 0.0489 0.0123
 Saturn -100070-01-26 02:37 J -34829119.46 -34829119.39 -34829119.29 0.0284 0.0266
 Saturn -100069-02-09 02:52 J -34828740.58 -34828740.38 -34828740.18 0.0283 0.0171
 Mars -100065-01-13 15:35 J -34827306.04 -34827305.85 -34827305.66 0.1663 0.0102
 Saturn -100055-08-08 08:52 J -34823446.33 -34823446.13 -34823445.93 0.0275 0.0152
 Saturn -100054-08-20 13:25 J -34823069.06 -34823068.94 -34823068.79 0.0277 0.0230
 Jupiter -100054-09-14 19:25 J -34823043.90 -34823043.69 -34823043.47 0.0540 0.0171
 Pluto -100054-10-03 13:25 J -34823025.12 -34823024.94 -34823024.72 0.0078 0.0047
 Uranus -100048-03-31 00:13 J -34821019.68 -34821019.49 -34821019.28 0.0144 0.0094
 Uranus -100047-04-05 09:35 J -34820649.36 -34820649.10 -34820648.83 0.0144 0.0015
 Uranus -100046-04-10 17:59 J -34820278.98 -34820278.75 -34820278.51 0.0143 0.0063
 Uranus -100045-04-15 01:11 J -34819908.49 -34819908.45 -34819908.39 0.0143 0.0140
 Jupiter -100042-09-19 17:01 J -34818655.97 -34818655.79 -34818655.60 0.0539 0.0293
 Saturn -100040-02-01 23:16 J -34818154.78 -34818154.53 -34818154.28 0.0284 0.0033
 Saturn -100025-08-14 13:54 J -34812482.15 -34812481.92 -34812481.69 0.0277 0.0063
 Neptune -100016-08-20 02:09 J -34809189.55 -34809189.41 -34809189.23 0.0088 0.0069
 Neptune -100015-08-22 10:47 J -34808822.26 -34808822.05 -34808821.81 0.0088 0.0038
 Neptune -100014-08-24 19:11 J -34808454.94 -34808454.70 -34808454.44 0.0088 0.0007

Neptune -100013-08-26 03:21 J -34808087.59 -34808087.36 -34808087.11 0.0088 0.0025

Mars -100012-07-20 10:04 J -34807759.16 -34807759.08 -34807759.00 0.1867 0.1698

Neptune -100012-08-28 11:45 J -34807720.21 -34807720.01 -34807719.82 0.0088 0.0056

Saturn -100011-01-27 10:33 J -34807568.21 -34807568.06 -34807567.90 0.0284 0.0219

Neptune -100011-08-30 19:25 J -34807352.72 -34807352.69 -34807352.63 0.0088 0.0087

Saturn -100010-02-10 10:47 J -34807189.20 -34807189.05 -34807188.88 0.0282 0.0218

Uranus -100004-09-30 16:47 J -34804764.97 -34804764.80 -34804764.60 0.0134 0.0087

Uranus -100003-10-04 18:13 J -34804395.97 -34804395.74 -34804395.50 0.0135 0.0028

Uranus -100002-10-08 19:54 J -34804026.90 -34804026.67 -34804026.42 0.0136 0.0032

Uranus -100001-10-11 22:18 J -34803657.73 -34803657.57 -34803657.37 0.0136 0.0092

100TH MILLENNIUM BCE

This is a list of transits of Earth in the 100th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-100000-03-09 23:16 J	-34803508.73	-34803508.53	-34803508.34	0.0487	0.0291		
Saturn	-99996-08-09 13:54 J	-34801895.13	-34801894.92	-34801894.69	0.0275	0.0109		
Saturn	-99995-08-21 18:42 J	-34801517.76	-34801517.72	-34801517.67	0.0277	0.0271		
Jupiter	-99988-03-14 12:42 J	-34799121.21	-34799120.97	-34799120.73	0.0488	0.0071		
Mars	-99986-01-15 22:18 J	-34798448.71	-34798448.57	-34798448.42	0.1665	0.1084		
Saturn	-99981-02-04 06:13 J	-34796603.49	-34796603.24	-34796602.99	0.0284	0.0013		
Jupiter	-99976-03-19 04:47 J	-34794733.39	-34794733.30	-34794733.19	0.0490	0.0442		

Jupiter -99971-09-13 22:47 J -34792728.75 -34792728.55 -34792728.35 0.0540 0.0248
 Saturn -99966-08-16 16:47 J -34790931.02 -34790930.80 -34790930.57 0.0277 0.0103
 Uranus -99964-03-31 13:25 J -34790338.14 -34790337.94 -34790337.72 0.0144 0.0088
 Uranus -99963-04-05 22:47 J -34789967.81 -34789967.55 -34789967.28 0.0144 0.0009
 Uranus -99962-04-11 07:11 J -34789597.42 -34789597.20 -34789596.96 0.0143 0.0069
 Jupiter -99959-09-18 18:13 J -34788340.95 -34788340.74 -34788340.53 0.0539 0.0207
 Saturn -99952-01-28 15:35 J -34786017.03 -34786016.85 -34786016.64 0.0284 0.0176
 Saturn -99951-02-11 16:33 J -34785637.90 -34785637.81 -34785637.71 0.0282 0.0260
 Mars -99939-01-09 03:06 J -34781288.47 -34781288.37 -34781288.26 0.1653 0.1368
 Saturn -99937-08-10 17:45 J -34780343.99 -34780343.76 -34780343.52 0.0275 0.0068
 Neptune -99933-02-12 14:37 J -34779063.07 -34779062.89 -34779062.69 0.0089 0.0061
 Mars -99933-07-23 16:18 J -34778901.02 -34778900.82 -34778900.63 0.1863 0.0162
 Neptune -99932-02-14 05:01 J -34778695.52 -34778695.29 -34778695.02 0.0089 0.0028
 Neptune -99931-02-16 20:09 J -34778327.92 -34778327.66 -34778327.39 0.0089 0.0006
 Neptune -99930-02-19 10:47 J -34777960.26 -34777960.05 -34777959.79 0.0089 0.0040
 Neptune -99929-02-22 02:09 J -34777592.54 -34777592.41 -34777592.24 0.0089 0.0073
 Saturn -99922-02-05 10:18 J -34775052.31 -34775052.07 -34775051.82 0.0284 0.0056
 Uranus -99920-10-01 07:54 J -34774083.36 -34774083.17 -34774082.97 0.0134 0.0081
 Uranus -99919-10-05 09:21 J -34773714.35 -34773714.11 -34773713.87 0.0135 0.0022
 Uranus -99918-10-09 11:01 J -34773345.27 -34773345.04 -34773344.80 0.0136 0.0037
 Jupiter -99917-03-09 05:59 J -34773193.42 -34773193.25 -34773193.07 0.0487 0.0335
 Uranus -99917-10-12 13:40 J -34772976.10 -34772975.93 -34772975.76 0.0136 0.0097
 Saturn -99908-08-05 13:25 J -34769757.05 -34769756.94 -34769756.81 0.0275 0.0238
 Saturn -99907-08-17 18:28 J -34769379.93 -34769379.73 -34769379.52 0.0277 0.0140
 Jupiter -99905-03-13 20:37 J -34768805.89 -34768805.64 -34768805.40 0.0488 0.0029
 Pluto -99894-04-02 13:25 J -34764769.13 -34764768.94 -34764768.69 0.0066 0.0040
 Saturn -99893-01-30 17:59 J -34764465.96 -34764465.75 -34764465.52 0.0284 0.0136
 Jupiter -99893-03-18 10:18 J -34764418.21 -34764418.07 -34764417.92 0.0489 0.0392
 Pluto -99893-04-03 06:42 J -34764402.39 -34764402.22 -34764402.01 0.0067 0.0047
 Jupiter -99888-09-13 01:11 J -34762413.63 -34762413.45 -34762413.27 0.0541 0.0325

Uranus -99880-04-01 04:18 J -34759656.52 -34759656.32 -34759656.08 0.0144 0.0081
 Uranus -99879-04-06 14:09 J -34759286.18 -34759285.91 -34759285.65 0.0144 0.0002
 Uranus -99878-04-11 22:18 J -34758915.78 -34758915.57 -34758915.33 0.0143 0.0076
 Saturn -99878-08-12 19:54 J -34758792.91 -34758792.67 -34758792.43 0.0275 0.0030
 Jupiter -99876-09-18 00:57 J -34758025.67 -34758025.46 -34758025.24 0.0540 0.0148
 Saturn -99863-02-06 12:42 J -34753501.20 -34753500.97 -34753500.73 0.0284 0.0095
 Mars -99860-01-11 08:37 J -34752431.33 -34752431.14 -34752430.96 0.1656 0.0449
 Neptune -99852-08-19 08:23 J -34749289.18 -34749289.15 -34749289.09 0.0088 0.0087
 Neptune -99851-08-21 17:01 J -34748921.97 -34748921.79 -34748921.58 0.0088 0.0056
 Neptune -99850-08-24 01:40 J -34748554.66 -34748554.43 -34748554.18 0.0088 0.0025
 Saturn -99849-08-06 14:09 J -34748206.06 -34748205.91 -34748205.73 0.0275 0.0201
 Neptune -99849-08-25 10:04 J -34748187.33 -34748187.08 -34748186.83 0.0088 0.0007
 Saturn -99848-08-18 18:57 J -34747828.89 -34747828.71 -34747828.52 0.0276 0.0176
 Neptune -99848-08-27 17:59 J -34747819.95 -34747819.75 -34747819.50 0.0088 0.0039
 Neptune -99847-08-30 02:37 J -34747452.54 -34747452.39 -34747452.23 0.0088 0.0069
 Uranus -99837-09-27 21:49 J -34743770.62 -34743770.59 -34743770.52 0.0134 0.0131
 Uranus -99836-10-01 22:33 J -34743401.75 -34743401.56 -34743401.34 0.0134 0.0075
 Uranus -99835-10-05 23:59 J -34743032.74 -34743032.50 -34743032.25 0.0135 0.0016
 Saturn -99834-01-31 18:13 J -34742914.97 -34742914.74 -34742914.51 0.0284 0.0099
 Jupiter -99834-03-09 13:40 J -34742878.08 -34742877.93 -34742877.77 0.0487 0.0373
 Uranus -99834-10-10 01:40 J -34742663.66 -34742663.43 -34742663.19 0.0135 0.0042
 Uranus -99833-10-13 04:04 J -34742294.48 -34742294.33 -34742294.16 0.0136 0.0102
 Jupiter -99822-03-14 04:18 J -34738490.56 -34738490.32 -34738490.07 0.0488 0.0012
 Saturn -99819-08-13 21:49 J -34737241.83 -34737241.59 -34737241.35 0.0275 0.0009
 Jupiter -99810-03-18 17:59 J -34734102.91 -34734102.75 -34734102.57 0.0489 0.0350
 Pluto -99808-10-03 14:09 J -34733173.10 -34733172.91 -34733172.68 0.0078 0.0041
 Jupiter -99805-09-12 11:30 J -34732098.17 -34732098.02 -34732097.85 0.0541 0.0373
 Saturn -99804-02-07 13:11 J -34731950.16 -34731949.95 -34731949.72 0.0284 0.0132
 Uranus -99796-04-01 15:49 J -34728975.05 -34728974.84 -34728974.60 0.0144 0.0075
 Uranus -99795-04-07 01:40 J -34728604.70 -34728604.43 -34728604.17 0.0144 0.0004

Uranus -99794-04-12 09:49 J -34728234.29 -34728234.09 -34728233.86 0.0143 0.0081
 Jupiter -99793-09-17 09:06 J -34727710.34 -34727710.12 -34727709.90 0.0540 0.0092
 Saturn -99790-08-08 14:52 J -34726655.07 -34726654.88 -34726654.68 0.0275 0.0164
 Saturn -99789-08-19 18:57 J -34726277.85 -34726277.71 -34726277.54 0.0276 0.0211
 Mars -99781-01-14 14:52 J -34723574.06 -34723573.88 -34723573.69 0.1658 0.0489
 Saturn -99775-02-01 17:30 J -34721364.01 -34721363.77 -34721363.53 0.0284 0.0062
 Neptune -99769-02-11 16:33 J -34719162.89 -34719162.81 -34719162.66 0.0089 0.0080
 Neptune -99768-02-13 07:40 J -34718795.40 -34718795.18 -34718794.95 0.0089 0.0046
 Neptune -99767-02-15 22:18 J -34718427.82 -34718427.57 -34718427.30 0.0089 0.0013
 Neptune -99766-02-18 12:57 J -34718060.20 -34718059.96 -34718059.69 0.0089 0.0021
 Neptune -99765-02-21 04:18 J -34717692.53 -34717692.32 -34717692.11 0.0089 0.0054
 Neptune -99764-02-22 18:42 J -34717324.73 -34717324.72 -34717324.66 0.0089 0.0088
 Saturn -99760-08-14 23:01 J -34715690.77 -34715690.54 -34715690.30 0.0275 0.0046
 Uranus -99753-09-28 12:13 J -34713089.05 -34713088.99 -34713088.88 0.0134 0.0125
 Uranus -99752-10-02 12:56 J -34712720.16 -34712719.96 -34712719.74 0.0134 0.0069
 Jupiter -99751-03-08 22:18 J -34712562.69 -34712562.57 -34712562.44 0.0487 0.0412
 Uranus -99751-10-06 14:23 J -34712351.14 -34712350.90 -34712350.66 0.0135 0.0011
 Uranus -99750-10-10 15:49 J -34711982.06 -34711981.84 -34711981.60 0.0135 0.0048
 Uranus -99749-10-13 18:13 J -34711612.88 -34711612.74 -34711612.58 0.0136 0.0107
 Saturn -99746-01-26 13:25 J -34710778.03 -34710777.94 -34710777.84 0.0285 0.0262
 Saturn -99745-02-09 13:54 J -34710399.12 -34710398.92 -34710398.72 0.0283 0.0169
 Jupiter -99739-03-13 12:42 J -34708175.21 -34708174.97 -34708174.73 0.0488 0.0052
 Saturn -99731-08-09 16:04 J -34705104.04 -34705103.83 -34705103.61 0.0275 0.0127
 Saturn -99730-08-21 20:23 J -34704726.76 -34704726.65 -34704726.55 0.0276 0.0246
 Mars -99728-07-20 01:40 J -34704028.45 -34704028.43 -34704028.41 0.1873 0.1859
 Jupiter -99727-03-18 03:20 J -34703787.53 -34703787.36 -34703787.16 0.0489 0.0314
 Jupiter -99722-09-12 17:16 J -34701782.91 -34701782.78 -34701782.65 0.0541 0.0438
 Saturn -99716-02-02 16:32 J -34699813.06 -34699812.81 -34699812.56 0.0284 0.0027
 Uranus -99712-04-02 04:32 J -34698293.54 -34698293.31 -34698293.07 0.0144 0.0069
 Uranus -99711-04-07 13:54 J -34697923.18 -34697922.92 -34697922.65 0.0144 0.0010

Uranus -99710-04-12 22:18 J -34697552.78 -34697552.57 -34697552.35 0.0143 0.0086
 Jupiter -99710-09-17 10:47 J -34697395.28 -34697395.05 -34697394.83 0.0541 0.0013
 Mars -99702-01-16 21:06 J -34694716.71 -34694716.62 -34694716.53 0.1661 0.1440
 Saturn -99701-08-16 00:42 J -34694139.69 -34694139.47 -34694139.23 0.0275 0.0084
 Jupiter -99698-09-22 09:35 J -34693007.20 -34693007.10 -34693007.00 0.0540 0.0477
 Saturn -99687-01-27 14:23 J -34689227.05 -34689226.90 -34689226.74 0.0285 0.0222
 Neptune -99687-08-20 23:44 J -34689021.63 -34689021.51 -34689021.35 0.0088 0.0074
 Saturn -99686-02-10 14:52 J -34688848.04 -34688847.88 -34688847.70 0.0283 0.0207
 Neptune -99686-08-23 08:23 J -34688654.36 -34688654.15 -34688653.91 0.0088 0.0042
 Neptune -99685-08-24 17:16 J -34688287.02 -34688286.78 -34688286.52 0.0088 0.0011
 Neptune -99684-08-27 01:40 J -34687919.67 -34687919.43 -34687919.18 0.0088 0.0020
 Neptune -99683-08-29 09:35 J -34687552.28 -34687552.10 -34687551.88 0.0088 0.0052
 Neptune -99682-08-31 17:30 J -34687184.83 -34687184.77 -34687184.65 0.0088 0.0083
 Saturn -99672-08-10 17:59 J -34683552.97 -34683552.75 -34683552.52 0.0275 0.0088
 Uranus -99669-09-29 02:37 J -34682407.48 -34682407.39 -34682407.26 0.0134 0.0119
 Jupiter -99668-03-08 07:25 J -34682247.28 -34682247.19 -34682247.10 0.0487 0.0448
 Uranus -99668-10-03 03:06 J -34682038.57 -34682038.37 -34682038.14 0.0134 0.0063
 Uranus -99667-10-07 04:32 J -34681669.55 -34681669.31 -34681669.06 0.0135 0.0006
 Uranus -99666-10-11 06:13 J -34681300.46 -34681300.24 -34681300.01 0.0135 0.0053
 Uranus -99665-10-14 08:23 J -34680931.27 -34680931.15 -34680930.99 0.0136 0.0112
 Saturn -99657-02-04 16:47 J -34678262.05 -34678261.80 -34678261.55 0.0284 0.0012
 Jupiter -99656-03-12 22:04 J -34677859.82 -34677859.58 -34677859.34 0.0487 0.0085
 Mars -99655-01-10 04:18 J -34677556.48 -34677556.32 -34677556.17 0.1649 0.0938
 Mars -99649-07-23 11:01 J -34675170.24 -34675170.04 -34675169.85 0.1869 0.0083
 Pluto -99647-04-04 03:06 J -34674550.59 -34674550.37 -34674550.10 0.0066 0.0028
 Pluto -99646-04-05 19:54 J -34674183.76 -34674183.67 -34674183.51 0.0067 0.0059
 Jupiter -99644-03-17 12:28 J -34673472.17 -34673471.98 -34673471.78 0.0488 0.0277
 Saturn -99643-08-05 23:16 J -34672965.63 -34672965.53 -34672965.41 0.0274 0.0244
 Saturn -99642-08-18 03:35 J -34672588.55 -34672588.35 -34672588.12 0.0275 0.0125
 Jupiter -99639-09-11 19:11 J -34671467.76 -34671467.70 -34671467.64 0.0542 0.0517

Uranus -99629-03-28 03:35 J -34667982.37 -34667982.35 -34667982.30 0.0145 0.0143
 Saturn -99628-01-28 16:47 J -34667675.99 -34667675.80 -34667675.61 0.0285 0.0181
 Uranus -99628-04-02 14:08 J -34667612.14 -34667611.91 -34667611.67 0.0144 0.0065
 Saturn -99627-02-11 17:16 J -34667296.90 -34667296.78 -34667296.65 0.0283 0.0245
 Uranus -99627-04-07 23:30 J -34667241.78 -34667241.52 -34667241.25 0.0144 0.0012
 Jupiter -99627-09-16 20:23 J -34667079.88 -34667079.65 -34667079.43 0.0541 0.0040
 Uranus -99626-04-13 07:54 J -34666871.37 -34666871.17 -34666870.96 0.0143 0.0089
 Jupiter -99615-09-21 18:13 J -34662691.87 -34662691.74 -34662691.60 0.0539 0.0423
 Saturn -99613-08-11 21:20 J -34662001.85 -34662001.61 -34662001.37 0.0275 0.0048
 Neptune -99604-02-12 10:18 J -34658895.24 -34658895.07 -34658894.88 0.0089 0.0064
 Neptune -99603-02-15 00:42 J -34658527.71 -34658527.47 -34658527.21 0.0089 0.0031
 Neptune -99602-02-17 15:35 J -34658160.11 -34658159.85 -34658159.58 0.0089 0.0003
 Neptune -99601-02-20 05:59 J -34657792.48 -34657792.25 -34657792.00 0.0089 0.0036
 Neptune -99600-02-21 21:20 J -34657424.78 -34657424.61 -34657424.45 0.0089 0.0069
 Saturn -99598-02-05 18:56 J -34656710.95 -34656710.71 -34656710.46 0.0284 0.0052
 Jupiter -99585-03-07 16:32 J -34651931.83 -34651931.81 -34651931.77 0.0486 0.0483
 Uranus -99585-09-29 16:32 J -34651725.92 -34651725.81 -34651725.67 0.0134 0.0114
 Saturn -99584-08-07 03:20 J -34651414.52 -34651414.36 -34651414.19 0.0274 0.0201
 Uranus -99584-10-03 17:01 J -34651357.00 -34651356.79 -34651356.56 0.0134 0.0058
 Saturn -99583-08-19 07:40 J -34651037.36 -34651037.18 -34651036.98 0.0276 0.0166
 Uranus -99583-10-07 18:28 J -34650987.98 -34650987.73 -34650987.49 0.0135 0.0001
 Uranus -99582-10-11 19:54 J -34650618.88 -34650618.67 -34650618.44 0.0135 0.0057
 Uranus -99581-10-14 22:18 J -34650249.68 -34650249.57 -34650249.43 0.0136 0.0116
 Mars -99576-01-12 09:06 J -34648699.31 -34648699.12 -34648698.93 0.1651 0.0047
 Jupiter -99573-03-12 03:49 J -34647544.57 -34647544.34 -34647544.10 0.0487 0.0135
 Mars -99570-07-27 15:20 J -34646311.88 -34646311.86 -34646311.83 0.1865 0.1843
 Saturn -99569-01-30 21:20 J -34646124.82 -34646124.61 -34646124.38 0.0285 0.0137
 Jupiter -99561-03-16 17:59 J -34643156.96 -34643156.75 -34643156.53 0.0488 0.0226
 Pluto -99561-10-05 08:23 J -34642954.39 -34642954.15 -34642953.91 0.0078 0.0018
 Saturn -99554-08-14 02:08 J -34640450.65 -34640450.41 -34640450.17 0.0275 0.0006

Uranus	-99545-03-28 15:20 J	-34637300.92	-34637300.86	-34637300.77	0.0145	0.0138
Uranus	-99544-04-03 01:40 J	-34636930.66	-34636930.43	-34636930.18	0.0145	0.0061
Jupiter	-99544-09-16 00:42 J	-34636764.69	-34636764.47	-34636764.25	0.0541	0.0111
Uranus	-99543-04-08 11:01 J	-34636560.30	-34636560.04	-34636559.77	0.0144	0.0017
Uranus	-99542-04-13 18:56 J	-34636189.90	-34636189.71	-34636189.49	0.0143	0.0092
Saturn	-99539-02-06 23:44 J	-34635159.74	-34635159.51	-34635159.27	0.0284	0.0095
Jupiter	-99532-09-20 16:32 J	-34632376.98	-34632376.81	-34632376.63	0.0540	0.0328
Saturn	-99525-08-08 08:52 J	-34629863.32	-34629863.13	-34629862.93	0.0275	0.0157
Saturn	-99524-08-20 13:40 J	-34629486.08	-34629485.93	-34629485.77	0.0276	0.0209
Neptune	-99522-08-22 15:49 J	-34628754.00	-34628753.84	-34628753.63	0.0088	0.0060
Neptune	-99521-08-24 00:42 J	-34628386.69	-34628386.47	-34628386.21	0.0088	0.0029
Neptune	-99520-08-26 09:49 J	-34628019.34	-34628019.09	-34628018.84	0.0088	0.0003
Neptune	-99519-08-28 17:59 J	-34627651.97	-34627651.75	-34627651.50	0.0088	0.0035
Neptune	-99518-08-31 02:08 J	-34627284.56	-34627284.41	-34627284.22	0.0088	0.0066
Saturn	-99510-02-01 05:01 J	-34624573.53	-34624573.29	-34624573.05	0.0285	0.0089
Uranus	-99501-09-30 06:28 J	-34621044.35	-34621044.23	-34621044.07	0.0134	0.0109
Uranus	-99500-10-04 07:11 J	-34620675.42	-34620675.20	-34620674.97	0.0134	0.0053
Uranus	-99499-10-08 08:23 J	-34620306.39	-34620306.15	-34620305.90	0.0135	0.0005
Uranus	-99498-10-12 10:18 J	-34619937.29	-34619937.07	-34619936.86	0.0135	0.0062
Mars	-99497-01-15 14:52 J	-34619842.04	-34619841.88	-34619841.72	0.1654	0.0873
Uranus	-99497-10-15 12:56 J	-34619568.07	-34619567.96	-34619567.85	0.0136	0.0120
Saturn	-99495-08-15 08:37 J	-34618899.38	-34618899.14	-34618898.90	0.0275	0.0039
Jupiter	-99490-03-12 10:04 J	-34617229.31	-34617229.08	-34617228.86	0.0487	0.0182
Saturn	-99481-01-26 06:42 J	-34613987.24	-34613987.22	-34613987.17	0.0285	0.0283
Saturn	-99480-02-08 06:56 J	-34613608.42	-34613608.21	-34613607.98	0.0284	0.0142
Jupiter	-99478-03-17 00:42 J	-34612841.69	-34612841.47	-34612841.24	0.0488	0.0182
Saturn	-99466-08-10 15:35 J	-34608312.07	-34608311.85	-34608311.63	0.0275	0.0112
Saturn	-99465-08-21 20:23 J	-34607934.73	-34607934.65	-34607934.54	0.0276	0.0255
Uranus	-99461-03-29 01:40 J	-34606619.51	-34606619.43	-34606619.32	0.0145	0.0134
Jupiter	-99461-09-14 21:35 J	-34606449.80	-34606449.60	-34606449.39	0.0541	0.0212

Uranus -99460-04-03 11:59 J -34606249.24 -34606249.00 -34606248.75 0.0145 0.0057
 Uranus -99459-04-08 20:52 J -34605878.88 -34605878.63 -34605878.36 0.0144 0.0020
 Uranus -99458-04-14 05:01 J -34605508.47 -34605508.29 -34605508.08 0.0143 0.0096
 Saturn -99451-02-02 15:49 J -34603022.09 -34603021.84 -34603021.59 0.0284 0.0038
 Mars -99450-01-09 02:23 J -34602681.50 -34602681.40 -34602681.30 0.1643 0.1368
 Jupiter -99449-09-19 21:35 J -34602061.79 -34602061.60 -34602061.39 0.0541 0.0259
 Neptune -99440-02-11 13:40 J -34598995.00 -34598994.93 -34598994.80 0.0089 0.0082
 Neptune -99439-02-14 04:18 J -34598627.52 -34598627.32 -34598627.08 0.0089 0.0049
 Neptune -99438-02-16 19:11 J -34598259.96 -34598259.70 -34598259.44 0.0089 0.0015
 Neptune -99437-02-19 09:49 J -34597892.35 -34597892.09 -34597891.83 0.0089 0.0018
 Neptune -99436-02-20 23:59 J -34597524.69 -34597524.50 -34597524.26 0.0089 0.0052
 Saturn -99436-08-16 16:32 J -34597348.04 -34597347.81 -34597347.58 0.0275 0.0086
 Neptune -99435-02-23 15:20 J -34597156.92 -34597156.86 -34597156.78 0.0089 0.0085
 Saturn -99422-01-27 16:47 J -34592435.93 -34592435.80 -34592435.64 0.0285 0.0231
 Saturn -99421-02-10 17:16 J -34592056.97 -34592056.78 -34592056.60 0.0283 0.0191
 Uranus -99417-09-30 20:08 J -34590362.80 -34590362.66 -34590362.50 0.0134 0.0104
 Uranus -99416-10-04 20:37 J -34589993.86 -34589993.64 -34589993.40 0.0134 0.0049
 Uranus -99415-10-08 22:04 J -34589624.82 -34589624.58 -34589624.33 0.0135 0.0008
 Uranus -99414-10-12 23:44 J -34589255.71 -34589255.51 -34589255.29 0.0135 0.0066
 Uranus -99413-10-16 02:23 J -34588886.49 -34588886.40 -34588886.29 0.0136 0.0124
 Jupiter -99407-03-11 15:35 J -34586914.06 -34586913.85 -34586913.63 0.0487 0.0232
 Saturn -99407-08-11 23:16 J -34586760.76 -34586760.53 -34586760.29 0.0275 0.0065
 Pluto -99400-04-05 11:59 J -34584332.23 -34584332.00 -34584331.74 0.0066 0.0028
 Pluto -99399-04-07 05:16 J -34583965.40 -34583965.28 -34583965.15 0.0067 0.0059
 Jupiter -99395-03-16 02:08 J -34582526.65 -34582526.41 -34582526.18 0.0487 0.0116
 Saturn -99392-02-04 04:32 J -34581470.56 -34581470.31 -34581470.06 0.0284 0.0016
 Jupiter -99383-03-20 15:49 J -34578138.88 -34578138.84 -34578138.78 0.0488 0.0475
 Saturn -99378-08-06 19:25 J -34576173.81 -34576173.69 -34576173.55 0.0274 0.0231
 Jupiter -99378-09-15 02:52 J -34576134.57 -34576134.38 -34576134.19 0.0541 0.0280
 Uranus -99377-03-29 14:08 J -34575938.02 -34575937.91 -34575937.78 0.0145 0.0128

Saturn -99377-08-18 01:25 J -34575796.65 -34575796.44 -34575796.23 0.0276 0.0133
 Uranus -99376-04-04 00:13 J -34575567.73 -34575567.49 -34575567.23 0.0144 0.0052
 Uranus -99375-04-09 09:35 J -34575197.36 -34575197.10 -34575196.84 0.0144 0.0025
 Uranus -99374-04-14 17:44 J -34574826.94 -34574826.76 -34574826.57 0.0143 0.0100
 Mars -99371-01-11 06:13 J -34573824.42 -34573824.24 -34573824.06 0.1645 0.0507
 Jupiter -99366-09-20 00:13 J -34571746.70 -34571746.49 -34571746.28 0.0540 0.0179
 Mars -99365-07-23 02:52 J -34571439.58 -34571439.38 -34571439.18 0.1876 0.0063
 Saturn -99363-01-29 05:30 J -34570884.45 -34570884.27 -34570884.06 0.0285 0.0177
 Saturn -99362-02-12 05:44 J -34570505.38 -34570505.26 -34570505.13 0.0283 0.0243
 Neptune -99358-08-22 00:56 J -34568853.59 -34568853.46 -34568853.33 0.0088 0.0076
 Neptune -99357-08-23 09:20 J -34568486.32 -34568486.11 -34568485.88 0.0088 0.0045
 Neptune -99356-08-25 18:13 J -34568118.98 -34568118.74 -34568118.49 0.0088 0.0014
 Neptune -99355-08-28 02:52 J -34567751.63 -34567751.38 -34567751.13 0.0088 0.0018
 Neptune -99354-08-30 11:16 J -34567384.23 -34567384.03 -34567383.81 0.0088 0.0049
 Neptune -99353-08-31 19:40 J -34567016.78 -34567016.68 -34567016.57 0.0088 0.0080
 Saturn -99348-08-13 07:40 J -34565209.42 -34565209.18 -34565208.93 0.0276 0.0018
 Saturn -99333-02-06 18:42 J -34559918.96 -34559918.72 -34559918.48 0.0284 0.0070
 Uranus -99333-10-01 09:20 J -34559681.26 -34559681.11 -34559680.93 0.0134 0.0099
 Uranus -99332-10-05 10:04 J -34559312.30 -34559312.08 -34559311.84 0.0134 0.0044
 Uranus -99331-10-09 11:30 J -34558943.26 -34558943.02 -34558942.77 0.0135 0.0014
 Uranus -99330-10-13 13:25 J -34558574.14 -34558573.94 -34558573.73 0.0135 0.0070
 Uranus -99329-10-16 16:18 J -34558204.90 -34558204.82 -34558204.74 0.0136 0.0128
 Jupiter -99324-03-10 16:18 J -34556599.01 -34556598.82 -34556598.63 0.0486 0.0298
 Saturn -99319-08-08 05:30 J -34554622.45 -34554622.27 -34554622.09 0.0274 0.0183
 Saturn -99318-08-20 10:47 J -34554245.22 -34554245.05 -34554244.86 0.0276 0.0181
 Pluto -99314-10-07 18:13 J -34552735.97 -34552735.74 -34552735.48 0.0078 0.0019
 Jupiter -99312-03-15 04:47 J -34552211.54 -34552211.30 -34552211.06 0.0487 0.0057
 Saturn -99304-01-30 19:25 J -34549332.91 -34549332.69 -34549332.46 0.0285 0.0122
 Jupiter -99300-03-19 19:40 J -34547823.80 -34547823.68 -34547823.56 0.0488 0.0420
 Jupiter -99295-09-13 22:47 J -34545819.71 -34545819.55 -34545819.39 0.0541 0.0386

Uranus -99293-03-29 23:59 J -34545256.62 -34545256.50 -34545256.35 0.0145 0.0124
 Mars -99292-01-13 10:47 J -34544967.23 -34544967.05 -34544966.86 0.1647 0.0376
 Uranus -99292-04-04 10:18 J -34544886.31 -34544886.07 -34544885.81 0.0144 0.0047
 Uranus -99291-04-09 19:25 J -34544515.94 -34544515.69 -34544515.43 0.0144 0.0029
 Uranus -99290-04-15 03:49 J -34544145.51 -34544145.34 -34544145.15 0.0143 0.0103
 Saturn -99289-08-14 16:04 J -34543658.07 -34543657.83 -34543657.59 0.0276 0.0029
 Mars -99286-07-27 10:32 J -34542581.12 -34542581.06 -34542581.00 0.1872 0.1785
 Jupiter -99283-09-18 19:11 J -34541431.92 -34541431.70 -34541431.47 0.0541 0.0069
 Neptune -99275-02-13 08:23 J -34538727.30 -34538727.15 -34538726.95 0.0089 0.0066
 Saturn -99274-02-08 09:49 J -34538367.31 -34538367.09 -34538366.86 0.0284 0.0126
 Neptune -99274-02-15 23:01 J -34538359.77 -34538359.54 -34538359.28 0.0089 0.0033
 Neptune -99273-02-18 13:54 J -34537992.18 -34537991.92 -34537991.65 0.0089 0.0002
 Neptune -99272-02-20 04:47 J -34537624.54 -34537624.30 -34537624.05 0.0089 0.0034
 Neptune -99271-02-22 19:11 J -34537256.85 -34537256.70 -34537256.51 0.0089 0.0068
 Jupiter -99271-09-23 17:30 J -34537043.81 -34537043.77 -34537043.73 0.0540 0.0530
 Saturn -99260-08-09 14:37 J -34533071.09 -34533070.89 -34533070.67 0.0274 0.0135
 Saturn -99259-08-21 19:54 J -34532693.80 -34532693.67 -34532693.53 0.0276 0.0227
 Uranus -99249-10-01 21:49 J -34528999.75 -34528999.59 -34528999.40 0.0134 0.0094
 Uranus -99248-10-05 22:47 J -34528630.78 -34528630.55 -34528630.31 0.0134 0.0039
 Uranus -99247-10-10 00:13 J -34528261.73 -34528261.49 -34528261.24 0.0135 0.0018
 Uranus -99246-10-14 02:08 J -34527892.61 -34527892.41 -34527892.20 0.0135 0.0074
 Saturn -99245-02-02 09:20 J -34527781.35 -34527781.11 -34527780.87 0.0284 0.0067
 Uranus -99245-10-17 04:18 J -34527523.35 -34527523.32 -34527523.24 0.0136 0.0132
 Jupiter -99241-03-09 19:40 J -34526283.84 -34526283.68 -34526283.51 0.0486 0.0353
 Saturn -99230-08-17 00:13 J -34522106.72 -34522106.49 -34522106.26 0.0276 0.0075
 Jupiter -99229-03-14 08:37 J -34521896.39 -34521896.14 -34521895.90 0.0487 0.0008
 Jupiter -99217-03-18 19:25 J -34517508.86 -34517508.69 -34517508.52 0.0487 0.0350
 Saturn -99216-01-27 00:28 J -34517194.60 -34517194.48 -34517194.33 0.0285 0.0239
 Saturn -99215-02-09 23:44 J -34516815.69 -34516815.51 -34516815.31 0.0283 0.0179
 Mars -99213-01-16 16:18 J -34516109.94 -34516109.82 -34516109.70 0.1650 0.1266

Jupiter -99212-09-12 22:47 J -34515504.65 -34515504.55 -34515504.44 0.0542 0.0473
 Uranus -99209-03-30 10:18 J -34514575.21 -34514575.07 -34514574.91 0.0145 0.0119
 Uranus -99208-04-04 20:37 J -34514204.89 -34514204.64 -34514204.39 0.0144 0.0043
 Uranus -99207-04-10 05:44 J -34513834.51 -34513834.26 -34513834.00 0.0144 0.0033
 Uranus -99206-04-15 13:54 J -34513464.07 -34513463.92 -34513463.72 0.0143 0.0108
 Saturn -99201-08-10 23:16 J -34511519.75 -34511519.53 -34511519.29 0.0274 0.0090
 Saturn -99200-08-23 04:18 J -34511142.35 -34511142.32 -34511142.27 0.0276 0.0271
 Jupiter -99200-09-17 23:30 J -34511116.75 -34511116.52 -34511116.30 0.0541 0.0010
 Neptune -99193-08-22 19:25 J -34508585.86 -34508585.69 -34508585.49 0.0088 0.0060
 Neptune -99192-08-25 04:04 J -34508218.56 -34508218.33 -34508218.08 0.0088 0.0029
 Neptune -99191-08-27 12:56 J -34507851.21 -34507850.96 -34507850.70 0.0088 0.0002
 Neptune -99190-08-29 21:06 J -34507483.84 -34507483.62 -34507483.37 0.0088 0.0034
 Neptune -99189-08-31 05:16 J -34507116.42 -34507116.28 -34507116.08 0.0088 0.0065
 Jupiter -99188-09-22 21:35 J -34506728.72 -34506728.60 -34506728.48 0.0540 0.0457
 Saturn -99186-02-03 22:18 J -34506229.82 -34506229.57 -34506229.32 0.0284 0.0014
 Saturn -99172-08-06 00:28 J -34500932.59 -34500932.48 -34500932.37 0.0274 0.0243
 Saturn -99171-08-18 06:56 J -34500555.43 -34500555.21 -34500554.99 0.0276 0.0118
 Mars -99166-01-10 05:01 J -34498949.44 -34498949.29 -34498949.13 0.1640 0.0923
 Uranus -99165-10-02 10:32 J -34498318.24 -34498318.06 -34498317.88 0.0134 0.0089
 Uranus -99164-10-06 11:16 J -34497949.26 -34497949.03 -34497948.78 0.0134 0.0035
 Uranus -99163-10-10 12:42 J -34497580.20 -34497579.97 -34497579.72 0.0135 0.0022
 Uranus -99162-10-14 14:23 J -34497211.08 -34497210.90 -34497210.68 0.0135 0.0079
 Uranus -99161-10-17 17:16 J -34496841.80 -34496841.78 -34496841.76 0.0136 0.0135
 Jupiter -99158-03-09 20:52 J -34495968.75 -34495968.63 -34495968.50 0.0486 0.0413
 Saturn -99157-01-29 12:28 J -34495643.16 -34495642.98 -34495642.79 0.0285 0.0188
 Saturn -99156-02-11 11:59 J -34495264.13 -34495264.00 -34495263.84 0.0283 0.0229
 Pluto -99153-04-06 12:56 J -34494114.14 -34494113.96 -34494113.76 0.0066 0.0047
 Pluto -99152-04-08 05:44 J -34493747.46 -34493747.26 -34493747.03 0.0067 0.0040
 Jupiter -99146-03-14 10:04 J -34491581.32 -34491581.08 -34491580.84 0.0486 0.0061
 Saturn -99142-08-13 07:25 J -34489968.43 -34489968.19 -34489967.95 0.0274 0.0044

Jupiter -99134-03-18 22:47 J -34487193.74 -34487193.55 -34487193.35 0.0487 0.0294
 Jupiter -99129-09-12 03:49 J -34485189.35 -34485189.34 -34485189.32 0.0542 0.0540
 Saturn -99127-02-05 08:52 J -34484678.37 -34484678.13 -34484677.88 0.0284 0.0036
 Uranus -99125-03-30 18:13 J -34483893.88 -34483893.74 -34483893.57 0.0145 0.0116
 Uranus -99124-04-05 04:18 J -34483523.56 -34483523.32 -34483523.05 0.0144 0.0041
 Uranus -99123-04-10 13:40 J -34483153.18 -34483152.93 -34483152.66 0.0144 0.0035
 Uranus -99122-04-15 22:04 J -34482782.73 -34482782.58 -34482782.39 0.0143 0.0109
 Jupiter -99117-09-16 23:59 J -34480801.72 -34480801.50 -34480801.28 0.0541 0.0089
 Saturn -99113-08-07 06:28 J -34479381.39 -34479381.23 -34479381.06 0.0274 0.0201
 Saturn -99112-08-19 12:13 J -34479004.18 -34479003.99 -34479003.79 0.0276 0.0159
 Neptune -99111-02-12 13:25 J -34478827.00 -34478826.94 -34478826.81 0.0089 0.0083
 Neptune -99110-02-15 04:18 J -34478459.53 -34478459.32 -34478459.09 0.0089 0.0049
 Neptune -99109-02-17 18:56 J -34478091.96 -34478091.71 -34478091.44 0.0089 0.0016
 Neptune -99108-02-19 09:35 J -34477724.35 -34477724.10 -34477723.83 0.0089 0.0018
 Neptune -99107-02-21 23:59 J -34477356.70 -34477356.50 -34477356.27 0.0089 0.0051
 Neptune -99106-02-24 14:37 J -34476988.94 -34476988.89 -34476988.78 0.0089 0.0085
 Jupiter -99105-09-21 19:54 J -34476413.83 -34476413.67 -34476413.50 0.0540 0.0362
 Saturn -99098-01-30 21:35 J -34474091.81 -34474091.60 -34474091.38 0.0285 0.0141
 Saturn -99097-02-13 21:49 J -34473712.65 -34473712.59 -34473712.52 0.0283 0.0274
 Mars -99087-01-12 09:06 J -34470092.31 -34470092.12 -34470091.93 0.1642 0.0082
 Saturn -99083-08-14 13:40 J -34468417.17 -34468416.93 -34468416.69 0.0274 0.0003
 Mars -99081-07-22 16:32 J -34467709.00 -34467708.81 -34467708.61 0.1882 0.0242
 Uranus -99081-10-02 22:04 J -34467636.75 -34467636.58 -34467636.38 0.0134 0.0086
 Uranus -99080-10-06 23:16 J -34467267.76 -34467267.53 -34467267.29 0.0134 0.0031
 Uranus -99079-10-11 00:28 J -34466898.71 -34466898.48 -34466898.23 0.0135 0.0025
 Uranus -99078-10-15 02:08 J -34466529.59 -34466529.41 -34466529.20 0.0135 0.0082
 Jupiter -99075-03-09 01:54 J -34465653.48 -34465653.42 -34465653.34 0.0486 0.0463
 Saturn -99068-02-06 17:16 J -34463127.01 -34463126.78 -34463126.53 0.0284 0.0082
 Pluto -99067-10-08 20:08 J -34462517.84 -34462517.66 -34462517.44 0.0078 0.0045
 Jupiter -99063-03-13 15:20 J -34461266.09 -34461265.86 -34461265.62 0.0487 0.0110

Saturn	-99054-08-09 11:01 J	-34457830.23	-34457830.04	-34457829.83	0.0274	0.0161
Saturn	-99053-08-20 16:32 J	-34457452.98	-34457452.81	-34457452.64	0.0276	0.0197
Jupiter	-99051-03-18 04:47 J	-34456878.51	-34456878.30	-34456878.09	0.0487	0.0246
Uranus	-99041-03-31 02:52 J	-34453212.53	-34453212.38	-34453212.20	0.0145	0.0113
Uranus	-99040-04-05 12:56 J	-34452842.21	-34452841.96	-34452841.70	0.0144	0.0038
Saturn	-99039-02-01 03:49 J	-34452540.57	-34452540.34	-34452540.11	0.0285	0.0098
Uranus	-99039-04-10 22:18 J	-34452471.81	-34452471.57	-34452471.30	0.0144	0.0038
Uranus	-99038-04-16 07:11 J	-34452101.36	-34452101.20	-34452101.03	0.0143	0.0111
Jupiter	-99034-09-17 00:42 J	-34450486.68	-34450486.47	-34450486.26	0.0542	0.0170
Neptune	-99029-08-22 05:44 J	-34448685.37	-34448685.26	-34448685.11	0.0088	0.0075
Neptune	-99028-08-24 14:37 J	-34448318.09	-34448317.89	-34448317.65	0.0088	0.0045
Neptune	-99027-08-26 23:44 J	-34447950.76	-34447950.51	-34447950.26	0.0088	0.0013
Neptune	-99026-08-29 08:08 J	-34447583.40	-34447583.16	-34447582.90	0.0088	0.0018
Neptune	-99025-08-30 16:47 J	-34447216.00	-34447215.80	-34447215.59	0.0088	0.0049
Saturn	-99024-08-15 18:28 J	-34446865.96	-34446865.73	-34446865.48	0.0274	0.0039
Neptune	-99024-09-02 01:11 J	-34446848.55	-34446848.45	-34446848.34	0.0088	0.0080
Jupiter	-99022-09-22 01:25 J	-34446098.63	-34446098.44	-34446098.25	0.0541	0.0300
Saturn	-99009-02-08 23:01 J	-34441575.77	-34441575.54	-34441575.32	0.0284	0.0123
Mars	-99008-01-14 12:28 J	-34441235.15	-34441234.98	-34441234.81	0.1644	0.0778
Mars	-99002-07-27 01:40 J	-34438850.52	-34438850.43	-34438850.34	0.1878	0.1664

99TH MILLENNIUM BCE

This is a list of transits of Earth in the 99th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								

TIME

Uranus -98997-10-03 10:04 J -34436955.26 -34436955.08 -34436954.88 0.0134 0.0082

Uranus -98996-10-07 11:01 J -34436586.27 -34436586.04 -34436585.79 0.0134 0.0028

Saturn -98995-08-10 14:23 J -34436279.12 -34436278.90 -34436278.68 0.0274 0.0123

Uranus -98995-10-11 12:28 J -34436217.22 -34436216.98 -34436216.74 0.0135 0.0028

Saturn -98994-08-22 19:11 J -34435901.83 -34435901.70 -34435901.57 0.0276 0.0233

Uranus -98994-10-15 14:08 J -34435848.10 -34435847.91 -34435847.72 0.0135 0.0084

Saturn -98980-02-02 06:56 J -34430989.45 -34430989.21 -34430988.96 0.0285 0.0059

Jupiter -98980-03-12 21:35 J -34430950.83 -34430950.60 -34430950.37 0.0486 0.0153

Jupiter -98968-03-17 11:01 J -34426563.26 -34426563.04 -34426562.81 0.0487 0.0202

Saturn -98965-08-16 22:04 J -34425314.81 -34425314.58 -34425314.35 0.0274 0.0076

Mars -98961-01-09 05:01 J -34424074.40 -34424074.29 -34424074.18 0.1634 0.1316

Uranus -98957-03-31 10:32 J -34422531.20 -34422531.06 -34422530.86 0.0145 0.0111

Uranus -98956-04-05 20:52 J -34422160.88 -34422160.63 -34422160.36 0.0144 0.0036

Uranus -98955-04-11 06:13 J -34421790.48 -34421790.24 -34421789.98 0.0144 0.0039

Uranus -98954-04-16 14:37 J -34421420.04 -34421419.89 -34421419.71 0.0143 0.0112

Saturn -98951-01-27 02:23 J -34420403.50 -34420403.40 -34420403.27 0.0286 0.0251

Jupiter -98951-09-16 10:04 J -34420171.29 -34420171.08 -34420170.88 0.0542 0.0221

Saturn -98950-02-10 01:54 J -34420024.62 -34420024.42 -34420024.21 0.0284 0.0162

Neptune -98946-02-14 10:47 J -34418559.23 -34418559.05 -34418558.87 0.0089 0.0066

Neptune -98945-02-17 01:11 J -34418191.69 -34418191.45 -34418191.20 0.0089 0.0032

Neptune -98944-02-18 15:49 J -34417824.11 -34417823.84 -34417823.58 0.0089 0.0001

Neptune -98943-02-21 06:13 J -34417456.47 -34417456.24 -34417455.98 0.0089 0.0035

Neptune -98942-02-23 21:06 J -34417088.78 -34417088.62 -34417088.44 0.0089 0.0068

Jupiter -98939-09-21 07:54 J -34415783.37 -34415783.17 -34415782.97 0.0541 0.0238

Saturn -98936-08-11 16:18 J -34414728.04 -34414727.82 -34414727.58 0.0274 0.0086

Saturn -98935-08-23 20:37 J -34414350.68 -34414350.64 -34414350.57 0.0276 0.0268

Saturn -98921-02-04 07:40 J -34409438.42 -34409438.18 -34409437.93 0.0285 0.0024

Uranus -98914-09-30 20:37 J -34406642.65 -34406642.64 -34406642.58 0.0134 0.0133

Uranus -98913-10-03 21:20 J -34406273.80 -34406273.61 -34406273.40 0.0134 0.0079

Uranus -98912-10-07 22:32 J -34405904.80 -34405904.56 -34405904.32 0.0134 0.0025
 Uranus -98911-10-11 23:16 J -34405535.75 -34405535.53 -34405535.28 0.0135 0.0031
 Uranus -98910-10-16 00:56 J -34405166.63 -34405166.46 -34405166.25 0.0135 0.0087
 Saturn -98907-08-06 19:40 J -34404140.79 -34404140.68 -34404140.56 0.0273 0.0238
 Saturn -98906-08-18 23:59 J -34403763.71 -34403763.50 -34403763.27 0.0274 0.0113
 Pluto -98905-04-09 04:04 J -34403529.60 -34403529.33 -34403529.07 0.0066 0.0014
 Jupiter -98897-03-12 05:44 J -34400635.48 -34400635.26 -34400635.03 0.0486 0.0193
 Saturn -98892-01-28 03:49 J -34398852.50 -34398852.34 -34398852.17 0.0286 0.0213
 Saturn -98891-02-11 03:20 J -34398473.54 -34398473.36 -34398473.18 0.0284 0.0197
 Jupiter -98885-03-16 19:25 J -34396247.92 -34396247.69 -34396247.46 0.0487 0.0161
 Mars -98882-01-11 08:23 J -34395217.33 -34395217.15 -34395216.97 0.1636 0.0485
 Saturn -98877-08-12 17:30 J -34393177.00 -34393176.77 -34393176.53 0.0274 0.0051
 Uranus -98873-03-31 20:08 J -34391849.81 -34391849.66 -34391849.46 0.0145 0.0107
 Uranus -98872-04-06 06:13 J -34391479.49 -34391479.24 -34391478.97 0.0144 0.0033
 Uranus -98871-04-11 15:35 J -34391109.09 -34391108.85 -34391108.58 0.0144 0.0042
 Uranus -98870-04-16 23:44 J -34390738.64 -34390738.51 -34390738.33 0.0143 0.0115
 Jupiter -98868-09-15 14:23 J -34389856.08 -34389855.90 -34389855.70 0.0542 0.0289
 Neptune -98864-08-24 02:52 J -34388417.56 -34388417.38 -34388417.18 0.0088 0.0059
 Neptune -98863-08-26 11:44 J -34388050.24 -34388050.01 -34388049.76 0.0088 0.0027
 Saturn -98862-02-05 07:25 J -34387887.44 -34387887.19 -34387886.94 0.0285 0.0012
 Neptune -98862-08-28 20:37 J -34387682.90 -34387682.64 -34387682.39 0.0088 0.0004
 Neptune -98861-08-30 04:47 J -34387315.52 -34387315.30 -34387315.06 0.0088 0.0035
 Neptune -98860-09-01 12:56 J -34386948.11 -34386947.96 -34386947.77 0.0088 0.0066
 Jupiter -98856-09-20 09:20 J -34385468.32 -34385468.11 -34385467.89 0.0542 0.0159
 Saturn -98848-08-07 21:35 J -34382589.76 -34382589.60 -34382589.43 0.0273 0.0201
 Saturn -98847-08-20 02:08 J -34382212.61 -34382212.41 -34382212.21 0.0274 0.0148
 Saturn -98833-01-30 04:04 J -34377301.52 -34377301.33 -34377301.14 0.0286 0.0177
 Saturn -98832-02-12 03:20 J -34376922.49 -34376922.36 -34376922.20 0.0284 0.0232
 Uranus -98830-10-01 07:54 J -34375961.21 -34375961.17 -34375961.08 0.0134 0.0129
 Uranus -98829-10-04 08:37 J -34375592.33 -34375592.14 -34375591.93 0.0134 0.0075

Uranus -98828-10-08 09:35 J -34375223.34 -34375223.10 -34375222.86 0.0134 0.0021
 Uranus -98827-10-12 10:47 J -34374854.29 -34374854.05 -34374853.81 0.0135 0.0033
 Uranus -98826-10-16 12:13 J -34374485.16 -34374484.99 -34374484.79 0.0135 0.0089
 Pluto -98819-10-11 15:06 J -34371933.07 -34371932.87 -34371932.64 0.0078 0.0040
 Saturn -98818-08-14 18:56 J -34371625.95 -34371625.71 -34371625.47 0.0274 0.0015
 Jupiter -98814-03-12 15:06 J -34370320.08 -34370319.87 -34370319.65 0.0486 0.0228
 Mars -98803-01-13 11:30 J -34366360.20 -34366360.02 -34366359.83 0.1638 0.0339
 Saturn -98803-02-06 06:28 J -34366336.47 -34366336.23 -34366335.98 0.0285 0.0047
 Jupiter -98802-03-17 04:47 J -34365932.53 -34365932.30 -34365932.07 0.0486 0.0129
 Mars -98797-07-22 03:06 J -34363978.57 -34363978.37 -34363978.18 0.1888 0.0469
 Jupiter -98790-03-21 18:42 J -34361544.74 -34361544.72 -34361544.68 0.0487 0.0483
 Uranus -98789-04-01 05:30 J -34361168.44 -34361168.27 -34361168.07 0.0145 0.0103
 Saturn -98789-08-08 23:01 J -34361038.73 -34361038.54 -34361038.34 0.0273 0.0164
 Uranus -98788-04-06 15:35 J -34360798.11 -34360797.85 -34360797.59 0.0144 0.0029
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 Jupiter -98785-09-14 17:01 J -34359540.95 -34359540.79 -34359540.62 0.0543 0.0364
 Neptune -98782-02-13 17:16 J -34358658.87 -34358658.78 -34358658.66 0.0089 0.0082
 Neptune -98781-02-16 07:25 J -34358291.40 -34358291.19 -34358290.95 0.0089 0.0048
 Neptune -98780-02-17 22:04 J -34357923.83 -34357923.58 -34357923.31 0.0089 0.0015
 Neptune -98779-02-20 12:42 J -34357556.22 -34357555.97 -34357555.70 0.0089 0.0019
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 Neptune -98777-02-25 17:59 J -34356820.79 -34356820.75 -34356820.65 0.0089 0.0086
 Saturn -98774-01-31 04:47 J -34355750.51 -34355750.30 -34355750.08 0.0286 0.0140
 Saturn -98773-02-14 04:32 J -34355371.38 -34355371.31 -34355371.22 0.0284 0.0268
 Jupiter -98773-09-19 19:25 J -34355152.91 -34355152.69 -34355152.47 0.0542 0.0112
 Saturn -98759-08-15 20:23 J -34350074.89 -34350074.65 -34350074.41 0.0274 0.0021
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 Uranus -98745-10-04 18:56 J -34344910.91 -34344910.71 -34344910.50 0.0134 0.0072

Saturn -98744-02-07 06:13 J -34344785.47 -34344785.24 -34344785.00 0.0285 0.0082
 Uranus -98744-10-08 19:54 J -34344541.91 -34344541.67 -34344541.42 0.0134 0.0019
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 Uranus -98742-10-16 22:47 J -34343803.72 -34343803.55 -34343803.36 0.0135 0.0091
 Jupiter -98731-03-12 01:40 J -34340004.63 -34340004.43 -34340004.22 0.0486 0.0257
 Saturn -98730-08-11 01:25 J -34339487.65 -34339487.44 -34339487.22 0.0274 0.0126
 Saturn -98729-08-22 06:13 J -34339110.38 -34339110.24 -34339110.10 0.0275 0.0220
 Mars -98724-01-15 14:23 J -34337503.03 -34337502.90 -34337502.76 0.1640 0.1172
 Jupiter -98719-03-16 12:28 J -34335617.21 -34335616.98 -34335616.74 0.0486 0.0086
 Mars -98718-07-26 13:54 J -34335120.04 -34335119.92 -34335119.80 0.1884 0.1478
 Saturn -98715-02-01 06:42 J -34334199.45 -34334199.22 -34334198.99 0.0285 0.0101
 Jupiter -98707-03-21 02:08 J -34331229.51 -34331229.41 -34331229.31 0.0487 0.0438
 Uranus -98705-04-01 14:23 J -34330487.08 -34330486.90 -34330486.70 0.0145 0.0099
 Uranus -98704-04-07 00:13 J -34330116.75 -34330116.49 -34330116.23 0.0144 0.0025
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 Uranus -98702-04-17 17:30 J -34329375.91 -34329375.77 -34329375.62 0.0143 0.0119
 Jupiter -98702-09-15 02:23 J -34329225.54 -34329225.40 -34329225.26 0.0543 0.0413
 Saturn -98700-08-16 22:47 J -34328523.79 -34328523.55 -34328523.31 0.0274 0.0058
 Neptune -98700-08-23 15:20 J -34328516.99 -34328516.86 -34328516.71 0.0088 0.0073
 Neptune -98699-08-26 00:13 J -34328149.70 -34328149.49 -34328149.25 0.0088 0.0042
 Neptune -98698-08-28 09:06 J -34327782.37 -34327782.12 -34327781.87 0.0088 0.0010
 Neptune -98697-08-29 17:59 J -34327415.00 -34327414.75 -34327414.51 0.0088 0.0021
 Neptune -98696-09-01 02:08 J -34327047.60 -34327047.41 -34327047.19 0.0088 0.0052
 Neptune -98695-09-03 10:18 J -34326680.13 -34326680.07 -34326679.96 0.0088 0.0083
 Jupiter -98690-09-20 00:56 J -34324837.69 -34324837.46 -34324837.24 0.0542 0.0046
 Saturn -98686-01-26 08:52 J -34323613.13 -34323613.13 -34323613.12 0.0286 0.0286
 Saturn -98685-02-09 07:40 J -34323234.39 -34323234.18 -34323233.94 0.0285 0.0120
 Jupiter -98678-09-24 17:59 J -34320449.85 -34320449.75 -34320449.65 0.0541 0.0484
 Mars -98677-01-10 08:23 J -34320342.31 -34320342.15 -34320341.99 0.1631 0.0875
 Saturn -98671-08-12 04:32 J -34317936.54 -34317936.31 -34317936.08 0.0274 0.0087

Saturn -98670-08-24 09:06 J -34317559.19 -34317559.12 -34317559.03 0.0275 0.0258
 Uranus -98662-10-02 04:32 J -34314598.39 -34314598.31 -34314598.19 0.0134 0.0122
 Uranus -98661-10-05 05:01 J -34314229.48 -34314229.29 -34314229.07 0.0134 0.0069
 Uranus -98660-10-09 06:13 J -34313860.49 -34313860.24 -34313860.00 0.0134 0.0016
 Uranus -98659-10-13 07:11 J -34313491.43 -34313491.20 -34313490.96 0.0135 0.0038
 Pluto -98658-04-10 20:37 J -34313311.87 -34313311.64 -34313311.36 0.0066 0.0024
 Uranus -98658-10-17 09:06 J -34313122.29 -34313122.12 -34313121.94 0.0135 0.0093
 Pluto -98657-04-11 14:23 J -34312944.97 -34312944.90 -34312944.83 0.0067 0.0064
 Saturn -98656-02-02 10:47 J -34312648.29 -34312648.05 -34312647.81 0.0285 0.0059
 Jupiter -98648-03-11 08:08 J -34309689.34 -34309689.16 -34309688.97 0.0485 0.0304
 Saturn -98642-08-06 20:52 J -34307349.72 -34307349.63 -34307349.52 0.0273 0.0248
 Saturn -98641-08-18 02:52 J -34306972.60 -34306972.38 -34306972.15 0.0274 0.0097
 Jupiter -98636-03-15 20:08 J -34305301.90 -34305301.66 -34305301.41 0.0486 0.0045
 Saturn -98627-01-27 12:28 J -34302062.10 -34302061.98 -34302061.85 0.0286 0.0244
 Saturn -98626-02-10 11:30 J -34301683.22 -34301683.02 -34301682.81 0.0284 0.0159
 Jupiter -98624-03-20 10:18 J -34300914.20 -34300914.07 -34300913.93 0.0487 0.0401
 Uranus -98621-04-01 21:20 J -34299805.78 -34299805.61 -34299805.39 0.0145 0.0097
 Uranus -98620-04-07 07:25 J -34299435.44 -34299435.19 -34299434.92 0.0144 0.0024
 Uranus -98619-04-12 16:32 J -34299065.05 -34299064.81 -34299064.55 0.0144 0.0049
 Jupiter -98619-09-13 23:44 J -34298910.58 -34298910.51 -34298910.43 0.0543 0.0509
 Uranus -98618-04-18 00:13 J -34298694.61 -34298694.49 -34298694.33 0.0143 0.0120
 Neptune -98617-02-15 15:49 J -34298391.01 -34298390.84 -34298390.64 0.0089 0.0063
 Neptune -98616-02-17 05:59 J -34298023.48 -34298023.25 -34298022.99 0.0089 0.0030
 Neptune -98615-02-19 20:52 J -34297655.89 -34297655.63 -34297655.36 0.0089 0.0003
 Neptune -98614-02-22 11:01 J -34297288.26 -34297288.04 -34297287.78 0.0089 0.0037
 Neptune -98613-02-25 01:40 J -34296920.57 -34296920.43 -34296920.25 0.0089 0.0070
 Saturn -98612-08-13 08:52 J -34296385.36 -34296385.13 -34296384.89 0.0274 0.0047
 Jupiter -98607-09-18 23:16 J -34294522.75 -34294522.53 -34294522.30 0.0542 0.0047
 Mars -98598-01-12 11:44 J -34291485.20 -34291485.01 -34291484.83 0.1633 0.0069
 Saturn -98597-02-04 17:44 J -34291097.01 -34291096.76 -34291096.51 0.0285 0.0015

Jupiter -98595-09-24 00:42 J -34290134.61 -34290134.47 -34290134.33 0.0542 0.0422
 Saturn -98583-08-08 02:23 J -34285798.56 -34285798.40 -34285798.24 0.0273 0.0207
 Saturn -98582-08-20 08:23 J -34285421.36 -34285421.15 -34285420.94 0.0274 0.0138
 Uranus -98578-10-02 14:23 J -34283917.00 -34283916.90 -34283916.78 0.0134 0.0119
 Uranus -98577-10-05 14:23 J -34283548.09 -34283547.90 -34283547.67 0.0134 0.0067
 Uranus -98576-10-09 15:35 J -34283179.09 -34283178.85 -34283178.60 0.0134 0.0014
 Uranus -98575-10-13 16:47 J -34282810.03 -34282809.80 -34282809.56 0.0135 0.0040
 Uranus -98574-10-17 18:28 J -34282440.89 -34282440.73 -34282440.54 0.0135 0.0095
 Pluto -98572-10-12 08:08 J -34281715.40 -34281715.16 -34281714.91 0.0078 0.0015
 Saturn -98568-01-28 18:56 J -34280510.88 -34280510.71 -34280510.53 0.0285 0.0199
 Saturn -98567-02-11 18:28 J -34280131.90 -34280131.73 -34280131.56 0.0284 0.0202
 Jupiter -98565-03-10 15:35 J -34279374.02 -34279373.85 -34279373.68 0.0485 0.0344
 Jupiter -98553-03-15 03:49 J -34274986.58 -34274986.34 -34274986.09 0.0486 0.0008
 Saturn -98553-08-14 14:52 J -34274834.12 -34274833.88 -34274833.64 0.0275 0.0004
 Jupiter -98541-03-19 14:08 J -34270599.08 -34270598.91 -34270598.74 0.0486 0.0343
 Saturn -98538-02-06 02:52 J -34269545.62 -34269545.38 -34269545.13 0.0285 0.0033
 Uranus -98537-04-02 04:47 J -34269124.50 -34269124.30 -34269124.10 0.0145 0.0094
 Uranus -98536-04-07 14:23 J -34268754.16 -34268753.90 -34268753.64 0.0144 0.0022
 Neptune -98536-08-23 03:49 J -34268616.37 -34268616.34 -34268616.27 0.0088 0.0087
 Uranus -98535-04-12 23:30 J -34268383.77 -34268383.52 -34268383.28 0.0144 0.0050
 Neptune -98535-08-25 12:56 J -34268249.14 -34268248.96 -34268248.74 0.0088 0.0056
 Uranus -98534-04-18 07:11 J -34268013.33 -34268013.20 -34268013.05 0.0143 0.0121
 Neptune -98534-08-27 22:18 J -34267881.81 -34267881.57 -34267881.32 0.0088 0.0024
 Neptune -98533-08-29 07:11 J -34267514.45 -34267514.20 -34267513.95 0.0088 0.0007
 Neptune -98532-08-31 15:20 J -34267147.06 -34267146.86 -34267146.61 0.0088 0.0039
 Neptune -98531-09-02 23:59 J -34266779.64 -34266779.50 -34266779.33 0.0088 0.0069
 Saturn -98524-08-09 09:20 J -34264247.29 -34264247.11 -34264246.90 0.0273 0.0163
 Jupiter -98524-09-18 05:44 J -34264207.48 -34264207.26 -34264207.04 0.0542 0.0108
 Saturn -98523-08-21 15:20 J -34263870.03 -34263869.86 -34263869.67 0.0275 0.0181
 Mars -98519-01-14 14:08 J -34262628.08 -34262627.91 -34262627.74 0.1635 0.0741

Mars -98513-07-21 09:49 J -34260248.28 -34260248.09 -34260247.91 0.1894 0.0762
 Jupiter -98512-09-23 04:18 J -34259819.49 -34259819.32 -34259819.15 0.0542 0.0349
 Saturn -98509-01-31 04:04 J -34258959.53 -34258959.33 -34258959.11 0.0285 0.0151
 Saturn -98508-02-13 03:35 J -34258580.46 -34258580.35 -34258580.23 0.0284 0.0248
 Saturn -98494-08-16 21:49 J -34253282.83 -34253282.59 -34253282.35 0.0275 0.0039
 Uranus -98494-10-02 23:59 J -34253235.62 -34253235.50 -34253235.38 0.0134 0.0116
 Uranus -98493-10-06 00:13 J -34252866.70 -34252866.49 -34252866.27 0.0134 0.0064
 Uranus -98492-10-10 01:11 J -34252497.69 -34252497.45 -34252497.21 0.0134 0.0012
 Uranus -98491-10-14 02:23 J -34252128.63 -34252128.40 -34252128.17 0.0135 0.0042
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 Mars -98472-01-08 11:01 J -34245467.16 -34245467.04 -34245466.91 0.1627 0.1209
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 Saturn -98464-08-22 23:59 J -34242318.64 -34242318.50 -34242318.36 0.0275 0.0224
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 Uranus -98451-04-13 05:30 J -34237702.51 -34237702.27 -34237702.01 0.0144 0.0051
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 Uranus -98450-04-18 12:56 J -34237332.07 -34237331.96 -34237331.80 0.0143 0.0122
 Neptune -98449-02-24 09:49 J -34237020.28 -34237020.09 -34237019.87 0.0089 0.0055
 Neptune -98448-02-26 00:42 J -34236652.48 -34236652.47 -34236652.43 0.0089 0.0088
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 Mars -98440-01-16 17:01 J -34233770.85 -34233770.79 -34233770.74 0.1637 0.1560

Saturn -98436-08-05 21:49 J -34232108.65 -34232108.59 -34232108.50 0.0274 0.0260
 Saturn -98435-08-18 05:59 J -34231731.48 -34231731.25 -34231731.02 0.0275 0.0083
 Mars -98434-07-25 22:32 J -34231389.71 -34231389.56 -34231389.40 0.1890 0.1241
 Jupiter -98429-09-21 23:01 J -34229504.74 -34229504.54 -34229504.33 0.0542 0.0241
 Saturn -98421-01-27 06:42 J -34226821.30 -34226821.22 -34226821.11 0.0285 0.0264
 Saturn -98420-02-09 04:18 J -34226442.53 -34226442.32 -34226442.09 0.0284 0.0133
 Pluto -98411-04-11 13:40 J -34223094.00 -34223093.93 -34223093.80 0.0066 0.0061
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 Uranus -98407-10-14 11:30 J -34221447.24 -34221447.02 -34221446.78 0.0135 0.0044
 Saturn -98406-08-13 03:20 J -34221144.59 -34221144.36 -34221144.12 0.0274 0.0073
 Uranus -98406-10-18 13:25 J -34221078.10 -34221077.94 -34221077.76 0.0135 0.0098
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 Jupiter -98399-03-09 21:49 J -34218743.66 -34218743.59 -34218743.50 0.0485 0.0456
 Mars -98393-01-11 12:28 J -34216610.16 -34216609.98 -34216609.79 0.1628 0.0441
 Saturn -98391-02-03 05:01 J -34215856.53 -34215856.29 -34215856.05 0.0285 0.0049
 Jupiter -98387-03-14 10:18 J -34214356.30 -34214356.07 -34214355.83 0.0486 0.0111
 Saturn -98377-08-07 06:42 J -34210557.37 -34210557.22 -34210557.07 0.0274 0.0216
 Saturn -98376-08-19 14:08 J -34210180.12 -34210179.91 -34210179.69 0.0275 0.0127
 Jupiter -98375-03-18 22:18 J -34209968.78 -34209968.57 -34209968.35 0.0486 0.0235
 Neptune -98371-08-25 02:37 J -34208348.54 -34208348.39 -34208348.22 0.0088 0.0069
 Neptune -98370-08-27 11:44 J -34207981.23 -34207981.01 -34207980.77 0.0088 0.0038
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 Neptune -98369-08-28 21:06 J -34207613.87 -34207613.62 -34207613.37 0.0088 0.0006
 Uranus -98368-04-08 03:35 J -34207391.61 -34207391.35 -34207391.09 0.0144 0.0019
 Neptune -98368-08-31 05:44 J -34207246.50 -34207246.26 -34207246.01 0.0088 0.0025
 Uranus -98367-04-13 12:13 J -34207021.23 -34207020.99 -34207020.74 0.0144 0.0052
 Neptune -98367-09-02 14:08 J -34206879.09 -34206878.91 -34206878.70 0.0088 0.0056

Uranus -98366-04-18 20:08 J -34206650.79 -34206650.66 -34206650.51 0.0143 0.0122
 Neptune -98366-09-04 22:32 J -34206511.59 -34206511.56 -34206511.49 0.0088 0.0087
 Saturn -98362-01-28 21:06 J -34205269.78 -34205269.62 -34205269.45 0.0285 0.0212
 Saturn -98361-02-11 18:42 J -34204890.90 -34204890.72 -34204890.52 0.0284 0.0184
 Jupiter -98358-09-17 01:40 J -34203577.62 -34203577.43 -34203577.24 0.0543 0.0297
 Saturn -98347-08-14 12:56 J -34199593.20 -34199592.96 -34199592.72 0.0274 0.0028
 Jupiter -98346-09-22 03:06 J -34199189.58 -34199189.37 -34199189.16 0.0542 0.0171
 Saturn -98332-02-04 18:13 J -34194304.98 -34194304.74 -34194304.49 0.0285 0.0006
 Uranus -98326-10-03 17:59 J -34191872.86 -34191872.75 -34191872.60 0.0134 0.0112
 Uranus -98325-10-06 18:42 J -34191503.93 -34191503.72 -34191503.50 0.0134 0.0060
 Pluto -98325-10-12 22:18 J -34191497.58 -34191497.57 -34191497.51 0.0078 0.0078
 Uranus -98324-10-10 19:40 J -34191134.92 -34191134.68 -34191134.43 0.0134 0.0008
 Pluto -98324-10-14 21:49 J -34191130.76 -34191130.59 -34191130.40 0.0078 0.0053
 Uranus -98323-10-14 21:06 J -34190765.85 -34190765.62 -34190765.39 0.0135 0.0045
 Uranus -98322-10-18 23:16 J -34190396.69 -34190396.53 -34190396.36 0.0135 0.0099
 Saturn -98318-08-09 14:52 J -34189006.06 -34189005.88 -34189005.68 0.0274 0.0173
 Saturn -98317-08-20 22:18 J -34188628.75 -34188628.57 -34188628.37 0.0275 0.0170
 Mars -98314-01-13 14:37 J -34187753.08 -34187752.89 -34187752.71 0.1630 0.0356
 Jupiter -98304-03-13 11:30 J -34184041.25 -34184041.02 -34184040.79 0.0485 0.0172
 Saturn -98303-01-30 10:32 J -34183718.25 -34183718.06 -34183717.85 0.0285 0.0161
 Saturn -98302-02-13 08:52 J -34183339.27 -34183339.13 -34183338.99 0.0284 0.0233
 Jupiter -98292-03-17 23:30 J -34179653.75 -34179653.52 -34179653.30 0.0486 0.0173
 Neptune -98288-02-16 00:13 J -34178222.67 -34178222.49 -34178222.28 0.0089 0.0060
 Saturn -98288-08-15 22:04 J -34178041.82 -34178041.58 -34178041.33 0.0274 0.0016
 Neptune -98287-02-18 14:23 J -34177855.14 -34177854.90 -34177854.64 0.0089 0.0026
 Neptune -98286-02-21 04:47 J -34177487.56 -34177487.30 -34177487.03 0.0089 0.0007
 Neptune -98285-02-23 18:56 J -34177119.94 -34177119.71 -34177119.47 0.0089 0.0040
 Uranus -98285-04-03 01:54 J -34177080.62 -34177080.42 -34177080.21 0.0145 0.0088
 Neptune -98284-02-25 09:35 J -34176752.24 -34176752.10 -34176751.94 0.0089 0.0074
 Uranus -98284-04-08 11:16 J -34176710.29 -34176710.03 -34176709.77 0.0144 0.0017

Uranus -98283-04-13 19:54 J -34176339.91 -34176339.67 -34176339.42 0.0144 0.0054
 Uranus -98282-04-19 03:35 J -34175969.46 -34175969.35 -34175969.20 0.0143 0.0124
 Jupiter -98275-09-16 05:01 J -34173262.45 -34173262.29 -34173262.12 0.0543 0.0369
 Saturn -98273-02-07 07:25 J -34172753.43 -34172753.19 -34172752.94 0.0285 0.0052
 Mars -98267-01-07 14:23 J -34170591.96 -34170591.90 -34170591.84 0.1623 0.1526
 Jupiter -98263-09-21 01:25 J -34168874.66 -34168874.44 -34168874.22 0.0542 0.0077
 Saturn -98259-08-10 22:32 J -34167454.77 -34167454.56 -34167454.34 0.0274 0.0131
 Saturn -98258-08-23 05:44 J -34167077.42 -34167077.26 -34167077.11 0.0275 0.0210
 Jupiter -98251-09-25 21:49 J -34164486.64 -34164486.59 -34164486.52 0.0541 0.0523
 Saturn -98244-01-31 22:32 J -34162166.78 -34162166.56 -34162166.33 0.0285 0.0113
 Saturn -98243-02-14 21:06 J -34161787.65 -34161787.62 -34161787.58 0.0284 0.0280
 Uranus -98242-10-04 02:52 J -34161191.50 -34161191.38 -34161191.22 0.0134 0.0110
 Uranus -98241-10-07 03:20 J -34160822.57 -34160822.36 -34160822.12 0.0134 0.0058
 Uranus -98240-10-11 04:47 J -34160453.54 -34160453.30 -34160453.05 0.0134 0.0006
 Uranus -98239-10-15 06:13 J -34160084.46 -34160084.24 -34160084.00 0.0135 0.0047
 Uranus -98238-10-19 08:23 J -34159715.30 -34159715.15 -34159714.98 0.0135 0.0100
 Mars -98235-01-15 17:16 J -34158895.91 -34158895.78 -34158895.64 0.1631 0.1142
 Mars -98229-07-20 14:52 J -34156518.05 -34156517.88 -34156517.71 0.1899 0.1080
 Saturn -98229-08-17 06:42 J -34156490.45 -34156490.22 -34156489.98 0.0274 0.0058
 Jupiter -98221-03-12 15:06 J -34153726.08 -34153725.87 -34153725.65 0.0485 0.0226
 Saturn -98214-02-08 18:42 J -34151201.95 -34151201.72 -34151201.48 0.0285 0.0099
 Jupiter -98209-03-17 03:35 J -34149338.58 -34149338.35 -34149338.11 0.0486 0.0120
 Neptune -98207-08-24 15:20 J -34148447.92 -34148447.86 -34148447.73 0.0088 0.0083
 Neptune -98206-08-27 00:56 J -34148080.65 -34148080.46 -34148080.23 0.0088 0.0051
 Neptune -98205-08-28 10:32 J -34147713.31 -34147713.06 -34147712.82 0.0088 0.0020
 Neptune -98204-08-30 19:25 J -34147345.94 -34147345.69 -34147345.43 0.0088 0.0011
 Neptune -98203-09-02 04:04 J -34146978.53 -34146978.33 -34146978.09 0.0088 0.0043
 Neptune -98202-09-04 12:42 J -34146611.09 -34146610.97 -34146610.81 0.0088 0.0073
 Uranus -98201-04-03 09:49 J -34146399.31 -34146399.09 -34146398.88 0.0145 0.0085
 Uranus -98200-04-08 18:56 J -34146028.97 -34146028.71 -34146028.44 0.0144 0.0015

Saturn -98200-08-12 05:01 J -34145903.52 -34145903.29 -34145903.06 0.0274 0.0090
 Uranus -98199-04-14 03:49 J -34145658.58 -34145658.34 -34145658.09 0.0144 0.0056
 Saturn -98199-08-24 11:16 J -34145526.11 -34145526.03 -34145525.91 0.0275 0.0249
 Uranus -98198-04-19 11:30 J -34145288.13 -34145288.02 -34145287.87 0.0143 0.0125
 Jupiter -98197-03-21 15:49 J -34144950.90 -34144950.84 -34144950.77 0.0487 0.0467
 Jupiter -98192-09-15 02:37 J -34142947.50 -34142947.39 -34142947.27 0.0542 0.0464
 Mars -98188-01-09 15:20 J -34141735.02 -34141734.86 -34141734.69 0.1624 0.0767
 Saturn -98185-02-03 08:23 J -34140615.38 -34140615.15 -34140614.90 0.0285 0.0068
 Jupiter -98180-09-20 00:28 J -34138559.70 -34138559.48 -34138559.25 0.0543 0.0012
 Saturn -98171-08-07 06:28 J -34135316.34 -34135316.23 -34135316.10 0.0273 0.0238
 Saturn -98170-08-19 13:40 J -34134939.15 -34134938.93 -34134938.70 0.0274 0.0098
 Jupiter -98168-09-25 01:54 J -34134171.54 -34134171.42 -34134171.30 0.0542 0.0455
 Pluto -98163-04-13 19:40 J -34132509.92 -34132509.68 -34132509.42 0.0066 0.0024
 Pluto -98162-04-15 12:13 J -34132143.02 -34132142.99 -34132142.88 0.0067 0.0065
 Uranus -98158-10-04 11:44 J -34130510.13 -34130510.01 -34130509.84 0.0134 0.0107
 Uranus -98157-10-07 12:56 J -34130141.18 -34130140.96 -34130140.74 0.0134 0.0055
 Saturn -98156-01-27 06:56 J -34130029.33 -34130029.21 -34130029.09 0.0286 0.0247
 Uranus -98156-10-11 14:08 J -34129772.16 -34129771.91 -34129771.67 0.0134 0.0003
 Saturn -98155-02-10 04:04 J -34129650.55 -34129650.33 -34129650.12 0.0285 0.0143
 Uranus -98155-10-15 15:35 J -34129403.07 -34129402.85 -34129402.62 0.0135 0.0049
 Uranus -98154-10-19 17:59 J -34129033.91 -34129033.75 -34129033.59 0.0135 0.0102
 Mars -98150-07-25 04:32 J -34127659.49 -34127659.31 -34127659.14 0.1896 0.0951
 Saturn -98141-08-13 10:32 J -34124352.30 -34124352.06 -34124351.82 0.0274 0.0052
 Jupiter -98138-03-12 20:37 J -34123410.84 -34123410.64 -34123410.44 0.0485 0.0273
 Saturn -98126-02-04 15:20 J -34119064.10 -34119063.86 -34119063.61 0.0285 0.0026
 Jupiter -98126-03-17 07:40 J -34119023.42 -34119023.18 -34119022.94 0.0485 0.0071
 Neptune -98124-02-15 10:18 J -34118322.21 -34118322.07 -34118321.92 0.0089 0.0073
 Neptune -98123-02-18 00:13 J -34117954.71 -34117954.49 -34117954.25 0.0089 0.0041
 Neptune -98122-02-20 14:37 J -34117587.16 -34117586.89 -34117586.63 0.0089 0.0008
 Neptune -98121-02-23 04:32 J -34117219.54 -34117219.31 -34117219.04 0.0089 0.0027

Neptune -98120-02-24 18:42 J -34116851.89 -34116851.72 -34116851.50 0.0089 0.0060
 Uranus -98117-04-03 17:01 J -34115718.00 -34115717.79 -34115717.57 0.0145 0.0082
 Uranus -98116-04-09 02:23 J -34115347.66 -34115347.40 -34115347.13 0.0144 0.0012
 Uranus -98115-04-14 11:30 J -34114977.26 -34114977.02 -34114976.78 0.0144 0.0058
 Jupiter -98114-03-21 20:23 J -34114635.77 -34114635.65 -34114635.52 0.0486 0.0418
 Uranus -98114-04-19 19:11 J -34114606.80 -34114606.70 -34114606.56 0.0143 0.0127
 Saturn -98112-08-08 12:13 J -34113765.14 -34113764.99 -34113764.81 0.0273 0.0199
 Saturn -98111-08-20 18:56 J -34113387.92 -34113387.71 -34113387.50 0.0274 0.0135
 Mars -98109-01-12 17:30 J -34112877.96 -34112877.77 -34112877.58 0.1626 0.0008
 Jupiter -98109-09-14 05:16 J -34112632.31 -34112632.28 -34112632.25 0.0543 0.0536
 Saturn -98097-01-29 13:11 J -34108478.11 -34108477.95 -34108477.77 0.0286 0.0206
 Jupiter -98097-09-19 07:54 J -34108244.40 -34108244.17 -34108243.95 0.0543 0.0067
 Saturn -98096-02-11 10:47 J -34108099.23 -34108099.05 -34108098.85 0.0285 0.0184
 Jupiter -98085-09-24 05:59 J -34103856.40 -34103856.25 -34103856.09 0.0542 0.0386
 Saturn -98082-08-15 14:23 J -34102801.14 -34102800.90 -34102800.66 0.0274 0.0015
 Pluto -98077-10-15 10:32 J -34100913.29 -34100913.06 -34100912.81 0.0078 0.0016
 Uranus -98074-10-04 20:37 J -34099828.78 -34099828.64 -34099828.48 0.0134 0.0104
 Uranus -98073-10-07 21:20 J -34099459.83 -34099459.61 -34099459.38 0.0134 0.0053
 Uranus -98072-10-11 22:47 J -34099090.79 -34099090.55 -34099090.30 0.0134 0.0002
 Uranus -98071-10-16 00:13 J -34098721.71 -34098721.49 -34098721.26 0.0135 0.0051
 Uranus -98070-10-20 02:08 J -34098352.55 -34098352.41 -34098352.24 0.0135 0.0103
 Saturn -98067-02-05 19:40 J -34097512.92 -34097512.68 -34097512.43 0.0285 0.0013
 Jupiter -98055-03-12 04:04 J -34093095.51 -34093095.33 -34093095.14 0.0485 0.0311
 Saturn -98053-08-09 17:16 J -34092213.98 -34092213.78 -34092213.58 0.0273 0.0160
 Saturn -98052-08-21 23:01 J -34091836.72 -34091836.54 -34091836.34 0.0274 0.0172
 Jupiter -98043-03-16 14:52 J -34088708.12 -34088707.88 -34088707.64 0.0485 0.0028
 Neptune -98042-08-26 14:52 J -34088180.03 -34088179.88 -34088179.68 0.0088 0.0065
 Neptune -98041-08-28 00:13 J -34087812.71 -34087812.49 -34087812.24 0.0088 0.0033
 Neptune -98040-08-30 09:35 J -34087445.35 -34087445.10 -34087444.85 0.0088 0.0002
 Neptune -98039-09-01 18:13 J -34087077.96 -34087077.74 -34087077.49 0.0088 0.0030

Saturn -98038-01-30 17:01 J -34086926.99 -34086926.79 -34086926.59 0.0286 0.0167

Neptune -98038-09-04 02:51 J -34086710.54 -34086710.38 -34086710.17 0.0088 0.0060

Saturn -98037-02-13 14:51 J -34086548.03 -34086547.88 -34086547.72 0.0285 0.0221

Uranus -98033-04-03 23:30 J -34085036.73 -34085036.52 -34085036.29 0.0145 0.0080

Uranus -98032-04-09 09:20 J -34084666.37 -34084666.11 -34084665.84 0.0144 0.0010

Jupiter -98031-03-21 03:35 J -34084320.50 -34084320.35 -34084320.20 0.0486 0.0374

Uranus -98031-04-14 18:13 J -34084295.97 -34084295.74 -34084295.49 0.0144 0.0060

Mars -98030-01-14 18:56 J -34084020.87 -34084020.71 -34084020.54 0.1627 0.0773

Uranus -98030-04-20 02:08 J -34083925.51 -34083925.41 -34083925.27 0.0143 0.0128

Saturn -98023-08-16 17:15 J -34081250.03 -34081249.78 -34081249.54 0.0274 0.0020

Jupiter -98014-09-19 10:32 J -34077929.27 -34077929.06 -34077928.84 0.0543 0.0140

Saturn -98008-02-06 21:49 J -34075961.83 -34075961.59 -34075961.35 0.0285 0.0048

Jupiter -98002-09-24 06:27 J -34073541.41 -34073541.23 -34073541.04 0.0543 0.0306

98TH MILLENNIUM BCE

This is a list of transits of Earth in the 98th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-97994-08-11 20:37 J	-34070662.86	-34070662.64	-34070662.43	0.0273	0.0124		
Saturn	-97993-08-23 01:39 J	-34070285.57	-34070285.43	-34070285.26	0.0274	0.0207		
Uranus	-97990-10-05 05:15 J	-34069147.42	-34069147.28	-34069147.10	0.0133	0.0101		
Uranus	-97989-10-08 06:13 J	-34068778.46	-34068778.24	-34068778.00	0.0134	0.0051		
Uranus	-97988-10-12 07:39 J	-34068409.42	-34068409.18	-34068408.93	0.0134	0.0001		
Uranus	-97987-10-16 09:06 J	-34068040.34	-34068040.12	-34068039.89	0.0135	0.0052		

Uranus -97986-10-20 10:47 J -34067671.19 -34067671.05 -34067670.88 0.0135 0.0105
 Mars -97983-01-08 19:54 J -34066859.81 -34066859.67 -34066859.53 0.1621 0.1069
 Saturn -97979-01-31 18:42 J -34065375.93 -34065375.72 -34065375.49 0.0286 0.0131
 Saturn -97978-02-14 17:01 J -34064996.89 -34064996.79 -34064996.68 0.0285 0.0257
 Jupiter -97972-03-11 11:59 J -34062780.16 -34062780.00 -34062779.83 0.0485 0.0351
 Saturn -97964-08-17 19:11 J -34059698.94 -34059698.70 -34059698.46 0.0274 0.0054
 Neptune -97960-02-14 19:25 J -34058421.69 -34058421.69 -34058421.61 0.0089 0.0089
 Jupiter -97960-03-15 23:30 J -34058392.76 -34058392.52 -34058392.28 0.0485 0.0009
 Neptune -97959-02-17 09:35 J -34058054.28 -34058054.10 -34058053.87 0.0089 0.0055
 Neptune -97958-02-19 23:59 J -34057686.74 -34057686.50 -34057686.23 0.0089 0.0022
 Neptune -97957-02-22 14:23 J -34057319.16 -34057318.90 -34057318.64 0.0089 0.0011
 Neptune -97956-02-24 04:03 J -34056951.53 -34056951.33 -34056951.08 0.0089 0.0045
 Neptune -97955-02-26 18:27 J -34056583.83 -34056583.73 -34056583.58 0.0089 0.0078
 Mars -97951-01-16 20:51 J -34055163.68 -34055163.63 -34055163.57 0.1628 0.1543
 Saturn -97949-02-08 21:49 J -34054410.82 -34054410.59 -34054410.35 0.0285 0.0082
 Uranus -97949-04-04 06:13 J -34054355.45 -34054355.24 -34054355.01 0.0145 0.0078
 Jupiter -97948-03-20 11:44 J -34054005.17 -34054005.01 -34054004.83 0.0486 0.0340
 Uranus -97948-04-09 16:03 J -34053985.10 -34053984.83 -34053984.57 0.0144 0.0008
 Uranus -97947-04-15 00:56 J -34053614.69 -34053614.46 -34053614.22 0.0144 0.0061
 Uranus -97946-04-20 08:37 J -34053244.22 -34053244.14 -34053244.00 0.0143 0.0130
 Mars -97945-07-19 17:59 J -34052787.88 -34052787.75 -34052787.61 0.1904 0.1418
 Saturn -97935-08-12 23:01 J -34049111.77 -34049111.54 -34049111.31 0.0273 0.0087
 Saturn -97934-08-25 04:03 J -34048734.43 -34048734.33 -34048734.21 0.0274 0.0241
 Jupiter -97931-09-18 13:11 J -34047614.15 -34047613.95 -34047613.74 0.0543 0.0213
 Saturn -97920-02-01 19:54 J -34043824.90 -34043824.67 -34043824.44 0.0286 0.0095
 Jupiter -97919-09-23 16:18 J -34043226.01 -34043225.82 -34043225.62 0.0543 0.0258
 Pluto -97915-04-15 23:44 J -34041925.77 -34041925.51 -34041925.23 0.0066 0.0011
 Saturn -97906-08-07 13:25 J -34038525.04 -34038524.94 -34038524.82 0.0273 0.0242
 Uranus -97906-10-05 13:39 J -34038466.07 -34038465.93 -34038465.75 0.0134 0.0100
 Saturn -97905-08-18 20:37 J -34038147.87 -34038147.64 -34038147.41 0.0274 0.0088

Uranus -97905-10-08 14:51 J -34038097.11 -34038096.88 -34038096.65 0.0134 0.0049
 Mars -97904-01-10 21:06 J -34038002.81 -34038002.62 -34038002.44 0.1622 0.0321
 Uranus -97904-10-12 16:03 J -34037728.08 -34037727.83 -34037727.59 0.0134 0.0003
 Uranus -97903-10-16 17:30 J -34037359.00 -34037358.77 -34037358.55 0.0135 0.0053
 Uranus -97902-10-20 18:56 J -34036989.84 -34036989.71 -34036989.54 0.0135 0.0105
 Saturn -97891-01-26 23:59 J -34033238.58 -34033238.50 -34033238.41 0.0286 0.0269
 Saturn -97890-02-09 21:06 J -34032859.84 -34032859.62 -34032859.39 0.0285 0.0115
 Jupiter -97889-03-10 22:03 J -34032464.73 -34032464.58 -34032464.43 0.0485 0.0380
 Neptune -97878-08-26 04:18 J -34028279.41 -34028279.32 -34028279.16 0.0088 0.0078
 Jupiter -97877-03-15 10:18 J -34028077.31 -34028077.07 -34028076.83 0.0485 0.0038
 Neptune -97877-08-27 13:54 J -34027912.12 -34027911.92 -34027911.68 0.0088 0.0046
 Saturn -97876-08-14 01:11 J -34027560.69 -34027560.45 -34027560.21 0.0273 0.0052
 Neptune -97876-08-29 23:15 J -34027544.77 -34027544.53 -34027544.27 0.0088 0.0016
 Neptune -97875-09-01 08:23 J -34027177.39 -34027177.15 -34027176.89 0.0088 0.0016
 Neptune -97874-09-03 16:47 J -34026809.99 -34026809.80 -34026809.56 0.0088 0.0048
 Neptune -97873-09-05 01:54 J -34026442.52 -34026442.42 -34026442.28 0.0088 0.0078
 Mars -97866-07-24 09:49 J -34023929.28 -34023929.09 -34023928.90 0.1901 0.0654
 Jupiter -97865-03-19 20:37 J -34023689.82 -34023689.64 -34023689.44 0.0485 0.0300
 Uranus -97865-04-04 12:56 J -34023674.18 -34023673.96 -34023673.74 0.0145 0.0076
 Uranus -97864-04-09 22:32 J -34023303.82 -34023303.56 -34023303.29 0.0144 0.0007
 Uranus -97863-04-15 07:25 J -34022933.42 -34022933.19 -34022932.94 0.0144 0.0062
 Uranus -97862-04-20 15:20 J -34022562.95 -34022562.86 -34022562.73 0.0143 0.0130
 Saturn -97861-02-03 20:37 J -34022273.88 -34022273.64 -34022273.40 0.0286 0.0060
 Jupiter -97848-09-17 22:47 J -34017298.75 -34017298.55 -34017298.36 0.0543 0.0260
 Saturn -97847-08-08 15:35 J -34016974.00 -34016973.85 -34016973.69 0.0273 0.0206
 Saturn -97846-08-20 22:32 J -34016596.78 -34016596.56 -34016596.35 0.0274 0.0122
 Jupiter -97836-09-22 22:18 J -34012910.78 -34012910.57 -34012910.36 0.0543 0.0195
 Saturn -97832-01-27 23:01 J -34011687.67 -34011687.54 -34011687.39 0.0286 0.0235
 Saturn -97831-02-10 20:37 J -34011308.85 -34011308.64 -34011308.42 0.0285 0.0148
 Pluto -97829-10-17 17:59 J -34010328.96 -34010328.75 -34010328.51 0.0078 0.0033

Mars -97825-01-13 22:47 J -34009145.74 -34009145.55 -34009145.37 0.1623 0.0433
 Uranus -97822-10-05 23:01 J -34007784.70 -34007784.54 -34007784.37 0.0134 0.0097
 Uranus -97821-10-08 23:44 J -34007415.74 -34007415.51 -34007415.28 0.0134 0.0047
 Uranus -97820-10-13 00:42 J -34007046.71 -34007046.47 -34007046.22 0.0134 0.0004
 Uranus -97819-10-17 02:08 J -34006677.63 -34006677.41 -34006677.18 0.0135 0.0054
 Uranus -97818-10-21 03:49 J -34006308.48 -34006308.34 -34006308.18 0.0135 0.0106
 Saturn -97817-08-15 03:20 J -34006009.60 -34006009.36 -34006009.12 0.0274 0.0016
 Jupiter -97806-03-11 06:56 J -34002149.32 -34002149.21 -34002149.08 0.0485 0.0418
 Saturn -97802-02-04 22:03 J -34000722.82 -34000722.58 -34000722.33 0.0285 0.0024
 Neptune -97795-02-16 19:39 J -33998153.82 -33998153.68 -33998153.49 0.0089 0.0070
 Neptune -97794-02-19 10:03 J -33997786.31 -33997786.08 -33997785.83 0.0089 0.0036
 Jupiter -97794-03-15 18:27 J -33997761.97 -33997761.73 -33997761.49 0.0485 0.0079
 Neptune -97793-02-22 00:13 J -33997418.75 -33997418.49 -33997418.22 0.0089 0.0003
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 Neptune -97791-02-26 04:32 J -33996683.48 -33996683.31 -33996683.11 0.0089 0.0063
 Saturn -97788-08-09 17:59 J -33995422.94 -33995422.75 -33995422.56 0.0273 0.0170
 Saturn -97787-08-22 00:42 J -33995045.66 -33995045.47 -33995045.26 0.0274 0.0157
 Jupiter -97782-03-20 05:44 J -33993374.46 -33993374.26 -33993374.06 0.0485 0.0263
 Uranus -97782-03-31 10:03 J -33993363.10 -33993363.08 -33993363.01 0.0145 0.0144
 Uranus -97781-04-04 20:23 J -33992992.87 -33992992.65 -33992992.41 0.0145 0.0074
 Uranus -97780-04-10 06:13 J -33992622.51 -33992622.24 -33992621.98 0.0144 0.0005
 Uranus -97779-04-15 14:51 J -33992252.11 -33992251.88 -33992251.63 0.0144 0.0064
 Mars -97778-01-08 02:08 J -33991984.51 -33991984.41 -33991984.30 0.1618 0.1336
 Uranus -97778-04-20 22:47 J -33991881.64 -33991881.55 -33991881.42 0.0143 0.0131
 Saturn -97773-01-29 23:59 J -33990136.66 -33990136.50 -33990136.31 0.0286 0.0199
 Saturn -97772-02-11 21:20 J -33989757.79 -33989757.61 -33989757.41 0.0285 0.0183
 Jupiter -97765-09-16 21:20 J -33986983.79 -33986983.61 -33986983.44 0.0543 0.0350
 Saturn -97758-08-17 05:59 J -33984458.49 -33984458.25 -33984458.00 0.0274 0.0022
 Jupiter -97753-09-21 21:49 J -33982595.81 -33982595.59 -33982595.36 0.0543 0.0111
 Mars -97746-01-16 00:42 J -33980288.59 -33980288.47 -33980288.34 0.1624 0.1197

Saturn -97743-02-06 01:11 J -33979171.70 -33979171.45 -33979171.20 0.0285 0.0015
 Uranus -97738-10-06 07:11 J -33977103.35 -33977103.20 -33977103.01 0.0134 0.0096
 Uranus -97737-10-09 07:54 J -33976734.38 -33976734.17 -33976733.92 0.0134 0.0046
 Uranus -97736-10-13 09:06 J -33976365.36 -33976365.12 -33976364.87 0.0134 0.0005
 Uranus -97735-10-17 10:32 J -33975996.28 -33975996.06 -33975995.83 0.0135 0.0055
 Uranus -97734-10-21 12:13 J -33975627.12 -33975626.99 -33975626.82 0.0135 0.0107
 Saturn -97729-08-10 21:49 J -33973871.81 -33973871.59 -33973871.38 0.0273 0.0133
 Saturn -97728-08-23 04:32 J -33973494.48 -33973494.31 -33973494.14 0.0274 0.0193
 Jupiter -97723-03-10 15:06 J -33971833.94 -33971833.87 -33971833.79 0.0485 0.0456
 Saturn -97714-01-31 02:51 J -33968585.57 -33968585.38 -33968585.17 0.0286 0.0161
 Saturn -97713-02-14 00:27 J -33968206.63 -33968206.48 -33968206.32 0.0285 0.0219
 Neptune -97713-08-27 03:35 J -33968011.51 -33968011.35 -33968011.13 0.0088 0.0060
 Neptune -97712-08-29 13:11 J -33967644.18 -33967643.95 -33967643.70 0.0088 0.0028
 Jupiter -97711-03-15 03:20 J -33967446.59 -33967446.36 -33967446.12 0.0485 0.0114
 Neptune -97711-08-31 22:32 J -33967276.82 -33967276.56 -33967276.31 0.0088 0.0003
 Neptune -97710-09-03 07:25 J -33966909.42 -33966909.19 -33966908.95 0.0088 0.0034
 Neptune -97709-09-04 15:49 J -33966541.99 -33966541.84 -33966541.65 0.0088 0.0065
 Saturn -97700-08-06 00:42 J -33963284.51 -33963284.47 -33963284.41 0.0274 0.0268
 Mars -97699-01-10 02:51 J -33963127.55 -33963127.38 -33963127.21 0.1618 0.0610
 Jupiter -97699-03-19 15:20 J -33963059.07 -33963058.86 -33963058.64 0.0485 0.0228
 Saturn -97699-08-18 09:35 J -33962907.33 -33962907.10 -33962906.86 0.0274 0.0059
 Uranus -97698-03-31 18:42 J -33962681.77 -33962681.72 -33962681.63 0.0145 0.0140
 Uranus -97697-04-05 04:47 J -33962311.52 -33962311.30 -33962311.06 0.0145 0.0071
 Uranus -97696-04-10 14:23 J -33961941.16 -33961940.90 -33961940.63 0.0144 0.0004
 Uranus -97695-04-15 23:01 J -33961570.76 -33961570.54 -33961570.29 0.0144 0.0066
 Uranus -97694-04-21 06:56 J -33961200.30 -33961200.21 -33961200.10 0.0143 0.0132
 Saturn -97684-02-07 06:56 J -33957620.45 -33957620.21 -33957619.97 0.0285 0.0055
 Jupiter -97682-09-17 03:06 J -33956668.51 -33956668.37 -33956668.22 0.0544 0.0412
 Saturn -97670-08-13 02:23 J -33952320.63 -33952320.40 -33952320.17 0.0273 0.0094
 Jupiter -97670-09-22 05:59 J -33952280.48 -33952280.25 -33952280.03 0.0543 0.0057

Saturn -97669-08-24 09:06 J -33951943.24 -33951943.12 -33951942.98 0.0274 0.0231
 Pluto -97668-04-16 06:13 J -33951708.37 -33951708.24 -33951708.06 0.0066 0.0055
 Pluto -97667-04-17 23:30 J -33951341.74 -33951341.52 -33951341.27 0.0067 0.0033
 Mars -97661-07-18 19:54 J -33949057.74 -33949057.67 -33949057.60 0.1908 0.1772
 Jupiter -97658-09-27 05:15 J -33947892.35 -33947892.28 -33947892.20 0.0542 0.0509
 Saturn -97655-02-01 08:08 J -33947034.38 -33947034.16 -33947033.93 0.0285 0.0120
 Saturn -97654-02-15 05:30 J -33946655.36 -33946655.27 -33946655.16 0.0285 0.0259
 Uranus -97654-10-06 16:18 J -33946421.98 -33946421.82 -33946421.62 0.0134 0.0093
 Uranus -97653-10-09 17:15 J -33946053.01 -33946052.78 -33946052.54 0.0134 0.0043
 Uranus -97652-10-13 18:13 J -33945683.98 -33945683.74 -33945683.49 0.0134 0.0007
 Uranus -97651-10-17 19:25 J -33945314.90 -33945314.69 -33945314.45 0.0135 0.0057
 Uranus -97650-10-21 21:20 J -33944945.74 -33944945.61 -33944945.45 0.0135 0.0108
 Saturn -97641-08-07 05:59 J -33941733.38 -33941733.25 -33941733.12 0.0274 0.0228
 Saturn -97640-08-19 14:51 J -33941356.10 -33941355.88 -33941355.65 0.0274 0.0097
 Neptune -97631-02-16 05:15 J -33938253.36 -33938253.28 -33938253.18 0.0089 0.0083
 Neptune -97630-02-18 19:11 J -33937885.91 -33937885.70 -33937885.48 0.0089 0.0051
 Neptune -97629-02-21 09:06 J -33937518.37 -33937518.12 -33937517.85 0.0089 0.0018
 Neptune -97628-02-22 23:30 J -33937150.78 -33937150.52 -33937150.26 0.0089 0.0015
 Jupiter -97628-03-14 08:37 J -33937131.36 -33937131.14 -33937130.91 0.0485 0.0163
 Neptune -97627-02-25 13:54 J -33936783.14 -33936782.92 -33936782.70 0.0089 0.0048
 Saturn -97626-01-26 20:08 J -33936447.70 -33936447.66 -33936447.59 0.0286 0.0277
 Neptune -97626-02-28 03:35 J -33936415.42 -33936415.35 -33936415.22 0.0089 0.0082
 Saturn -97625-02-09 15:06 J -33936069.10 -33936068.87 -33936068.63 0.0285 0.0098
 Mars -97620-01-12 03:35 J -33934270.54 -33934270.35 -33934270.16 0.1619 0.0131
 Jupiter -97616-03-18 19:54 J -33932743.89 -33932743.67 -33932743.44 0.0485 0.0175
 Uranus -97614-04-01 03:20 J -33932000.45 -33932000.36 -33932000.27 0.0145 0.0136
 Uranus -97613-04-05 13:11 J -33931630.18 -33931629.95 -33931629.71 0.0145 0.0067
 Uranus -97612-04-10 23:01 J -33931259.81 -33931259.54 -33931259.28 0.0144 0.0003
 Uranus -97611-04-16 07:25 J -33930889.41 -33930889.19 -33930888.95 0.0144 0.0068
 Saturn -97611-08-14 08:23 J -33930769.39 -33930769.15 -33930768.91 0.0273 0.0054

Uranus -97610-04-21 15:20 J -33930518.94 -33930518.86 -33930518.76 0.0143 0.0134
 Saturn -97610-08-26 15:06 J -33930391.90 -33930391.87 -33930391.81 0.0274 0.0269
 Jupiter -97599-09-16 07:11 J -33926353.30 -33926353.20 -33926353.09 0.0543 0.0480
 Saturn -97596-02-02 16:32 J -33925483.04 -33925482.81 -33925482.57 0.0285 0.0075
 Jupiter -97587-09-21 02:23 J -33921965.62 -33921965.40 -33921965.17 0.0543 0.0043
 Mars -97582-07-23 13:25 J -33920199.14 -33920198.94 -33920198.73 0.1906 0.0349
 Saturn -97582-08-09 11:59 J -33920182.18 -33920182.00 -33920181.83 0.0274 0.0188
 Pluto -97582-10-18 23:01 J -33920111.68 -33920111.54 -33920111.36 0.0078 0.0060
 Saturn -97581-08-20 20:51 J -33919804.83 -33919804.63 -33919804.41 0.0275 0.0137
 Pluto -97581-10-19 21:49 J -33919744.66 -33919744.59 -33919744.46 0.0077 0.0071
 Jupiter -97575-09-26 00:56 J -33917577.60 -33917577.46 -33917577.30 0.0543 0.0407
 Mars -97573-01-07 08:37 J -33917109.17 -33917109.14 -33917109.11 0.1615 0.1591
 Uranus -97570-10-07 00:42 J -33915740.63 -33915740.47 -33915740.27 0.0134 0.0091
 Uranus -97569-10-10 01:54 J -33915371.65 -33915371.42 -33915371.18 0.0134 0.0041
 Uranus -97568-10-14 02:51 J -33915002.63 -33915002.38 -33915002.14 0.0134 0.0008
 Saturn -97567-01-28 06:56 J -33914896.34 -33914896.21 -33914896.06 0.0285 0.0231
 Uranus -97567-10-18 04:18 J -33914633.54 -33914633.32 -33914633.10 0.0135 0.0058
 Saturn -97566-02-11 01:54 J -33914517.63 -33914517.42 -33914517.20 0.0285 0.0144
 Uranus -97566-10-22 06:13 J -33914264.38 -33914264.24 -33914264.09 0.0135 0.0109
 Saturn -97552-08-15 16:32 J -33909218.05 -33909217.81 -33909217.57 0.0274 0.0013
 Neptune -97549-08-26 17:01 J -33908110.91 -33908110.79 -33908110.62 0.0088 0.0073
 Neptune -97548-08-29 02:37 J -33907743.60 -33907743.39 -33907743.15 0.0088 0.0042
 Neptune -97547-08-31 11:59 J -33907376.24 -33907376.00 -33907375.74 0.0088 0.0011
 Neptune -97546-09-02 21:06 J -33907008.86 -33907008.62 -33907008.37 0.0088 0.0021
 Jupiter -97545-03-13 13:25 J -33906816.15 -33906815.94 -33906815.72 0.0485 0.0213
 Neptune -97545-09-04 05:44 J -33906641.44 -33906641.26 -33906641.03 0.0088 0.0052
 Neptune -97544-09-06 14:51 J -33906273.97 -33906273.88 -33906273.78 0.0088 0.0082
 Mars -97541-01-15 05:15 J -33905413.44 -33905413.28 -33905413.12 0.1621 0.0869
 Saturn -97537-02-05 03:06 J -33903931.61 -33903931.37 -33903931.12 0.0285 0.0029
 Jupiter -97533-03-18 01:11 J -33902428.68 -33902428.45 -33902428.21 0.0485 0.0127

Uranus	-97530-04-01 11:15 J	-33901319.11	-33901319.03	-33901318.90	0.0145	0.0133
Uranus	-97529-04-05 21:35 J	-33900948.83	-33900948.60	-33900948.36	0.0145	0.0064
Uranus	-97528-04-11 07:11 J	-33900578.46	-33900578.20	-33900577.94	0.0144	0.0004
Uranus	-97527-04-16 15:35 J	-33900208.07	-33900207.85	-33900207.61	0.0144	0.0070
Uranus	-97526-04-21 23:15 J	-33899837.60	-33899837.53	-33899837.43	0.0143	0.0136
Saturn	-97523-08-10 19:11 J	-33898630.91	-33898630.70	-33898630.50	0.0274	0.0148
Saturn	-97522-08-23 04:03 J	-33898253.51	-33898253.33	-33898253.14	0.0275	0.0177
Jupiter	-97521-03-22 12:56 J	-33898041.03	-33898040.96	-33898040.90	0.0486	0.0466
Saturn	-97508-01-29 19:54 J	-33893344.86	-33893344.67	-33893344.48	0.0285	0.0182
Saturn	-97507-02-12 15:06 J	-33892966.05	-33892965.87	-33892965.68	0.0285	0.0191
Jupiter	-97504-09-20 03:20 J	-33891650.58	-33891650.36	-33891650.14	0.0544	0.0123
Mars	-97494-01-09 09:20 J	-33888252.26	-33888252.11	-33888251.95	0.1616	0.0866
Saturn	-97493-08-17 01:11 J	-33887666.69	-33887666.45	-33887666.20	0.0274	0.0030
Jupiter	-97492-09-25 05:44 J	-33887262.43	-33887262.26	-33887262.08	0.0543	0.0342
Uranus	-97486-10-07 10:03 J	-33885059.25	-33885059.08	-33885058.88	0.0134	0.0088
Uranus	-97485-10-10 11:01 J	-33884690.27	-33884690.04	-33884689.80	0.0134	0.0039
Uranus	-97484-10-14 11:59 J	-33884321.24	-33884321.00	-33884320.75	0.0134	0.0011
Uranus	-97483-10-18 13:25 J	-33883952.15	-33883951.94	-33883951.71	0.0135	0.0060
Uranus	-97482-10-22 15:20 J	-33883582.99	-33883582.86	-33883582.71	0.0135	0.0110
Saturn	-97478-02-06 15:49 J	-33882380.09	-33882379.84	-33882379.59	0.0285	0.0019
Neptune	-97466-02-18 04:18 J	-33877985.48	-33877985.32	-33877985.12	0.0089	0.0066
Neptune	-97465-02-20 18:13 J	-33877617.98	-33877617.74	-33877617.49	0.0089	0.0032
Neptune	-97464-02-22 08:37 J	-33877250.40	-33877250.14	-33877249.88	0.0089	0.0001
Saturn	-97464-08-12 03:20 J	-33877079.58	-33877079.36	-33877079.13	0.0274	0.0107
Neptune	-97463-02-24 22:18 J	-33876882.80	-33876882.57	-33876882.31	0.0089	0.0034
Saturn	-97463-08-24 12:13 J	-33876702.13	-33876701.99	-33876701.84	0.0275	0.0216
Mars	-97462-01-17 06:27 J	-33876556.24	-33876556.23	-33876556.21	0.1622	0.1616
Neptune	-97462-02-27 12:42 J	-33876515.13	-33876514.97	-33876514.79	0.0089	0.0067
Jupiter	-97462-03-13 17:59 J	-33876500.94	-33876500.75	-33876500.54	0.0485	0.0264
Jupiter	-97450-03-18 03:06 J	-33872113.60	-33872113.37	-33872113.13	0.0485	0.0069

Saturn -97449-02-01 09:06 J -33871793.33 -33871793.12 -33871792.89 0.0285 0.0135
 Saturn -97448-02-14 04:47 J -33871414.42 -33871414.30 -33871414.15 0.0284 0.0238
 Uranus -97446-04-01 19:11 J -33870637.80 -33870637.70 -33870637.56 0.0145 0.0129
 Uranus -97445-04-06 05:01 J -33870267.51 -33870267.29 -33870267.03 0.0145 0.0062
 Uranus -97444-04-11 14:51 J -33869897.14 -33869896.88 -33869896.61 0.0144 0.0006
 Uranus -97443-04-16 23:15 J -33869526.75 -33869526.53 -33869526.30 0.0144 0.0072
 Uranus -97442-04-22 06:56 J -33869156.26 -33869156.21 -33869156.11 0.0143 0.0137
 Jupiter -97438-03-22 14:08 J -33867726.03 -33867725.91 -33867725.77 0.0485 0.0405
 Saturn -97435-08-07 00:56 J -33866492.55 -33866492.46 -33866492.36 0.0273 0.0251
 Saturn -97434-08-19 10:47 J -33866115.28 -33866115.05 -33866114.81 0.0274 0.0071
 Jupiter -97421-09-19 06:27 J -33861335.44 -33861335.23 -33861335.02 0.0543 0.0195
 Pluto -97420-04-18 02:51 J -33861124.57 -33861124.38 -33861124.14 0.0066 0.0039
 Saturn -97419-02-08 05:30 J -33860828.51 -33860828.27 -33860828.03 0.0285 0.0067
 Pluto -97419-04-19 19:54 J -33860757.84 -33860757.67 -33860757.47 0.0067 0.0049
 Mars -97415-01-11 10:32 J -33859395.25 -33859395.06 -33859394.88 0.1616 0.0150
 Jupiter -97409-09-24 02:37 J -33856947.59 -33856947.39 -33856947.18 0.0543 0.0245
 Saturn -97405-08-13 11:44 J -33855528.24 -33855528.01 -33855527.77 0.0274 0.0066
 Saturn -97404-08-25 20:23 J -33855150.74 -33855150.65 -33855150.56 0.0275 0.0255
 Uranus -97403-10-03 18:27 J -33854746.73 -33854746.73 -33854746.69 0.0133 0.0133
 Uranus -97402-10-07 18:42 J -33854377.89 -33854377.72 -33854377.52 0.0133 0.0086
 Uranus -97401-10-10 19:39 J -33854008.91 -33854008.68 -33854008.44 0.0134 0.0037
 Uranus -97400-10-14 20:37 J -33853639.88 -33853639.64 -33853639.39 0.0134 0.0012
 Uranus -97399-10-18 22:03 J -33853270.79 -33853270.58 -33853270.35 0.0135 0.0062
 Uranus -97398-10-22 23:59 J -33852901.62 -33852901.50 -33852901.35 0.0135 0.0111
 Saturn -97390-02-02 22:47 J -33850241.79 -33850241.55 -33850241.32 0.0285 0.0087
 Saturn -97389-02-16 18:56 J -33849862.72 -33849862.71 -33849862.69 0.0284 0.0284
 Neptune -97385-08-26 05:15 J -33848210.30 -33848210.28 -33848210.19 0.0088 0.0086
 Neptune -97384-08-28 15:06 J -33847843.05 -33847842.87 -33847842.65 0.0088 0.0055
 Neptune -97383-08-31 00:42 J -33847475.70 -33847475.47 -33847475.22 0.0088 0.0024
 Neptune -97382-09-02 10:03 J -33847108.33 -33847108.08 -33847107.82 0.0088 0.0007

Neptune -97381-09-03 18:42 J -33846740.93 -33846740.72 -33846740.47 0.0088 0.0039
 Neptune -97380-09-06 03:35 J -33846373.49 -33846373.35 -33846373.17 0.0088 0.0069
 Jupiter -97379-03-12 20:37 J -33846185.81 -33846185.64 -33846185.45 0.0485 0.0318
 Saturn -97376-08-08 11:01 J -33844941.19 -33844941.04 -33844940.88 0.0273 0.0208
 Saturn -97375-08-20 20:37 J -33844563.86 -33844563.64 -33844563.42 0.0274 0.0112
 Jupiter -97367-03-17 06:27 J -33841798.47 -33841798.23 -33841797.99 0.0485 0.0015
 Uranus -97362-04-02 03:06 J -33839956.48 -33839956.37 -33839956.22 0.0145 0.0127
 Saturn -97361-01-28 00:13 J -33839655.59 -33839655.49 -33839655.37 0.0286 0.0254
 Uranus -97361-04-06 13:25 J -33839586.18 -33839585.94 -33839585.70 0.0145 0.0059
 Saturn -97360-02-09 18:42 J -33839276.95 -33839276.72 -33839276.50 0.0285 0.0114
 Uranus -97360-04-11 22:47 J -33839215.81 -33839215.55 -33839215.28 0.0144 0.0008
 Uranus -97359-04-17 07:11 J -33838845.41 -33838845.20 -33838844.96 0.0144 0.0074
 Uranus -97358-04-22 15:06 J -33838474.92 -33838474.87 -33838474.78 0.0143 0.0139
 Jupiter -97355-03-21 17:59 J -33837410.91 -33837410.75 -33837410.58 0.0485 0.0351
 Saturn -97346-08-15 20:08 J -33833976.90 -33833976.66 -33833976.41 0.0274 0.0026
 Jupiter -97338-09-19 01:54 J -33831020.61 -33831020.42 -33831020.23 0.0543 0.0295
 Mars -97336-01-13 10:32 J -33830538.23 -33830538.06 -33830537.88 0.1617 0.0575
 Pluto -97334-10-20 22:18 J -33829527.77 -33829527.57 -33829527.34 0.0078 0.0039
 Saturn -97331-02-04 11:01 J -33828690.28 -33828690.04 -33828689.80 0.0285 0.0041
 Jupiter -97326-09-24 00:56 J -33826632.67 -33826632.46 -33826632.24 0.0543 0.0157
 Uranus -97319-10-04 04:03 J -33824065.36 -33824065.33 -33824065.26 0.0133 0.0131
 Uranus -97318-10-08 04:47 J -33823696.49 -33823696.30 -33823696.11 0.0133 0.0083
 Saturn -97317-08-09 20:51 J -33823389.82 -33823389.63 -33823389.44 0.0273 0.0167
 Uranus -97317-10-11 05:15 J -33823327.51 -33823327.28 -33823327.03 0.0134 0.0035
 Saturn -97316-08-22 05:30 J -33823012.47 -33823012.27 -33823012.06 0.0274 0.0152
 Uranus -97316-10-15 06:13 J -33822958.48 -33822958.24 -33822957.99 0.0134 0.0015
 Uranus -97315-10-19 08:08 J -33822589.38 -33822589.16 -33822588.95 0.0135 0.0063
 Uranus -97314-10-23 09:35 J -33822220.21 -33822220.10 -33822219.95 0.0135 0.0113
 Saturn -97302-01-29 11:59 J -33818104.16 -33818104.00 -33818103.83 0.0286 0.0208
 Neptune -97302-02-17 12:42 J -33818085.06 -33818084.97 -33818084.83 0.0089 0.0080

Saturn -97301-02-12 06:27 J -33817725.43 -33817725.23 -33817725.02 0.0285 0.0159
 Neptune -97301-02-20 02:51 J -33817717.59 -33817717.38 -33817717.15 0.0089 0.0047
 Neptune -97300-02-21 16:32 J -33817350.06 -33817349.81 -33817349.54 0.0089 0.0015
 Neptune -97299-02-24 06:27 J -33816982.48 -33816982.23 -33816981.96 0.0089 0.0018
 Neptune -97298-02-26 20:23 J -33816614.85 -33816614.65 -33816614.42 0.0089 0.0051
 Mars -97298-07-22 15:20 J -33816469.07 -33816468.86 -33816468.65 0.1910 0.0012
 Neptune -97297-02-29 10:47 J -33816247.12 -33816247.05 -33816246.95 0.0089 0.0084
 Jupiter -97296-03-12 00:27 J -33815870.62 -33815870.48 -33815870.32 0.0485 0.0370
 Mars -97289-01-08 17:01 J -33813376.92 -33813376.79 -33813376.66 0.1613 0.1111
 Saturn -97287-08-17 03:35 J -33812425.59 -33812425.35 -33812425.10 0.0274 0.0014
 Jupiter -97284-03-16 10:47 J -33811483.29 -33811483.05 -33811482.81 0.0485 0.0038
 Uranus -97278-04-02 11:30 J -33809275.14 -33809275.02 -33809274.87 0.0145 0.0124
 Uranus -97277-04-06 21:20 J -33808904.84 -33808904.61 -33808904.36 0.0145 0.0057
 Uranus -97276-04-12 06:56 J -33808534.47 -33808534.21 -33808533.94 0.0145 0.0010
 Uranus -97275-04-17 15:20 J -33808164.07 -33808163.86 -33808163.63 0.0144 0.0075
 Uranus -97274-04-22 23:30 J -33807793.56 -33807793.52 -33807793.45 0.0143 0.0140
 Saturn -97272-02-05 21:20 J -33807138.85 -33807138.61 -33807138.36 0.0285 0.0007
 Jupiter -97272-03-20 20:37 J -33807095.83 -33807095.64 -33807095.45 0.0485 0.0298
 Saturn -97258-08-12 05:15 J -33801838.49 -33801838.28 -33801838.06 0.0273 0.0126
 Mars -97257-01-16 11:59 J -33801681.10 -33801681.00 -33801680.89 0.1618 0.1304
 Saturn -97257-08-23 13:39 J -33801461.10 -33801460.93 -33801460.76 0.0274 0.0190
 Jupiter -97255-09-18 03:20 J -33800705.52 -33800705.36 -33800705.19 0.0544 0.0370
 Saturn -97243-01-30 21:06 J -33796552.81 -33796552.62 -33796552.41 0.0286 0.0166
 Jupiter -97243-09-23 06:13 J -33796317.46 -33796317.24 -33796317.01 0.0543 0.0094
 Saturn -97242-02-13 16:18 J -33796173.99 -33796173.82 -33796173.64 0.0285 0.0201
 Uranus -97235-10-04 13:11 J -33793383.99 -33793383.95 -33793383.86 0.0133 0.0128
 Uranus -97234-10-08 13:54 J -33793015.11 -33793014.92 -33793014.72 0.0133 0.0081
 Uranus -97233-10-11 14:37 J -33792646.12 -33792645.89 -33792645.65 0.0134 0.0033
 Uranus -97232-10-15 15:35 J -33792277.09 -33792276.85 -33792276.60 0.0134 0.0016
 Jupiter -97231-09-28 04:47 J -33791929.32 -33791929.30 -33791929.27 0.0542 0.0538

Uranus -97231-10-19 17:01 J -33791907.99 -33791907.79 -33791907.56 0.0135 0.0065
 Uranus -97230-10-23 18:56 J -33791538.82 -33791538.71 -33791538.56 0.0135 0.0114
 Saturn -97229-08-05 23:15 J -33791251.56 -33791251.53 -33791251.48 0.0274 0.0269
 Saturn -97228-08-18 10:03 J -33790874.32 -33790874.08 -33790873.84 0.0274 0.0050
 Neptune -97220-08-28 02:51 J -33787942.51 -33787942.38 -33787942.20 0.0088 0.0069
 Neptune -97219-08-30 12:42 J -33787575.18 -33787574.97 -33787574.72 0.0088 0.0038
 Neptune -97218-09-01 22:32 J -33787207.81 -33787207.56 -33787207.30 0.0088 0.0007
 Neptune -97217-09-03 07:25 J -33786840.42 -33786840.19 -33786839.93 0.0088 0.0025
 Neptune -97216-09-05 16:47 J -33786472.99 -33786472.80 -33786472.60 0.0088 0.0055
 Neptune -97215-09-08 01:11 J -33786105.49 -33786105.45 -33786105.36 0.0088 0.0086
 Saturn -97213-02-08 05:01 J -33785587.53 -33785587.29 -33785587.04 0.0285 0.0043
 Jupiter -97213-03-11 05:15 J -33785555.40 -33785555.28 -33785555.15 0.0485 0.0415
 Mars -97210-01-10 17:15 J -33784519.96 -33784519.78 -33784519.60 0.1614 0.0402
 Jupiter -97201-03-15 16:18 J -33781168.05 -33781167.82 -33781167.58 0.0484 0.0082
 Saturn -97199-08-13 12:13 J -33780287.22 -33780286.99 -33780286.76 0.0273 0.0088
 Saturn -97198-08-25 19:54 J -33779909.79 -33779909.67 -33779909.52 0.0274 0.0227
 Uranus -97194-04-02 20:51 J -33778593.75 -33778593.63 -33778593.46 0.0146 0.0121
 Uranus -97193-04-07 06:56 J -33778223.44 -33778223.21 -33778222.96 0.0145 0.0054
 Uranus -97192-04-12 16:32 J -33777853.07 -33777852.81 -33777852.55 0.0145 0.0012
 Uranus -97191-04-18 00:56 J -33777482.67 -33777482.46 -33777482.22 0.0144 0.0078
 Uranus -97190-04-23 09:20 J -33777112.14 -33777112.11 -33777112.06 0.0143 0.0142
 Jupiter -97189-03-20 02:23 J -33776780.60 -33776780.40 -33776780.19 0.0485 0.0250
 Saturn -97184-02-01 04:32 J -33775001.53 -33775001.31 -33775001.09 0.0286 0.0125
 Saturn -97183-02-14 23:59 J -33774622.63 -33774622.50 -33774622.37 0.0285 0.0240
 Pluto -97172-04-19 19:54 J -33770540.89 -33770540.67 -33770540.43 0.0066 0.0034
 Jupiter -97172-09-17 07:25 J -33770390.32 -33770390.19 -33770390.06 0.0543 0.0435
 Pluto -97171-04-21 12:27 J -33770174.10 -33770173.98 -33770173.80 0.0067 0.0055
 Saturn -97170-08-08 05:01 J -33769700.42 -33769700.29 -33769700.16 0.0273 0.0232
 Saturn -97169-08-19 15:06 J -33769323.10 -33769322.87 -33769322.64 0.0274 0.0085
 Jupiter -97160-09-22 06:56 J -33766002.44 -33766002.21 -33766001.98 0.0543 0.0014

Saturn -97155-01-26 16:03 J -33764414.85 -33764414.83 -33764414.80 0.0286 0.0283
 Saturn -97154-02-09 09:49 J -33764036.32 -33764036.09 -33764035.85 0.0285 0.0079
 Uranus -97151-10-04 23:59 J -33762702.57 -33762702.50 -33762702.40 0.0133 0.0124
 Uranus -97150-10-09 00:13 J -33762333.67 -33762333.49 -33762333.27 0.0133 0.0078
 Uranus -97149-10-12 01:11 J -33761964.68 -33761964.45 -33761964.20 0.0134 0.0030
 Jupiter -97148-09-27 03:35 J -33761614.46 -33761614.35 -33761614.22 0.0543 0.0455
 Uranus -97148-10-16 02:23 J -33761595.64 -33761595.40 -33761595.15 0.0134 0.0018
 Uranus -97147-10-20 04:03 J -33761226.54 -33761226.33 -33761226.11 0.0135 0.0067
 Uranus -97146-10-24 06:13 J -33760857.36 -33760857.24 -33760857.12 0.0135 0.0116
 Saturn -97140-08-14 17:44 J -33758736.00 -33758735.76 -33758735.52 0.0273 0.0051
 Saturn -97139-08-27 01:11 J -33758358.51 -33758358.45 -33758358.37 0.0274 0.0261
 Neptune -97137-02-19 10:18 J -33757817.23 -33757817.07 -33757816.86 0.0089 0.0063
 Neptune -97136-02-21 00:13 J -33757449.72 -33757449.49 -33757449.23 0.0089 0.0030
 Neptune -97135-02-23 14:08 J -33757082.17 -33757081.91 -33757081.65 0.0089 0.0003
 Neptune -97134-02-26 04:03 J -33756714.57 -33756714.33 -33756714.09 0.0089 0.0036
 Neptune -97133-02-28 17:44 J -33756346.91 -33756346.76 -33756346.58 0.0089 0.0069
 Mars -97131-01-12 17:30 J -33755662.95 -33755662.77 -33755662.58 0.1614 0.0302
 Jupiter -97130-03-11 12:42 J -33755240.04 -33755239.97 -33755239.89 0.0484 0.0456
 Saturn -97125-02-03 09:06 J -33753450.35 -33753450.12 -33753449.88 0.0286 0.0088
 Saturn -97124-02-16 04:47 J -33753071.35 -33753071.30 -33753071.23 0.0285 0.0276
 Jupiter -97118-03-15 23:15 J -33750852.76 -33750852.53 -33750852.29 0.0485 0.0124
 Saturn -97111-08-09 08:51 J -33748149.29 -33748149.13 -33748148.95 0.0273 0.0196
 Uranus -97110-04-03 06:42 J -33747912.35 -33747912.22 -33747912.04 0.0146 0.0117
 Saturn -97110-08-21 18:13 J -33747771.95 -33747771.74 -33747771.51 0.0274 0.0119
 Uranus -97109-04-07 16:47 J -33747542.03 -33747541.80 -33747541.54 0.0145 0.0050
 Uranus -97108-04-13 02:37 J -33747171.65 -33747171.39 -33747171.13 0.0145 0.0016
 Uranus -97107-04-18 11:01 J -33746801.24 -33746801.04 -33746800.80 0.0144 0.0081
 Jupiter -97106-03-20 09:35 J -33746465.31 -33746465.10 -33746464.88 0.0485 0.0210
 Saturn -97096-01-27 18:27 J -33742863.84 -33742863.73 -33742863.60 0.0286 0.0248
 Saturn -97095-02-10 12:27 J -33742485.20 -33742484.98 -33742484.75 0.0285 0.0115

Jupiter -97089-09-16 05:15 J -33740075.33 -33740075.28 -33740075.21 0.0544 0.0523
 Pluto -97086-10-22 18:27 J -33738943.96 -33738943.73 -33738943.49 0.0078 0.0026
 Mars -97084-01-07 01:25 J -33738501.54 -33738501.44 -33738501.33 0.1612 0.1337
 Saturn -97081-08-15 21:49 J -33737184.83 -33737184.59 -33737184.35 0.0273 0.0016
 Jupiter -97077-09-21 08:37 J -33735687.37 -33735687.14 -33735686.92 0.0544 0.0060
 Uranus -97067-10-05 09:49 J -33732021.17 -33732021.09 -33732020.97 0.0133 0.0121
 Saturn -97066-02-04 11:30 J -33731899.26 -33731899.02 -33731898.77 0.0286 0.0053
 Uranus -97066-10-09 10:18 J -33731652.26 -33731652.07 -33731651.85 0.0133 0.0075
 Jupiter -97065-09-26 12:13 J -33731299.13 -33731298.99 -33731298.83 0.0544 0.0404
 Uranus -97065-10-12 11:30 J -33731283.26 -33731283.02 -33731282.78 0.0134 0.0027
 Uranus -97064-10-16 12:42 J -33730914.21 -33730913.97 -33730913.73 0.0134 0.0020
 Uranus -97063-10-20 14:08 J -33730545.11 -33730544.91 -33730544.69 0.0135 0.0069
 Uranus -97062-10-24 15:49 J -33730175.94 -33730175.84 -33730175.70 0.0135 0.0117
 Neptune -97056-08-27 13:25 J -33728041.99 -33728041.94 -33728041.83 0.0088 0.0084
 Neptune -97055-08-29 23:30 J -33727674.71 -33727674.52 -33727674.30 0.0088 0.0053
 Neptune -97054-09-01 09:20 J -33727307.35 -33727307.11 -33727306.86 0.0088 0.0021
 Neptune -97053-09-02 18:56 J -33726939.96 -33726939.71 -33726939.46 0.0088 0.0009
 Mars -97052-01-14 17:44 J -33726805.90 -33726805.76 -33726805.61 0.1615 0.1014
 Saturn -97052-08-10 11:44 J -33726598.20 -33726598.01 -33726597.80 0.0273 0.0162
 Neptune -97052-09-05 03:49 J -33726572.55 -33726572.34 -33726572.10 0.0088 0.0041
 Saturn -97051-08-22 21:06 J -33726220.82 -33726220.62 -33726220.42 0.0274 0.0151
 Neptune -97051-09-07 12:56 J -33726205.08 -33726204.96 -33726204.79 0.0088 0.0071
 Saturn -97037-01-29 18:42 J -33721312.88 -33721312.72 -33721312.55 0.0286 0.0215
 Saturn -97036-02-11 13:11 J -33720934.16 -33720933.95 -33720933.73 0.0285 0.0146
 Jupiter -97035-03-15 07:54 J -33720537.39 -33720537.17 -33720536.94 0.0485 0.0157
 Uranus -97026-04-03 17:30 J -33717230.92 -33717230.77 -33717230.58 0.0146 0.0112
 Uranus -97025-04-08 03:49 J -33716860.58 -33716860.34 -33716860.08 0.0145 0.0046
 Uranus -97024-04-13 13:39 J -33716490.20 -33716489.93 -33716489.67 0.0145 0.0020
 Jupiter -97023-03-19 19:39 J -33716149.90 -33716149.68 -33716149.45 0.0484 0.0179
 Uranus -97023-04-18 22:32 J -33716119.77 -33716119.56 -33716119.34 0.0144 0.0084

Saturn -97022-08-18 00:27 J -33715633.72 -33715633.48 -33715633.24 0.0273 0.0019

Mars -97014-07-21 14:23 J -33712739.10 -33712738.90 -33712738.69 0.1913 0.0369

Saturn -97007-02-05 13:11 J -33710348.20 -33710347.95 -33710347.71 0.0286 0.0019

Mars -97005-01-10 00:42 J -33709644.64 -33709644.47 -33709644.30 0.1612 0.0649

97TH MILLENNIUM BCE

This is a list of transits of Earth in the 97th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-96994-09-21 17:15 J	-33705372.00	-33705371.78	-33705371.55	0.0544	0.0109		
Saturn	-96993-08-11 13:39 J	-33705047.14	-33705046.93	-33705046.71	0.0273	0.0129		
Saturn	-96992-08-23 22:32 J	-33704669.73	-33704669.56	-33704669.37	0.0274	0.0183		
Uranus	-96983-10-05 21:06 J	-33701339.72	-33701339.62	-33701339.48	0.0133	0.0117		
Jupiter	-96982-09-26 17:44 J	-33700983.94	-33700983.76	-33700983.59	0.0543	0.0341		
Uranus	-96982-10-09 21:49 J	-33700970.79	-33700970.59	-33700970.37	0.0133	0.0071		
Uranus	-96981-10-12 22:47 J	-33700601.79	-33700601.55	-33700601.30	0.0134	0.0024		
Uranus	-96980-10-16 23:44 J	-33700232.74	-33700232.51	-33700232.26	0.0134	0.0024		
Uranus	-96979-10-21 01:11 J	-33699863.64	-33699863.45	-33699863.23	0.0135	0.0072		
Saturn	-96978-01-30 17:59 J	-33699761.93	-33699761.75	-33699761.56	0.0286	0.0182		
Uranus	-96978-10-25 03:20 J	-33699494.47	-33699494.36	-33699494.25	0.0135	0.0120		
Saturn	-96977-02-13 12:56 J	-33699383.15	-33699382.96	-33699382.77	0.0285	0.0177		
Neptune	-96973-02-18 17:59 J	-33697916.86	-33697916.75	-33697916.61	0.0089	0.0078		
Neptune	-96972-02-20 07:11 J	-33697549.40	-33697549.20	-33697548.95	0.0089	0.0046		
Neptune	-96971-02-22 21:06 J	-33697181.87	-33697181.62	-33697181.35	0.0089	0.0013		

Neptune -96970-02-25 11:01 J -33696814.29 -33696814.04 -33696813.78 0.0089 0.0020
 Neptune -96969-02-28 00:27 J -33696446.67 -33696446.48 -33696446.25 0.0089 0.0052
 Neptune -96968-03-01 14:08 J -33696078.96 -33696078.91 -33696078.81 0.0089 0.0085
 Saturn -96964-08-06 15:49 J -33694459.91 -33694459.84 -33694459.75 0.0273 0.0258
 Saturn -96963-08-19 02:37 J -33694082.63 -33694082.39 -33694082.15 0.0274 0.0053
 Jupiter -96952-03-14 17:30 J -33690221.99 -33690221.77 -33690221.55 0.0484 0.0192
 Saturn -96948-02-06 13:39 J -33688797.18 -33688796.93 -33688796.68 0.0285 0.0015
 Uranus -96942-04-04 03:35 J -33686549.50 -33686549.35 -33686549.15 0.0146 0.0108
 Uranus -96941-04-08 14:08 J -33686179.16 -33686178.91 -33686178.65 0.0145 0.0041
 Jupiter -96940-03-19 04:32 J -33685834.54 -33685834.31 -33685834.08 0.0484 0.0140
 Uranus -96940-04-13 23:59 J -33685808.76 -33685808.50 -33685808.24 0.0145 0.0024
 Uranus -96939-04-19 08:51 J -33685438.32 -33685438.13 -33685437.91 0.0144 0.0088
 Mars -96935-07-25 10:18 J -33683880.14 -33683880.07 -33683880.00 0.1911 0.1780
 Saturn -96934-08-13 15:35 J -33683496.07 -33683495.85 -33683495.61 0.0273 0.0095
 Saturn -96933-08-24 23:59 J -33683118.64 -33683118.50 -33683118.34 0.0274 0.0215
 Jupiter -96928-03-23 14:51 J -33681446.92 -33681446.88 -33681446.83 0.0485 0.0475
 Mars -96926-01-12 00:56 J -33680787.65 -33680787.46 -33680787.28 0.1612 0.0057
 Pluto -96924-04-21 09:06 J -33679957.32 -33679957.12 -33679956.86 0.0066 0.0036
 Pluto -96923-04-23 02:08 J -33679590.54 -33679590.41 -33679590.22 0.0067 0.0054
 Saturn -96919-01-31 17:30 J -33678210.98 -33678210.77 -33678210.56 0.0286 0.0150
 Saturn -96918-02-14 12:27 J -33677832.14 -33677831.98 -33677831.81 0.0285 0.0209
 Jupiter -96911-09-20 16:18 J -33675057.03 -33675056.82 -33675056.61 0.0544 0.0195
 Saturn -96905-08-07 17:30 J -33672908.90 -33672908.77 -33672908.62 0.0273 0.0224
 Saturn -96904-08-20 04:18 J -33672531.55 -33672531.32 -33672531.09 0.0274 0.0086
 Jupiter -96899-09-25 17:59 J -33670668.94 -33670668.75 -33670668.55 0.0544 0.0261
 Uranus -96899-10-06 08:08 J -33670658.28 -33670658.16 -33670658.03 0.0133 0.0113
 Uranus -96898-10-10 08:37 J -33670289.35 -33670289.14 -33670288.93 0.0133 0.0068
 Uranus -96897-10-13 09:35 J -33669920.35 -33669920.10 -33669919.86 0.0134 0.0021
 Uranus -96896-10-17 10:18 J -33669551.30 -33669551.07 -33669550.82 0.0134 0.0026
 Uranus -96895-10-21 11:30 J -33669182.21 -33669182.02 -33669181.80 0.0135 0.0074

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 Neptune -96891-08-29 09:35 J -33667774.25 -33667774.10 -33667773.92 0.0088 0.0067
 Neptune -96890-08-31 19:25 J -33667406.92 -33667406.69 -33667406.45 0.0088 0.0037
 Saturn -96889-02-08 14:51 J -33667246.12 -33667245.88 -33667245.63 0.0285 0.0049
 Neptune -96889-09-02 05:01 J -33667039.55 -33667039.29 -33667039.04 0.0088 0.0006
 Neptune -96888-09-04 14:23 J -33666672.14 -33666671.90 -33666671.65 0.0088 0.0025
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 Mars -96879-01-06 09:49 J -33663626.13 -33663626.09 -33663626.04 0.1610 0.1552
 Saturn -96875-08-14 18:13 J -33661944.98 -33661944.74 -33661944.50 0.0273 0.0060
 Saturn -96874-08-27 02:08 J -33661567.50 -33661567.41 -33661567.29 0.0274 0.0247
 Jupiter -96869-03-14 02:37 J -33659906.60 -33659906.39 -33659906.18 0.0485 0.0227
 Saturn -96860-02-01 17:30 J -33656659.99 -33656659.77 -33656659.54 0.0285 0.0116
 Saturn -96859-02-15 12:27 J -33656281.10 -33656280.98 -33656280.84 0.0285 0.0241
 Uranus -96858-04-04 14:37 J -33655868.06 -33655867.89 -33655867.69 0.0146 0.0103
 Jupiter -96857-03-18 14:23 J -33655519.14 -33655518.90 -33655518.67 0.0485 0.0109
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 Saturn -96846-08-09 19:54 J -33651357.84 -33651357.67 -33651357.48 0.0274 0.0189
 Jupiter -96845-03-23 01:54 J -33651131.50 -33651131.42 -33651131.32 0.0485 0.0445
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 Saturn -96831-01-27 01:39 J -33646073.51 -33646073.43 -33646073.35 0.0285 0.0269
 Saturn -96830-02-09 17:30 J -33645695.00 -33645694.77 -33645694.53 0.0285 0.0084
 Jupiter -96828-09-19 23:30 J -33644741.72 -33644741.52 -33644741.32 0.0544 0.0250
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 Jupiter -96816-09-25 03:20 J -33640353.56 -33640353.36 -33640353.15 0.0544 0.0214
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Uranus -96814-10-10 20:37 J -33639607.85 -33639607.64 -33639607.42 0.0133 0.0064
 Uranus -96813-10-13 21:20 J -33639238.85 -33639238.61 -33639238.36 0.0134 0.0018
 Uranus -96812-10-17 22:03 J -33638869.81 -33638869.58 -33638869.33 0.0134 0.0029
 Uranus -96811-10-21 23:30 J -33638500.72 -33638500.52 -33638500.31 0.0135 0.0076
 Uranus -96810-10-26 01:11 J -33638131.54 -33638131.45 -33638131.35 0.0135 0.0123
 Neptune -96808-02-19 13:11 J -33637649.12 -33637648.95 -33637648.75 0.0089 0.0062
 Neptune -96807-02-22 02:51 J -33637281.61 -33637281.38 -33637281.12 0.0089 0.0030
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 Saturn -96801-02-03 19:39 J -33635108.92 -33635108.68 -33635108.45 0.0285 0.0081
 Mars -96800-01-08 09:20 J -33634769.27 -33634769.11 -33634768.96 0.1610 0.0872
 Saturn -96800-02-16 14:37 J -33634729.95 -33634729.89 -33634729.82 0.0285 0.0274
 Saturn -96787-08-10 23:15 J -33629806.73 -33629806.53 -33629806.33 0.0274 0.0153
 Jupiter -96786-03-14 13:11 J -33629591.15 -33629590.95 -33629590.75 0.0485 0.0259
 Saturn -96786-08-23 10:03 J -33629429.28 -33629429.08 -33629428.88 0.0274 0.0155
 Jupiter -96774-03-18 22:03 J -33625203.81 -33625203.58 -33625203.34 0.0484 0.0068
 Uranus -96774-04-05 01:11 J -33625186.63 -33625186.45 -33625186.24 0.0146 0.0099
 Uranus -96773-04-09 11:30 J -33624816.27 -33624816.02 -33624815.76 0.0145 0.0034
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 Uranus -96772-04-14 21:20 J -33624445.85 -33624445.61 -33624445.34 0.0145 0.0031
 Saturn -96771-02-10 22:03 J -33624143.80 -33624143.58 -33624143.35 0.0285 0.0121
 Uranus -96771-04-20 06:27 J -33624075.41 -33624075.23 -33624075.01 0.0144 0.0094
 Mars -96768-01-16 00:42 J -33623073.55 -33623073.47 -33623073.39 0.1613 0.1437
 Jupiter -96762-03-23 08:37 J -33620816.27 -33620816.14 -33620816.00 0.0484 0.0400
 Saturn -96757-08-17 01:25 J -33618842.69 -33618842.44 -33618842.20 0.0273 0.0010
 Jupiter -96745-09-19 05:01 J -33614426.47 -33614426.29 -33614426.10 0.0544 0.0311
 Saturn -96742-02-04 23:44 J -33613557.75 -33613557.51 -33613557.27 0.0285 0.0043
 Jupiter -96733-09-24 00:42 J -33610038.69 -33610038.47 -33610038.24 0.0543 0.0120
 Uranus -96731-10-07 07:25 J -33609295.33 -33609295.19 -33609295.04 0.0133 0.0106

Mars -96730-07-20 09:20 J -33609009.30 -33609009.11 -33609008.92 0.1916 0.0803
 Uranus -96730-10-11 07:25 J -33608926.39 -33608926.19 -33608925.95 0.0133 0.0062
 Uranus -96729-10-14 08:23 J -33608557.40 -33608557.15 -33608556.91 0.0134 0.0015
 Saturn -96728-08-12 03:20 J -33608255.57 -33608255.36 -33608255.13 0.0274 0.0118
 Uranus -96728-10-18 09:06 J -33608188.36 -33608188.12 -33608187.88 0.0134 0.0031
 Saturn -96727-08-24 14:08 J -33607878.08 -33607877.91 -33607877.73 0.0274 0.0190
 Neptune -96727-08-28 17:44 J -33607873.81 -33607873.76 -33607873.64 0.0088 0.0084
 Uranus -96727-10-22 10:18 J -33607819.27 -33607819.07 -33607818.87 0.0135 0.0078
 Neptune -96726-08-31 03:49 J -33607506.52 -33607506.34 -33607506.12 0.0088 0.0053
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 Neptune -96725-09-01 13:54 J -33607139.16 -33607138.92 -33607138.66 0.0088 0.0021
 Neptune -96724-09-03 23:30 J -33606771.77 -33606771.52 -33606771.26 0.0088 0.0010
 Neptune -96723-09-06 08:37 J -33606404.35 -33606404.14 -33606403.90 0.0088 0.0041
 Neptune -96722-09-08 17:44 J -33606036.88 -33606036.76 -33606036.58 0.0088 0.0071
 Mars -96721-01-11 08:37 J -33605912.33 -33605912.14 -33605911.96 0.1611 0.0194
 Saturn -96713-01-30 12:56 J -33602971.13 -33602970.96 -33602970.76 0.0285 0.0192
 Saturn -96712-02-12 05:01 J -33602592.48 -33602592.29 -33602592.08 0.0285 0.0160
 Jupiter -96703-03-13 19:25 J -33599275.88 -33599275.69 -33599275.50 0.0484 0.0304
 Saturn -96699-08-06 18:42 J -33597668.80 -33597668.72 -33597668.65 0.0273 0.0260
 Saturn -96698-08-19 06:56 J -33597291.44 -33597291.21 -33597290.96 0.0274 0.0048
 Jupiter -96691-03-18 04:18 J -33594888.56 -33594888.32 -33594888.07 0.0484 0.0025
 Uranus -96690-04-05 12:27 J -33594505.16 -33594504.98 -33594504.77 0.0146 0.0095
 Uranus -96689-04-09 23:01 J -33594134.79 -33594134.54 -33594134.27 0.0145 0.0031
 Uranus -96688-04-15 09:06 J -33593764.37 -33593764.12 -33593763.86 0.0145 0.0034
 Uranus -96687-04-20 18:27 J -33593393.93 -33593393.73 -33593393.54 0.0144 0.0097
 Saturn -96683-02-06 06:42 J -33592006.46 -33592006.22 -33592005.97 0.0285 0.0005
 Jupiter -96679-03-22 15:49 J -33590501.00 -33590500.84 -33590500.68 0.0485 0.0358
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 Pluto -96675-04-24 13:54 J -33589007.11 -33589006.92 -33589006.72 0.0067 0.0045
 Saturn -96669-08-13 09:06 J -33586704.35 -33586704.12 -33586703.88 0.0274 0.0080

Saturn -96668-08-25 19:54 J -33586326.80 -33586326.67 -33586326.53 0.0275 0.0226
 Jupiter -96662-09-19 00:27 J -33584111.63 -33584111.48 -33584111.33 0.0543 0.0411
 Saturn -96654-01-31 22:32 J -33581419.77 -33581419.56 -33581419.35 0.0285 0.0149
 Saturn -96653-02-14 14:23 J -33581041.06 -33581040.90 -33581040.71 0.0285 0.0201
 Mars -96651-07-24 06:13 J -33580150.39 -33580150.24 -33580150.09 0.1915 0.1356
 Jupiter -96650-09-24 03:20 J -33579723.59 -33579723.36 -33579723.13 0.0544 0.0048
 Uranus -96647-10-07 19:54 J -33578613.81 -33578613.67 -33578613.50 0.0133 0.0102
 Uranus -96646-10-11 20:08 J -33578244.87 -33578244.66 -33578244.42 0.0133 0.0057
 Uranus -96645-10-14 20:51 J -33577875.87 -33577875.63 -33577875.38 0.0134 0.0012
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 Uranus -96644-10-18 21:35 J -33577506.84 -33577506.60 -33577506.36 0.0134 0.0035
 Neptune -96643-02-21 08:08 J -33577381.36 -33577381.16 -33577380.92 0.0089 0.0047
 Uranus -96643-10-22 22:32 J -33577137.74 -33577137.56 -33577137.35 0.0135 0.0081
 Mars -96642-01-13 07:54 J -33577055.35 -33577055.17 -33577054.99 0.1611 0.0493
 Neptune -96642-02-23 22:03 J -33577013.84 -33577013.58 -33577013.32 0.0089 0.0014
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 Neptune -96641-02-26 11:15 J -33576646.27 -33576646.03 -33576645.76 0.0089 0.0019
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 Saturn -96640-08-08 01:54 J -33576117.55 -33576117.42 -33576117.26 0.0274 0.0222
 Neptune -96639-03-02 14:23 J -33575910.95 -33575910.90 -33575910.78 0.0089 0.0085
 Saturn -96639-08-20 14:37 J -33575740.12 -33575739.89 -33575739.66 0.0274 0.0085
 Jupiter -96638-09-29 06:42 J -33575335.30 -33575335.22 -33575335.14 0.0544 0.0507
 Saturn -96624-02-07 16:18 J -33570455.06 -33570454.82 -33570454.57 0.0285 0.0040
 Jupiter -96620-03-13 00:56 J -33568960.62 -33568960.46 -33568960.29 0.0485 0.0350
 Saturn -96610-08-15 15:49 J -33565153.08 -33565152.84 -33565152.60 0.0275 0.0043
 Saturn -96609-08-27 02:23 J -33564775.46 -33564775.40 -33564775.32 0.0275 0.0262
 Jupiter -96608-03-17 10:47 J -33564573.29 -33564573.05 -33564572.81 0.0485 0.0022
 Uranus -96606-04-06 00:56 J -33563823.66 -33563823.46 -33563823.24 0.0146 0.0090
 Uranus -96605-04-10 11:30 J -33563453.28 -33563453.02 -33563452.76 0.0145 0.0026
 Uranus -96604-04-15 21:06 J -33563082.86 -33563082.62 -33563082.35 0.0145 0.0038

Uranus -96603-04-21 06:13 J -33562712.41 -33562712.24 -33562712.04 0.0144 0.0101
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 Mars -96595-01-07 17:59 J -33559893.88 -33559893.75 -33559893.61 0.1609 0.1083
 Saturn -96595-02-02 10:03 J -33559868.30 -33559868.08 -33559867.85 0.0285 0.0106
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 Saturn -96580-08-21 23:01 J -33554188.75 -33554188.54 -33554188.32 0.0274 0.0124
 Jupiter -96579-09-18 04:03 J -33553796.43 -33553796.33 -33553796.22 0.0544 0.0476
 Jupiter -96567-09-23 06:42 J -33549408.45 -33549408.22 -33549407.99 0.0544 0.0021
 Saturn -96566-01-27 13:54 J -33549282.01 -33549281.92 -33549281.82 0.0285 0.0262
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 Neptune -96562-08-30 11:44 J -33547606.15 -33547606.01 -33547605.83 0.0088 0.0068
 Uranus -96562-10-12 08:37 J -33547563.36 -33547563.14 -33547562.91 0.0133 0.0053
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 Jupiter -96555-09-28 03:06 J -33545020.51 -33545020.37 -33545020.22 0.0543 0.0411
 Saturn -96551-08-16 23:44 J -33543601.76 -33543601.51 -33543601.27 0.0275 0.0006
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 Uranus -96520-04-16 10:03 J -33532401.33 -33532401.08 -33532400.83 0.0145 0.0042
 Uranus -96519-04-21 18:42 J -33532030.88 -33532030.72 -33532030.52 0.0144 0.0105
 Mars -96516-01-09 16:47 J -33531036.98 -33531036.80 -33531036.62 0.1609 0.0420
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 Saturn -96492-08-18 07:54 J -33522050.41 -33522050.17 -33522049.92 0.0275 0.0033
 Jupiter -96484-09-22 01:11 J -33519093.67 -33519093.45 -33519093.23 0.0543 0.0123
 Neptune -96479-02-20 12:27 J -33517481.14 -33517480.98 -33517480.78 0.0089 0.0064
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 Neptune -96478-02-23 01:54 J -33517113.65 -33517113.42 -33517113.16 0.0089 0.0032
 Uranus -96478-10-12 22:03 J -33516881.81 -33516881.58 -33516881.35 0.0133 0.0049
 Saturn -96477-02-06 11:44 J -33516765.25 -33516765.01 -33516764.76 0.0285 0.0017
 Neptune -96477-02-25 15:35 J -33516746.11 -33516745.85 -33516745.58 0.0089 0.0002
 Uranus -96477-10-15 22:18 J -33516512.81 -33516512.57 -33516512.32 0.0134 0.0005
 Neptune -96476-02-27 05:15 J -33516378.52 -33516378.28 -33516378.03 0.0089 0.0033
 Uranus -96476-10-19 23:01 J -33516143.77 -33516143.54 -33516143.31 0.0134 0.0041
 Neptune -96475-03-01 18:42 J -33516010.88 -33516010.72 -33516010.53 0.0089 0.0066
 Uranus -96475-10-23 23:59 J -33515774.68 -33515774.50 -33515774.30 0.0134 0.0087
 Uranus -96474-10-28 01:25 J -33515405.46 -33515405.44 -33515405.38 0.0135 0.0133
 Jupiter -96472-09-27 01:25 J -33514705.62 -33514705.44 -33514705.26 0.0544 0.0325
 Saturn -96463-08-13 06:42 J -33511463.45 -33511463.22 -33511462.99 0.0274 0.0102
 Saturn -96462-08-25 17:59 J -33511085.91 -33511085.75 -33511085.58 0.0274 0.0200
 Jupiter -96454-03-12 07:39 J -33508330.26 -33508330.18 -33508330.09 0.0485 0.0453
 Saturn -96448-01-30 15:20 J -33506179.05 -33506178.86 -33506178.66 0.0285 0.0172

Saturn -96447-02-13 05:59 J -33505800.43 -33505800.25 -33505800.04 0.0285 0.0172
 Mars -96446-07-19 02:08 J -33505279.56 -33505279.41 -33505279.25 0.1917 0.1270
 Jupiter -96442-03-16 17:15 J -33503943.01 -33503942.78 -33503942.55 0.0485 0.0127
 Uranus -96439-04-01 15:20 J -33502830.90 -33502830.86 -33502830.78 0.0146 0.0143
 Uranus -96438-04-07 02:23 J -33502460.61 -33502460.40 -33502460.17 0.0146 0.0079
 Mars -96437-01-12 16:18 J -33502180.00 -33502179.82 -33502179.63 0.1609 0.0255
 Uranus -96437-04-11 13:11 J -33502090.21 -33502089.95 -33502089.69 0.0145 0.0015
 Uranus -96436-04-16 22:47 J -33501719.79 -33501719.55 -33501719.29 0.0145 0.0047
 Uranus -96435-04-22 07:54 J -33501349.33 -33501349.17 -33501348.98 0.0144 0.0109
 Saturn -96434-08-08 01:54 J -33500876.54 -33500876.42 -33500876.29 0.0274 0.0236
 Saturn -96433-08-19 16:18 J -33500499.05 -33500498.82 -33500498.58 0.0275 0.0070
 Jupiter -96430-03-21 02:37 J -33499555.61 -33499555.39 -33499555.17 0.0485 0.0199
 Pluto -96428-04-24 04:47 J -33498790.41 -33498790.30 -33498790.14 0.0066 0.0058
 Pluto -96427-04-25 22:03 J -33498423.81 -33498423.58 -33498423.33 0.0067 0.0031
 Saturn -96418-02-08 00:27 J -33495213.72 -33495213.48 -33495213.23 0.0285 0.0027
 Saturn -96404-08-14 16:18 J -33489912.06 -33489911.82 -33489911.58 0.0274 0.0063
 Saturn -96403-08-27 03:06 J -33489534.48 -33489534.37 -33489534.24 0.0274 0.0237
 Jupiter -96401-09-21 01:54 J -33488778.63 -33488778.42 -33488778.20 0.0544 0.0199
 Neptune -96398-08-29 18:13 J -33487705.78 -33487705.74 -33487705.65 0.0088 0.0085
 Neptune -96397-08-31 04:18 J -33487338.50 -33487338.32 -33487338.10 0.0088 0.0055
 Neptune -96396-09-02 14:23 J -33486971.14 -33486970.90 -33486970.65 0.0088 0.0023
 Uranus -96396-10-05 10:32 J -33486938.06 -33486938.06 -33486938.01 0.0132 0.0132
 Neptune -96395-09-04 23:59 J -33486603.75 -33486603.50 -33486603.24 0.0088 0.0007
 Uranus -96395-10-09 11:01 J -33486569.23 -33486569.04 -33486568.86 0.0133 0.0088
 Neptune -96394-09-07 09:20 J -33486236.32 -33486236.11 -33486235.87 0.0088 0.0038
 Uranus -96394-10-13 11:01 J -33486200.27 -33486200.04 -33486199.81 0.0133 0.0045
 Neptune -96393-09-08 18:27 J -33485868.87 -33485868.73 -33485868.55 0.0088 0.0069
 Uranus -96393-10-16 11:15 J -33485831.28 -33485831.03 -33485830.79 0.0134 0.0002
 Uranus -96392-10-20 11:44 J -33485462.24 -33485462.01 -33485461.77 0.0134 0.0045
 Uranus -96391-10-24 12:42 J -33485093.14 -33485092.97 -33485092.78 0.0134 0.0091

Mars -96390-01-07 03:06 J -33485018.47 -33485018.37 -33485018.26 0.1609 0.1288
 Saturn -96389-02-02 03:06 J -33484627.58 -33484627.37 -33484627.14 0.0285 0.0129
 Jupiter -96389-09-26 05:15 J -33484390.48 -33484390.28 -33484390.08 0.0544 0.0258
 Saturn -96388-02-14 18:42 J -33484248.88 -33484248.72 -33484248.55 0.0285 0.0214
 Saturn -96375-08-09 10:32 J -33479325.22 -33479325.06 -33479324.88 0.0274 0.0198
 Saturn -96374-08-22 00:27 J -33478947.70 -33478947.48 -33478947.25 0.0275 0.0107
 Mars -96367-07-23 00:27 J -33476420.66 -33476420.48 -33476420.29 0.1917 0.0926
 Saturn -96360-01-26 21:35 J -33474040.66 -33474040.60 -33474040.52 0.0285 0.0272
 Saturn -96359-02-09 11:15 J -33473662.27 -33473662.03 -33473661.79 0.0285 0.0068
 Jupiter -96359-03-15 20:23 J -33473627.87 -33473627.65 -33473627.42 0.0485 0.0177
 Mars -96358-01-14 15:35 J -33473323.00 -33473322.85 -33473322.70 0.1609 0.0929
 Uranus -96355-04-02 03:49 J -33472149.42 -33472149.34 -33472149.24 0.0146 0.0137
 Uranus -96354-04-07 14:23 J -33471779.11 -33471778.90 -33471778.66 0.0146 0.0074
 Uranus -96353-04-12 01:11 J -33471408.71 -33471408.45 -33471408.18 0.0146 0.0011
 Uranus -96352-04-17 11:01 J -33471038.28 -33471038.04 -33471037.79 0.0145 0.0051
 Uranus -96351-04-22 19:54 J -33470667.82 -33470667.67 -33470667.49 0.0144 0.0113
 Jupiter -96347-03-20 06:56 J -33469240.44 -33469240.21 -33469239.98 0.0484 0.0151
 Saturn -96345-08-16 01:25 J -33468360.68 -33468360.44 -33468360.19 0.0274 0.0025
 Saturn -96344-08-28 11:44 J -33467983.02 -33467983.01 -33467982.98 0.0274 0.0273
 Pluto -96342-10-27 05:59 J -33467193.37 -33467193.25 -33467193.09 0.0078 0.0064
 Pluto -96341-10-28 04:47 J -33466826.39 -33466826.30 -33466826.15 0.0077 0.0068
 Jupiter -96335-03-24 16:03 J -33464852.87 -33464852.83 -33464852.78 0.0484 0.0474
 Saturn -96330-02-03 13:39 J -33463076.16 -33463075.93 -33463075.70 0.0285 0.0087
 Saturn -96329-02-17 05:44 J -33462697.37 -33462697.26 -33462697.15 0.0285 0.0254
 Jupiter -96318-09-21 03:35 J -33458463.54 -33458463.35 -33458463.15 0.0543 0.0270
 Saturn -96316-08-10 18:13 J -33457773.93 -33457773.74 -33457773.53 0.0274 0.0160
 Neptune -96315-02-19 17:01 J -33457580.89 -33457580.79 -33457580.68 0.0089 0.0081
 Saturn -96315-08-23 07:25 J -33457396.40 -33457396.19 -33457395.98 0.0274 0.0142
 Neptune -96314-02-22 05:59 J -33457213.46 -33457213.25 -33457213.02 0.0089 0.0049
 Neptune -96313-02-24 19:25 J -33456845.94 -33456845.69 -33456845.43 0.0089 0.0017

Neptune -96312-02-26 08:51 J -33456478.38 -33456478.13 -33456477.87 0.0089 0.0015
 Uranus -96312-10-06 00:42 J -33456256.52 -33456256.47 -33456256.38 0.0132 0.0127
 Mars -96311-01-09 02:08 J -33456161.58 -33456161.41 -33456161.24 0.1609 0.0621
 Neptune -96311-02-28 22:03 J -33456110.78 -33456110.58 -33456110.34 0.0089 0.0048
 Uranus -96311-10-10 00:27 J -33455887.65 -33455887.48 -33455887.27 0.0133 0.0084
 Neptune -96310-03-03 11:44 J -33455743.11 -33455743.01 -33455742.88 0.0089 0.0080
 Uranus -96310-10-14 00:42 J -33455518.70 -33455518.47 -33455518.23 0.0133 0.0040
 Uranus -96309-10-17 01:11 J -33455149.70 -33455149.45 -33455149.20 0.0133 0.0004
 Uranus -96308-10-21 01:54 J -33454780.65 -33454780.42 -33454780.19 0.0134 0.0049
 Uranus -96307-10-25 02:37 J -33454411.55 -33454411.39 -33454411.20 0.0134 0.0094
 Jupiter -96306-09-26 03:35 J -33454075.56 -33454075.35 -33454075.13 0.0543 0.0172
 Saturn -96301-01-29 05:30 J -33452489.40 -33452489.27 -33452489.12 0.0285 0.0232
 Saturn -96300-02-10 19:39 J -33452110.90 -33452110.68 -33452110.45 0.0285 0.0107
 Saturn -96286-08-18 09:35 J -33446809.34 -33446809.10 -33446808.85 0.0274 0.0014
 Mars -96279-01-16 14:51 J -33444465.91 -33444465.88 -33444465.86 0.1610 0.1589
 Jupiter -96276-03-15 02:23 J -33443312.61 -33443312.40 -33443312.18 0.0484 0.0221
 Saturn -96271-02-04 21:20 J -33441524.85 -33441524.61 -33441524.36 0.0285 0.0049
 Uranus -96271-04-02 16:18 J -33441467.91 -33441467.82 -33441467.69 0.0146 0.0132
 Uranus -96270-04-08 03:20 J -33441097.58 -33441097.36 -33441097.12 0.0146 0.0069
 Uranus -96269-04-12 14:08 J -33440727.17 -33440726.91 -33440726.65 0.0146 0.0006
 Uranus -96268-04-17 23:44 J -33440356.75 -33440356.51 -33440356.26 0.0145 0.0055
 Uranus -96267-04-23 08:51 J -33439986.26 -33439986.13 -33439985.95 0.0144 0.0117
 Jupiter -96264-03-19 12:27 J -33438925.21 -33438924.98 -33438924.74 0.0484 0.0104
 Saturn -96257-08-12 00:56 J -33436222.67 -33436222.46 -33436222.24 0.0274 0.0124
 Saturn -96256-08-24 13:11 J -33435845.13 -33435844.95 -33435844.76 0.0274 0.0176
 Jupiter -96252-03-23 21:49 J -33434537.70 -33434537.59 -33434537.48 0.0485 0.0430
 Saturn -96242-01-30 10:47 J -33430938.22 -33430938.05 -33430937.87 0.0285 0.0196
 Saturn -96241-02-13 01:25 J -33430559.64 -33430559.44 -33430559.22 0.0285 0.0143
 Jupiter -96235-09-20 00:13 J -33428148.65 -33428148.49 -33428148.31 0.0544 0.0361
 Neptune -96233-08-30 09:20 J -33427438.22 -33427438.11 -33427437.93 0.0088 0.0073

Mars -96232-01-11 00:56 J -33427304.64 -33427304.46 -33427304.27 0.1608 0.0046
 Neptune -96232-09-01 19:39 J -33427070.89 -33427070.68 -33427070.44 0.0088 0.0041
 Neptune -96231-09-04 05:44 J -33426703.50 -33426703.26 -33426703.00 0.0088 0.0011
 Neptune -96230-09-06 15:20 J -33426336.10 -33426335.86 -33426335.61 0.0088 0.0021
 Neptune -96229-09-08 00:27 J -33425968.66 -33425968.48 -33425968.25 0.0088 0.0052
 Saturn -96228-08-07 02:08 J -33425635.50 -33425635.41 -33425635.30 0.0274 0.0249
 Neptune -96228-09-10 10:03 J -33425601.16 -33425601.08 -33425600.97 0.0088 0.0082
 Uranus -96228-10-06 14:23 J -33425574.98 -33425574.90 -33425574.79 0.0132 0.0122
 Saturn -96227-08-19 16:03 J -33425258.07 -33425257.83 -33425257.58 0.0274 0.0050
 Uranus -96227-10-10 14:08 J -33425206.09 -33425205.91 -33425205.70 0.0133 0.0079
 Uranus -96226-10-14 14:08 J -33424837.13 -33424836.91 -33424836.66 0.0133 0.0036
 Uranus -96225-10-17 14:37 J -33424468.14 -33424467.89 -33424467.65 0.0133 0.0008
 Uranus -96224-10-21 15:06 J -33424099.09 -33424098.87 -33424098.63 0.0134 0.0053
 Jupiter -96223-09-25 03:49 J -33423760.56 -33423760.34 -33423760.11 0.0544 0.0096
 Uranus -96223-10-25 16:18 J -33423729.98 -33423729.82 -33423729.64 0.0134 0.0097
 Saturn -96212-02-06 02:51 J -33419973.62 -33419973.38 -33419973.13 0.0285 0.0012
 Saturn -96198-08-14 06:13 J -33414671.47 -33414671.24 -33414671.00 0.0274 0.0089
 Saturn -96197-08-25 17:59 J -33414293.90 -33414293.75 -33414293.58 0.0274 0.0208
 Jupiter -96193-03-14 09:06 J -33412997.31 -33412997.12 -33412996.91 0.0485 0.0262
 Uranus -96187-04-03 04:18 J -33410786.44 -33410786.32 -33410786.19 0.0147 0.0127
 Uranus -96186-04-08 14:51 J -33410416.10 -33410415.88 -33410415.63 0.0146 0.0065
 Mars -96185-01-06 12:42 J -33410143.04 -33410142.97 -33410142.89 0.1609 0.1474
 Uranus -96185-04-13 01:54 J -33410045.68 -33410045.42 -33410045.16 0.0146 0.0003
 Uranus -96184-04-18 11:44 J -33409675.24 -33409675.01 -33409674.76 0.0145 0.0059
 Saturn -96183-01-31 13:39 J -33409387.12 -33409386.93 -33409386.72 0.0285 0.0162
 Uranus -96183-04-23 21:06 J -33409304.75 -33409304.62 -33409304.45 0.0145 0.0120
 Saturn -96182-02-14 04:47 J -33409008.49 -33409008.30 -33409008.10 0.0285 0.0176
 Jupiter -96181-03-18 19:25 J -33408609.93 -33408609.69 -33408609.45 0.0484 0.0066
 Pluto -96179-04-27 05:01 J -33407840.55 -33407840.29 -33407840.02 0.0067 0.0013
 Jupiter -96169-03-23 06:27 J -33404222.36 -33404222.23 -33404222.09 0.0484 0.0395

Saturn -96169-08-08 07:25 J -33404084.33 -33404084.19 -33404084.02 0.0274 0.0213
 Saturn -96168-08-20 21:06 J -33403706.85 -33403706.62 -33403706.38 0.0274 0.0084
 Mars -96162-07-17 17:59 J -33401549.83 -33401549.75 -33401549.66 0.1918 0.1733
 Mars -96153-01-14 00:27 J -33398447.65 -33398447.48 -33398447.31 0.1608 0.0698
 Saturn -96153-02-08 05:59 J -33398422.49 -33398422.25 -33398422.00 0.0285 0.0022
 Jupiter -96152-09-19 07:25 J -33397833.33 -33397833.19 -33397833.04 0.0544 0.0414
 Neptune -96150-02-21 09:35 J -33397313.25 -33397313.10 -33397312.91 0.0089 0.0067
 Neptune -96149-02-23 22:47 J -33396945.78 -33396945.55 -33396945.30 0.0089 0.0035
 Neptune -96148-02-25 12:13 J -33396578.25 -33396577.99 -33396577.73 0.0089 0.0003
 Neptune -96147-02-28 01:11 J -33396210.68 -33396210.45 -33396210.19 0.0089 0.0030
 Neptune -96146-03-02 14:51 J -33395843.05 -33395842.88 -33395842.67 0.0089 0.0062
 Uranus -96144-10-07 04:47 J -33394893.40 -33394893.30 -33394893.17 0.0132 0.0117
 Uranus -96143-10-11 04:47 J -33394524.50 -33394524.30 -33394524.09 0.0133 0.0074
 Uranus -96142-10-15 04:47 J -33394155.54 -33394155.30 -33394155.06 0.0133 0.0031
 Uranus -96141-10-18 05:01 J -33393786.53 -33393786.29 -33393786.04 0.0133 0.0013
 Jupiter -96140-09-24 11:15 J -33393445.25 -33393445.03 -33393444.80 0.0544 0.0046
 Uranus -96140-10-22 05:44 J -33393417.47 -33393417.26 -33393417.03 0.0134 0.0057
 Saturn -96139-08-15 10:18 J -33393120.31 -33393120.07 -33393119.83 0.0274 0.0055
 Uranus -96139-10-26 06:42 J -33393048.36 -33393048.22 -33393048.04 0.0134 0.0101
 Saturn -96138-08-27 21:20 J -33392742.71 -33392742.61 -33392742.48 0.0274 0.0239
 Jupiter -96128-09-29 11:44 J -33389057.10 -33389057.01 -33389056.90 0.0544 0.0486
 Saturn -96124-02-01 14:23 J -33387836.10 -33387835.90 -33387835.67 0.0285 0.0131
 Saturn -96123-02-15 05:59 J -33387457.41 -33387457.25 -33387457.07 0.0285 0.0207
 Jupiter -96110-03-14 19:54 J -33382681.86 -33382681.67 -33382681.48 0.0485 0.0291
 Saturn -96110-08-10 11:30 J -33382533.20 -33382533.02 -33382532.83 0.0274 0.0178
 Saturn -96109-08-22 00:27 J -33382155.69 -33382155.48 -33382155.25 0.0274 0.0117
 Mars -96106-01-08 12:13 J -33381286.15 -33381285.99 -33381285.83 0.1608 0.0814
 Uranus -96103-04-03 17:44 J -33380104.89 -33380104.76 -33380104.60 0.0147 0.0122
 Uranus -96102-04-09 04:32 J -33379734.53 -33379734.31 -33379734.05 0.0146 0.0060
 Uranus -96101-04-13 15:35 J -33379364.11 -33379363.85 -33379363.59 0.0146 0.0002

Uranus -96100-04-19 01:25 J -33378993.67 -33378993.44 -33378993.20 0.0145 0.0063
 Uranus -96099-04-24 11:01 J -33378623.16 -33378623.04 -33378622.89 0.0145 0.0124
 Jupiter -96098-03-19 04:32 J -33378294.54 -33378294.31 -33378294.07 0.0484 0.0032
 Saturn -96095-01-26 19:25 J -33377249.74 -33377249.69 -33377249.63 0.0285 0.0277
 Saturn -96094-02-09 07:39 J -33376871.42 -33376871.18 -33376870.94 0.0285 0.0054
 Pluto -96093-10-29 13:25 J -33376243.12 -33376242.94 -33376242.71 0.0077 0.0045
 Jupiter -96086-03-23 14:51 J -33373907.04 -33373906.88 -33373906.71 0.0484 0.0356
 Mars -96083-07-21 17:59 J -33372690.95 -33372690.75 -33372690.54 0.1918 0.0487
 Saturn -96080-08-16 13:11 J -33371569.19 -33371568.95 -33371568.70 0.0274 0.0023
 Saturn -96079-08-28 23:59 J -33371191.53 -33371191.50 -33371191.45 0.0274 0.0269
 Mars -96074-01-15 23:59 J -33369590.59 -33369590.50 -33369590.40 0.1608 0.1369
 Jupiter -96069-09-18 12:42 J -33367518.08 -33367517.97 -33367517.86 0.0543 0.0472
 Neptune -96068-09-01 00:42 J -33367170.64 -33367170.47 -33367170.26 0.0088 0.0059
 Neptune -96067-09-03 10:47 J -33366803.28 -33366803.05 -33366802.79 0.0088 0.0028
 Neptune -96066-09-05 20:51 J -33366435.88 -33366435.63 -33366435.37 0.0088 0.0003
 Saturn -96065-02-03 13:54 J -33366285.14 -33366284.92 -33366284.69 0.0285 0.0099
 Neptune -96065-09-07 06:13 J -33366068.46 -33366068.24 -33366067.99 0.0088 0.0034
 Saturn -96064-02-16 05:44 J -33365906.39 -33365906.26 -33365906.12 0.0285 0.0236
 Neptune -96064-09-09 15:49 J -33365701.01 -33365700.84 -33365700.66 0.0088 0.0064
 Uranus -96060-10-07 19:11 J -33364211.81 -33364211.70 -33364211.55 0.0132 0.0112
 Uranus -96059-10-11 19:11 J -33363842.91 -33363842.70 -33363842.49 0.0133 0.0069
 Uranus -96058-10-15 19:11 J -33363473.94 -33363473.70 -33363473.45 0.0133 0.0026
 Jupiter -96057-09-23 09:35 J -33363130.33 -33363130.10 -33363129.87 0.0544 0.0042
 Uranus -96057-10-18 19:25 J -33363104.93 -33363104.69 -33363104.44 0.0133 0.0017
 Uranus -96056-10-22 20:08 J -33362735.87 -33362735.66 -33362735.43 0.0134 0.0061
 Uranus -96055-10-26 20:51 J -33362366.75 -33362366.63 -33362366.45 0.0134 0.0106
 Saturn -96051-08-11 14:08 J -33360982.11 -33360981.91 -33360981.69 0.0274 0.0145
 Saturn -96050-08-24 03:06 J -33360604.56 -33360604.37 -33360604.15 0.0274 0.0149
 Jupiter -96045-09-28 12:13 J -33358742.14 -33358741.99 -33358741.84 0.0544 0.0407
 Saturn -96036-01-27 20:08 J -33355698.78 -33355698.66 -33355698.54 0.0285 0.0245

Saturn	-96035-02-10 08:23 J	-33355320.38	-33355320.15	-33355319.91	0.0285	0.0085
Mars	-96027-01-10 11:15 J	-33352429.22	-33352429.03	-33352428.85	0.1608	0.0166
Jupiter	-96027-03-14 05:01 J	-33352366.46	-33352366.29	-33352366.11	0.0484	0.0326
Saturn	-96021-08-17 15:20 J	-33350018.11	-33350017.86	-33350017.62	0.0274	0.0009
Uranus	-96019-04-04 05:59 J	-33349423.39	-33349423.25	-33349423.07	0.0147	0.0117
Uranus	-96018-04-09 17:15 J	-33349053.02	-33349052.78	-33349052.53	0.0146	0.0055
Uranus	-96017-04-14 04:03 J	-33348682.59	-33348682.33	-33348682.07	0.0146	0.0007
Uranus	-96016-04-19 14:08 J	-33348312.13	-33348311.91	-33348311.67	0.0145	0.0068
Jupiter	-96015-03-18 13:39 J	-33347979.17	-33347978.93	-33347978.69	0.0484	0.0004
Uranus	-96015-04-24 23:59 J	-33347941.61	-33347941.50	-33347941.36	0.0145	0.0128
Saturn	-96006-02-04 13:11 J	-33344734.18	-33344733.95	-33344733.71	0.0285	0.0069
Saturn	-96005-02-18 05:15 J	-33344355.37	-33344355.28	-33344355.19	0.0285	0.0265
Jupiter	-96003-03-23 00:42 J	-33343591.65	-33343591.47	-33343591.29	0.0484	0.0325

96TH MILLENNIUM BCE

This is a list of transits of Earth in the 96th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-95992-08-12 16:18 J	-33339431.04	-33339430.82	-33339430.59	0.0274	0.0112		
Saturn	-95991-08-25 05:30 J	-33339053.45	-33339053.27	-33339053.09	0.0274	0.0180		
Neptune	-95986-02-20 12:56 J	-33337413.01	-33337412.96	-33337412.86	0.0089	0.0085		
Neptune	-95985-02-23 02:08 J	-33337045.61	-33337045.41	-33337045.19	0.0089	0.0053		
Neptune	-95984-02-24 15:06 J	-33336678.12	-33336677.87	-33336677.61	0.0089	0.0021		
Neptune	-95983-02-27 04:18 J	-33336310.57	-33336310.32	-33336310.05	0.0089	0.0011		

Neptune -95982-03-01 17:44 J -33335942.98 -33335942.76 -33335942.53 0.0089 0.0043
 Neptune -95981-03-03 06:42 J -33335575.32 -33335575.22 -33335575.05 0.0089 0.0076
 Saturn -95977-01-29 20:51 J -33334147.78 -33334147.63 -33334147.46 0.0285 0.0213
 Saturn -95976-02-11 09:06 J -33333769.33 -33333769.12 -33333768.88 0.0285 0.0117
 Uranus -95976-10-08 10:32 J -33333530.20 -33333530.06 -33333529.91 0.0132 0.0105
 Uranus -95975-10-12 10:03 J -33333161.28 -33333161.08 -33333160.85 0.0133 0.0064
 Jupiter -95974-09-23 17:30 J -33332815.00 -33332814.77 -33332814.55 0.0544 0.0094
 Uranus -95974-10-16 10:18 J -33332792.31 -33332792.07 -33332791.82 0.0133 0.0021
 Uranus -95973-10-19 10:47 J -33332423.29 -33332423.05 -33332422.81 0.0133 0.0022
 Uranus -95972-10-23 11:15 J -33332054.23 -33332054.03 -33332053.80 0.0134 0.0066
 Uranus -95971-10-27 12:13 J -33331685.12 -33331684.99 -33331684.83 0.0134 0.0109
 Saturn -95963-08-07 02:08 J -33328844.50 -33328844.41 -33328844.32 0.0274 0.0252
 Saturn -95962-08-19 17:30 J -33328467.01 -33328466.77 -33328466.52 0.0274 0.0042
 Jupiter -95962-09-28 22:03 J -33328426.74 -33328426.58 -33328426.41 0.0544 0.0364
 Mars -95948-01-12 09:49 J -33323572.26 -33323572.09 -33323571.91 0.1608 0.0495
 Saturn -95947-02-05 12:56 J -33323183.20 -33323182.96 -33323182.72 0.0285 0.0038
 Jupiter -95944-03-13 14:51 J -33322051.04 -33322050.88 -33322050.71 0.0485 0.0357
 Uranus -95935-04-04 20:37 J -33318741.80 -33318741.64 -33318741.45 0.0147 0.0110
 Uranus -95934-04-10 07:54 J -33318371.41 -33318371.17 -33318370.92 0.0146 0.0048
 Uranus -95933-04-14 18:56 J -33318000.97 -33318000.71 -33318000.45 0.0146 0.0013
 Saturn -95933-08-13 17:59 J -33317879.98 -33317879.75 -33317879.51 0.0274 0.0081
 Jupiter -95932-03-18 01:25 J -33317663.68 -33317663.44 -33317663.20 0.0485 0.0033
 Uranus -95932-04-20 05:01 J -33317630.51 -33317630.29 -33317630.06 0.0145 0.0073
 Saturn -95932-08-26 07:11 J -33317502.35 -33317502.20 -33317502.04 0.0274 0.0210
 Uranus -95931-04-25 14:51 J -33317259.97 -33317259.88 -33317259.76 0.0145 0.0133
 Pluto -95931-04-28 10:03 J -33317257.35 -33317257.08 -33317256.81 0.0066 0.0011
 Jupiter -95920-03-22 10:03 J -33313276.27 -33313276.08 -33313275.89 0.0484 0.0289
 Saturn -95918-01-30 23:15 J -33312596.71 -33312596.53 -33312596.34 0.0285 0.0180
 Saturn -95917-02-13 11:44 J -33312218.22 -33312218.01 -33312217.80 0.0285 0.0149
 Saturn -95904-08-08 04:18 J -33307293.45 -33307293.32 -33307293.16 0.0274 0.0220

Neptune -95904-08-31 04:32 J -33307270.41 -33307270.31 -33307270.17 0.0088 0.0077
 Saturn -95903-08-20 20:08 J -33306915.89 -33306915.66 -33306915.42 0.0274 0.0073
 Neptune -95903-09-02 15:06 J -33306903.07 -33306902.87 -33306902.64 0.0088 0.0047
 Neptune -95902-09-05 01:25 J -33306535.69 -33306535.44 -33306535.19 0.0088 0.0016
 Mars -95901-01-07 22:32 J -33306410.70 -33306410.56 -33306410.42 0.1608 0.0995
 Neptune -95901-09-06 11:15 J -33306168.27 -33306168.03 -33306167.77 0.0088 0.0015
 Neptune -95900-09-08 21:20 J -33305800.83 -33305800.61 -33305800.40 0.0088 0.0046
 Neptune -95899-09-11 06:13 J -33305433.35 -33305433.24 -33305433.09 0.0088 0.0076
 Uranus -95892-10-09 01:25 J -33302848.59 -33302848.44 -33302848.27 0.0132 0.0100
 Jupiter -95891-09-22 23:59 J -33302499.72 -33302499.50 -33302499.28 0.0544 0.0149
 Uranus -95891-10-13 01:25 J -33302479.66 -33302479.44 -33302479.22 0.0133 0.0058
 Uranus -95890-10-17 01:25 J -33302110.68 -33302110.44 -33302110.19 0.0133 0.0016
 Uranus -95889-10-20 01:39 J -33301741.66 -33301741.43 -33301741.18 0.0133 0.0028
 Saturn -95888-02-06 14:08 J -33301632.15 -33301631.91 -33301631.66 0.0285 0.0006
 Uranus -95888-10-24 02:23 J -33301372.60 -33301372.40 -33301372.18 0.0134 0.0070
 Uranus -95887-10-28 03:06 J -33301003.49 -33301003.37 -33301003.22 0.0134 0.0113
 Jupiter -95879-09-27 20:23 J -33298111.84 -33298111.65 -33298111.45 0.0544 0.0276
 Saturn -95874-08-15 20:51 J -33296328.87 -33296328.63 -33296328.39 0.0275 0.0048
 Saturn -95873-08-27 09:49 J -33295951.20 -33295951.09 -33295950.97 0.0275 0.0242
 Mars -95869-01-15 09:35 J -33294715.23 -33294715.10 -33294714.97 0.1607 0.1147
 Jupiter -95861-03-12 23:44 J -33291735.64 -33291735.51 -33291735.36 0.0485 0.0393
 Saturn -95859-02-01 02:51 J -33291045.59 -33291045.38 -33291045.17 0.0284 0.0145
 Saturn -95858-02-14 15:20 J -33290667.05 -33290666.86 -33290666.67 0.0284 0.0182
 Uranus -95851-04-05 08:51 J -33288060.30 -33288060.13 -33288059.94 0.0147 0.0104
 Uranus -95850-04-10 20:08 J -33287689.91 -33287689.66 -33287689.40 0.0146 0.0043
 Jupiter -95849-03-17 09:20 J -33287348.35 -33287348.11 -33287347.87 0.0484 0.0071
 Uranus -95849-04-15 07:11 J -33287319.46 -33287319.20 -33287318.94 0.0146 0.0018
 Uranus -95848-04-20 17:15 J -33286948.98 -33286948.78 -33286948.54 0.0145 0.0078
 Uranus -95847-04-26 03:20 J -33286578.42 -33286578.36 -33286578.26 0.0145 0.0137
 Saturn -95845-08-09 08:08 J -33285742.33 -33285742.16 -33285741.97 0.0274 0.0186

Pluto -95845-10-30 17:44 J -33285660.00 -33285659.76 -33285659.50 0.0078 0.0007
 Saturn -95844-08-21 23:44 J -33285364.73 -33285364.51 -33285364.28 0.0274 0.0106
 Jupiter -95837-03-21 17:59 J -33282960.95 -33282960.75 -33282960.54 0.0484 0.0250
 Saturn -95829-02-08 17:59 J -33280080.99 -33280080.75 -33280080.51 0.0285 0.0030
 Mars -95822-01-09 21:35 J -33277553.78 -33277553.60 -33277553.42 0.1608 0.0344
 Neptune -95821-02-22 05:44 J -33277145.39 -33277145.26 -33277145.08 0.0089 0.0071
 Neptune -95820-02-23 18:42 J -33276777.94 -33276777.72 -33276777.47 0.0089 0.0039
 Neptune -95819-02-26 07:54 J -33276410.42 -33276410.17 -33276409.90 0.0089 0.0007
 Neptune -95818-02-28 20:51 J -33276042.87 -33276042.63 -33276042.37 0.0089 0.0025
 Neptune -95817-03-02 10:03 J -33275675.27 -33275675.08 -33275674.87 0.0089 0.0057
 Saturn -95815-08-16 23:59 J -33274777.74 -33274777.50 -33274777.25 0.0275 0.0015
 Saturn -95814-08-29 13:11 J -33274399.97 -33274399.95 -33274399.93 0.0275 0.0273
 Jupiter -95808-09-21 20:37 J -33272184.84 -33272184.64 -33272184.43 0.0543 0.0242
 Uranus -95808-10-09 16:32 J -33272166.97 -33272166.81 -33272166.62 0.0132 0.0094
 Uranus -95807-10-13 16:32 J -33271798.03 -33271797.81 -33271797.58 0.0132 0.0053
 Uranus -95806-10-17 16:47 J -33271429.04 -33271428.80 -33271428.55 0.0133 0.0011
 Uranus -95805-10-20 17:01 J -33271060.03 -33271059.79 -33271059.55 0.0133 0.0032
 Uranus -95804-10-24 17:15 J -33270690.96 -33270690.78 -33270690.56 0.0134 0.0075
 Uranus -95803-10-28 17:59 J -33270321.85 -33270321.75 -33270321.61 0.0134 0.0117
 Saturn -95800-02-02 08:37 J -33269494.36 -33269494.14 -33269493.91 0.0284 0.0109
 Saturn -95799-02-15 21:06 J -33269115.76 -33269115.62 -33269115.45 0.0284 0.0218
 Mars -95799-07-20 10:32 J -33268961.27 -33268961.06 -33268960.85 0.1919 0.0056
 Jupiter -95796-09-27 00:42 J -33267796.68 -33267796.47 -33267796.26 0.0544 0.0212
 Saturn -95786-08-11 13:39 J -33264191.13 -33264190.93 -33264190.72 0.0274 0.0152
 Saturn -95785-08-23 05:01 J -33263813.50 -33263813.29 -33263813.08 0.0274 0.0139
 Jupiter -95778-03-13 06:56 J -33261420.31 -33261420.21 -33261420.10 0.0485 0.0434
 Saturn -95771-01-27 13:39 J -33258908.03 -33258907.93 -33258907.82 0.0284 0.0256
 Saturn -95770-02-09 23:59 J -33258529.74 -33258529.50 -33258529.26 0.0284 0.0066
 Uranus -95767-04-05 23:01 J -33257378.73 -33257378.54 -33257378.34 0.0147 0.0098
 Jupiter -95766-03-17 16:32 J -33257033.04 -33257032.81 -33257032.57 0.0485 0.0112

Uranus -95766-04-11 10:18 J -33257008.32 -33257008.07 -33257007.82 0.0146 0.0037
 Uranus -95765-04-15 21:06 J -33256637.87 -33256637.62 -33256637.35 0.0146 0.0024
 Uranus -95764-04-21 07:54 J -33256267.39 -33256267.17 -33256266.96 0.0145 0.0083
 Uranus -95763-04-26 17:44 J -33255896.81 -33255896.76 -33255896.69 0.0145 0.0141
 Saturn -95757-08-05 10:18 J -33253604.09 -33253604.07 -33253604.06 0.0275 0.0275
 Saturn -95756-08-18 04:47 J -33253226.54 -33253226.30 -33253226.05 0.0275 0.0019
 Jupiter -95754-03-22 02:23 J -33252645.61 -33252645.40 -33252645.18 0.0485 0.0212
 Mars -95743-01-11 20:51 J -33248696.81 -33248696.63 -33248696.44 0.1607 0.0309
 Saturn -95741-02-04 17:01 J -33247943.02 -33247942.79 -33247942.55 0.0284 0.0071
 Saturn -95740-02-17 05:59 J -33247564.35 -33247564.25 -33247564.13 0.0284 0.0254
 Neptune -95739-09-01 19:11 J -33247002.86 -33247002.70 -33247002.51 0.0088 0.0065
 Neptune -95738-09-04 05:30 J -33246635.50 -33246635.27 -33246635.03 0.0088 0.0034
 Neptune -95737-09-05 15:49 J -33246268.09 -33246267.84 -33246267.58 0.0088 0.0003
 Neptune -95736-09-08 01:39 J -33245900.67 -33245900.43 -33245900.18 0.0088 0.0028
 Neptune -95735-09-10 11:01 J -33245533.20 -33245533.04 -33245532.82 0.0088 0.0059
 Saturn -95727-08-12 20:23 J -33242639.87 -33242639.65 -33242639.42 0.0274 0.0116
 Saturn -95726-08-25 11:30 J -33242262.21 -33242262.02 -33242261.83 0.0274 0.0174
 Jupiter -95725-09-21 02:08 J -33241869.60 -33241869.41 -33241869.22 0.0544 0.0299
 Uranus -95725-10-06 07:54 J -33241854.20 -33241854.17 -33241854.10 0.0132 0.0129
 Uranus -95724-10-10 07:54 J -33241485.34 -33241485.17 -33241484.98 0.0132 0.0088
 Uranus -95723-10-14 07:39 J -33241116.40 -33241116.18 -33241115.94 0.0132 0.0047
 Uranus -95722-10-18 07:54 J -33240747.41 -33240747.17 -33240746.92 0.0133 0.0006
 Uranus -95721-10-21 07:54 J -33240378.40 -33240378.17 -33240377.93 0.0133 0.0037
 Uranus -95720-10-25 08:08 J -33240009.34 -33240009.16 -33240008.95 0.0134 0.0079
 Uranus -95719-10-29 08:37 J -33239640.22 -33239640.14 -33239640.01 0.0134 0.0121
 Jupiter -95713-09-26 05:15 J -33237481.49 -33237481.28 -33237481.06 0.0544 0.0149
 Saturn -95712-01-28 22:18 J -33237356.73 -33237356.57 -33237356.42 0.0284 0.0217
 Saturn -95711-02-11 08:23 J -33236978.37 -33236978.15 -33236977.92 0.0284 0.0105
 Saturn -95698-08-07 16:18 J -33232052.93 -33232052.82 -33232052.69 0.0275 0.0240
 Saturn -95697-08-19 11:15 J -33231675.27 -33231675.03 -33231674.79 0.0275 0.0053

Mars -95696-01-06 10:03 J -33231535.21 -33231535.08 -33231534.96 0.1609 0.1166
 Jupiter -95695-03-12 13:25 J -33231104.97 -33231104.94 -33231104.89 0.0485 0.0477
 Jupiter -95683-03-16 21:35 J -33226717.82 -33226717.60 -33226717.37 0.0485 0.0158
 Uranus -95683-04-06 10:47 J -33226697.25 -33226697.05 -33226696.85 0.0147 0.0093
 Pluto -95683-04-29 13:25 J -33226674.15 -33226673.94 -33226673.70 0.0066 0.0037
 Saturn -95682-02-06 03:35 J -33226391.59 -33226391.35 -33226391.10 0.0284 0.0031
 Uranus -95682-04-11 21:49 J -33226326.84 -33226326.59 -33226326.33 0.0146 0.0033
 Pluto -95682-05-01 06:56 J -33226307.37 -33226307.21 -33226307.05 0.0067 0.0053
 Uranus -95681-04-16 08:51 J -33225956.38 -33225956.13 -33225955.87 0.0146 0.0027
 Uranus -95680-04-21 19:11 J -33225585.89 -33225585.70 -33225585.47 0.0145 0.0087
 Uranus -95679-04-27 05:15 J -33225215.29 -33225215.28 -33225215.24 0.0145 0.0144
 Jupiter -95671-03-21 06:56 J -33222330.43 -33222330.21 -33222329.98 0.0484 0.0163
 Saturn -95668-08-14 04:47 J -33221088.53 -33221088.30 -33221088.06 0.0274 0.0080
 Saturn -95667-08-26 19:39 J -33220710.83 -33220710.68 -33220710.52 0.0274 0.0209
 Mars -95664-01-13 19:39 J -33219839.83 -33219839.68 -33219839.53 0.1607 0.0949
 Jupiter -95659-03-25 15:20 J -33217942.87 -33217942.86 -33217942.83 0.0484 0.0482
 Neptune -95657-02-21 09:20 J -33217245.11 -33217245.11 -33217245.07 0.0089 0.0089
 Neptune -95656-02-22 22:03 J -33216877.76 -33216877.58 -33216877.36 0.0089 0.0057
 Neptune -95655-02-25 11:15 J -33216510.27 -33216510.03 -33216509.77 0.0089 0.0025
 Neptune -95654-02-28 00:13 J -33216142.74 -33216142.49 -33216142.22 0.0089 0.0007
 Saturn -95653-01-31 08:37 J -33215805.32 -33215805.14 -33215804.94 0.0284 0.0176
 Neptune -95653-03-01 13:11 J -33215775.17 -33215774.95 -33215774.70 0.0089 0.0039
 Saturn -95652-02-12 19:11 J -33215426.91 -33215426.70 -33215426.48 0.0284 0.0144
 Neptune -95652-03-04 02:23 J -33215407.54 -33215407.40 -33215407.23 0.0089 0.0071
 Jupiter -95642-09-20 23:44 J -33211554.67 -33211554.51 -33211554.35 0.0543 0.0385
 Uranus -95641-10-06 22:47 J -33211172.61 -33211172.55 -33211172.45 0.0132 0.0124
 Uranus -95640-10-10 22:47 J -33210803.73 -33210803.55 -33210803.35 0.0132 0.0083
 Saturn -95639-08-09 00:13 J -33210501.64 -33210501.49 -33210501.32 0.0275 0.0205
 Uranus -95639-10-14 22:32 J -33210434.79 -33210434.56 -33210434.32 0.0132 0.0043
 Saturn -95638-08-21 18:27 J -33210123.95 -33210123.73 -33210123.49 0.0275 0.0089

Uranus	-95638-10-18 22:47 J	-33210065.80	-33210065.55	-33210065.31	0.0133	0.0002
Uranus	-95637-10-21 22:32 J	-33209696.79	-33209696.56	-33209696.32	0.0133	0.0040
Uranus	-95636-10-25 22:47 J	-33209327.73	-33209327.55	-33209327.34	0.0134	0.0083
Uranus	-95635-10-29 23:15 J	-33208958.60	-33208958.53	-33208958.41	0.0134	0.0125
Jupiter	-95630-09-26 00:13 J	-33207166.72	-33207166.49	-33207166.27	0.0543	0.0050
Saturn	-95623-02-07 15:35 J	-33204840.09	-33204839.85	-33204839.61	0.0284	0.0010
Jupiter	-95618-10-01 01:25 J	-33202778.53	-33202778.44	-33202778.35	0.0544	0.0492
Mars	-95617-01-09 08:51 J	-33202678.31	-33202678.13	-33202677.96	0.1608	0.0517
Saturn	-95609-08-15 14:37 J	-33199537.14	-33199536.89	-33199536.65	0.0275	0.0042
Saturn	-95608-08-28 04:47 J	-33199159.39	-33199159.30	-33199159.18	0.0274	0.0245
Jupiter	-95600-03-16 01:39 J	-33196402.64	-33196402.43	-33196402.21	0.0485	0.0208
Uranus	-95599-04-07 00:27 J	-33196015.68	-33196015.48	-33196015.27	0.0147	0.0088
Uranus	-95598-04-12 11:30 J	-33195645.27	-33195645.02	-33195644.76	0.0146	0.0028
Uranus	-95597-04-16 22:32 J	-33195274.81	-33195274.56	-33195274.30	0.0146	0.0032
Pluto	-95597-10-31 22:47 J	-33195076.77	-33195076.55	-33195076.30	0.0078	0.0028
Uranus	-95596-04-22 08:37 J	-33194904.32	-33194904.14	-33194903.91	0.0145	0.0091
Saturn	-95594-02-01 20:37 J	-33194253.84	-33194253.64	-33194253.41	0.0284	0.0135
Saturn	-95593-02-15 07:25 J	-33193875.36	-33193875.19	-33193874.99	0.0284	0.0185
Jupiter	-95588-03-20 11:01 J	-33192015.27	-33192015.04	-33192014.80	0.0485	0.0114
Mars	-95585-01-16 19:11 J	-33190982.72	-33190982.70	-33190982.68	0.1607	0.1595
Saturn	-95580-08-10 09:35 J	-33188950.29	-33188950.10	-33188949.90	0.0275	0.0168
Saturn	-95579-08-23 03:06 J	-33188572.58	-33188572.37	-33188572.14	0.0275	0.0123
Jupiter	-95576-03-24 19:54 J	-33187627.77	-33187627.67	-33187627.56	0.0485	0.0433
Neptune	-95575-08-31 23:30 J	-33187102.59	-33187102.52	-33187102.41	0.0088	0.0083
Neptune	-95574-09-03 10:18 J	-33186735.27	-33186735.07	-33186734.85	0.0088	0.0052
Neptune	-95573-09-04 20:37 J	-33186367.89	-33186367.64	-33186367.39	0.0088	0.0021
Neptune	-95572-09-07 06:42 J	-33186000.47	-33186000.22	-33185999.96	0.0088	0.0010
Neptune	-95571-09-09 16:18 J	-33185633.03	-33185632.82	-33185632.58	0.0088	0.0041
Neptune	-95570-09-12 01:54 J	-33185265.54	-33185265.42	-33185265.24	0.0088	0.0072
Saturn	-95565-01-27 19:25 J	-33183666.77	-33183666.69	-33183666.60	0.0284	0.0265

Saturn -95564-02-09 03:49 J -33183288.58 -33183288.34 -33183288.10 0.0284 0.0050
 Jupiter -95559-09-19 20:08 J -33181239.77 -33181239.66 -33181239.55 0.0543 0.0473
 Uranus -95557-10-07 13:54 J -33180491.02 -33180490.92 -33180490.81 0.0132 0.0118
 Uranus -95556-10-11 13:39 J -33180122.12 -33180121.93 -33180121.72 0.0132 0.0078
 Uranus -95555-10-15 13:25 J -33179753.18 -33179752.94 -33179752.70 0.0133 0.0038
 Uranus -95554-10-19 13:25 J -33179384.19 -33179383.94 -33179383.70 0.0133 0.0004
 Uranus -95553-10-22 13:11 J -33179015.18 -33179014.95 -33179014.71 0.0133 0.0045
 Uranus -95552-10-26 13:25 J -33178646.12 -33178645.94 -33178645.74 0.0134 0.0086
 Uranus -95551-10-30 14:08 J -33178276.97 -33178276.91 -33178276.82 0.0134 0.0128
 Saturn -95550-08-18 01:11 J -33177985.70 -33177985.45 -33177985.21 0.0275 0.0006
 Jupiter -95547-09-25 00:56 J -33176851.69 -33176851.46 -33176851.23 0.0544 0.0022
 Mars -95538-01-11 07:39 J -33173821.36 -33173821.18 -33173821.00 0.1608 0.0127
 Saturn -95535-02-03 09:20 J -33172702.34 -33172702.11 -33172701.88 0.0284 0.0094
 Jupiter -95535-09-30 04:32 J -33172463.44 -33172463.31 -33172463.16 0.0544 0.0425
 Saturn -95534-02-16 20:37 J -33172323.78 -33172323.64 -33172323.49 0.0284 0.0225
 Saturn -95521-08-11 18:42 J -33167398.93 -33167398.72 -33167398.50 0.0275 0.0131
 Saturn -95520-08-24 11:44 J -33167021.20 -33167021.01 -33167020.80 0.0275 0.0158
 Jupiter -95517-03-15 05:15 J -33166087.48 -33166087.28 -33166087.07 0.0485 0.0258
 Uranus -95516-04-02 00:13 J -33165704.53 -33165704.49 -33165704.41 0.0147 0.0143
 Uranus -95515-04-07 11:30 J -33165334.22 -33165334.02 -33165333.79 0.0147 0.0084
 Mars -95515-07-19 02:23 J -33165231.61 -33165231.40 -33165231.19 0.1919 0.0370
 Uranus -95514-04-12 22:47 J -33164963.80 -33164963.55 -33164963.28 0.0146 0.0025
 Uranus -95513-04-17 09:49 J -33164593.34 -33164593.09 -33164592.83 0.0146 0.0035
 Uranus -95512-04-22 19:54 J -33164222.85 -33164222.67 -33164222.45 0.0145 0.0094
 Saturn -95506-01-29 06:56 J -33162115.34 -33162115.21 -33162115.05 0.0284 0.0225
 Saturn -95505-02-11 16:03 J -33161737.06 -33161736.83 -33161736.59 0.0284 0.0091
 Jupiter -95505-03-19 13:39 J -33161700.16 -33161699.93 -33161699.69 0.0485 0.0063
 Jupiter -95493-03-23 23:30 J -33157312.66 -33157312.52 -33157312.37 0.0484 0.0383
 Neptune -95492-02-22 02:37 J -33156977.52 -33156977.39 -33156977.24 0.0089 0.0074
 Saturn -95492-08-06 16:18 J -33156811.90 -33156811.82 -33156811.71 0.0275 0.0255

Mars -95491-01-05 21:06 J -33156659.72 -33156659.62 -33156659.51 0.1610 0.1317
 Neptune -95491-02-24 15:06 J -33156610.08 -33156609.87 -33156609.63 0.0089 0.0043
 Saturn -95491-08-19 11:30 J -33156434.26 -33156434.02 -33156433.77 0.0275 0.0033
 Neptune -95490-02-27 04:03 J -33156242.58 -33156242.33 -33156242.06 0.0089 0.0011
 Neptune -95489-02-29 17:15 J -33155875.03 -33155874.78 -33155874.53 0.0089 0.0021
 Neptune -95488-03-03 05:59 J -33155507.44 -33155507.25 -33155507.02 0.0089 0.0053
 Neptune -95487-03-05 19:11 J -33155139.75 -33155139.70 -33155139.60 0.0089 0.0085
 Saturn -95476-02-04 21:06 J -33151150.85 -33151150.62 -33151150.37 0.0284 0.0053
 Jupiter -95476-09-18 23:15 J -33150924.55 -33150924.53 -33150924.50 0.0543 0.0538
 Saturn -95475-02-18 08:51 J -33150772.21 -33150772.13 -33150772.03 0.0284 0.0265
 Uranus -95473-10-08 04:32 J -33149809.43 -33149809.31 -33149809.18 0.0132 0.0113
 Uranus -95472-10-12 04:03 J -33149440.52 -33149440.33 -33149440.11 0.0132 0.0074
 Uranus -95471-10-16 03:35 J -33149071.58 -33149071.35 -33149071.10 0.0133 0.0034
 Uranus -95470-10-20 03:49 J -33148702.59 -33148702.34 -33148702.09 0.0133 0.0007
 Uranus -95469-10-23 03:20 J -33148333.58 -33148333.36 -33148333.12 0.0133 0.0049
 Uranus -95468-10-27 03:49 J -33147964.51 -33147964.34 -33147964.14 0.0134 0.0090
 Uranus -95467-10-31 04:47 J -33147595.35 -33147595.30 -33147595.24 0.0134 0.0130
 Jupiter -95464-09-24 00:56 J -33146536.68 -33146536.46 -33146536.23 0.0543 0.0099
 Saturn -95462-08-14 04:03 J -33145847.56 -33145847.33 -33145847.09 0.0275 0.0095
 Saturn -95461-08-25 20:37 J -33145469.81 -33145469.64 -33145469.46 0.0275 0.0192
 Mars -95459-01-13 06:42 J -33144964.38 -33144964.22 -33144964.06 0.1607 0.0765
 Jupiter -95452-09-29 01:11 J -33142148.63 -33142148.45 -33142148.27 0.0543 0.0334
 Saturn -95447-01-30 17:30 J -33140563.94 -33140563.77 -33140563.58 0.0284 0.0186
 Saturn -95446-02-13 03:06 J -33140185.58 -33140185.37 -33140185.15 0.0284 0.0129
 Mars -95436-07-23 03:35 J -33136372.41 -33136372.35 -33136372.29 0.1920 0.1834
 Jupiter -95434-03-15 10:32 J -33135772.24 -33135772.06 -33135771.87 0.0485 0.0301
 Pluto -95434-05-02 07:54 J -33135724.42 -33135724.17 -33135723.90 0.0067 0.0021
 Saturn -95433-08-08 03:06 J -33135260.52 -33135260.37 -33135260.22 0.0275 0.0216
 Uranus -95432-04-02 14:08 J -33135022.99 -33135022.91 -33135022.79 0.0147 0.0136
 Saturn -95432-08-20 21:20 J -33134882.85 -33134882.61 -33134882.38 0.0275 0.0070

Uranus -95431-04-08 01:25 J -33134652.65 -33134652.44 -33134652.20 0.0147 0.0078
 Uranus -95430-04-13 12:42 J -33134282.23 -33134281.97 -33134281.71 0.0146 0.0019
 Uranus -95429-04-17 23:30 J -33133911.77 -33133911.52 -33133911.26 0.0146 0.0040
 Uranus -95428-04-23 09:35 J -33133541.28 -33133541.10 -33133540.89 0.0145 0.0098
 Jupiter -95422-03-19 18:27 J -33131384.97 -33131384.73 -33131384.49 0.0485 0.0014
 Saturn -95417-02-07 07:54 J -33129599.41 -33129599.17 -33129598.92 0.0284 0.0014
 Mars -95412-01-07 20:08 J -33127802.83 -33127802.66 -33127802.50 0.1609 0.0686
 Jupiter -95410-03-24 03:49 J -33126997.51 -33126997.34 -33126997.16 0.0484 0.0333
 Neptune -95410-09-02 15:35 J -33126835.01 -33126834.85 -33126834.69 0.0088 0.0069
 Neptune -95409-09-04 01:39 J -33126467.65 -33126467.43 -33126467.19 0.0088 0.0038
 Neptune -95408-09-06 11:59 J -33126100.26 -33126100.00 -33126099.75 0.0088 0.0008
 Neptune -95407-09-08 21:49 J -33125732.83 -33125732.59 -33125732.33 0.0088 0.0023
 Neptune -95406-09-11 07:39 J -33125365.37 -33125365.18 -33125364.96 0.0088 0.0054
 Neptune -95405-09-12 17:44 J -33124997.84 -33124997.76 -33124997.68 0.0088 0.0084
 Saturn -95403-08-15 12:42 J -33124296.21 -33124295.97 -33124295.73 0.0275 0.0059
 Saturn -95402-08-28 04:32 J -33123918.44 -33123918.31 -33123918.16 0.0275 0.0225
 Uranus -95389-10-08 18:42 J -33119127.84 -33119127.72 -33119127.56 0.0132 0.0108
 Saturn -95388-02-01 01:39 J -33119012.62 -33119012.43 -33119012.21 0.0284 0.0149
 Uranus -95388-10-12 18:27 J -33118758.93 -33118758.73 -33118758.51 0.0132 0.0069
 Saturn -95387-02-14 11:59 J -33118634.19 -33118634.00 -33118633.80 0.0284 0.0166
 Uranus -95387-10-16 18:13 J -33118389.98 -33118389.74 -33118389.49 0.0133 0.0029
 Uranus -95386-10-20 18:13 J -33118020.99 -33118020.74 -33118020.50 0.0133 0.0012
 Uranus -95385-10-23 17:59 J -33117651.97 -33117651.75 -33117651.51 0.0133 0.0053
 Uranus -95384-10-27 18:13 J -33117282.90 -33117282.74 -33117282.55 0.0134 0.0094
 Jupiter -95381-09-22 20:08 J -33116221.87 -33116221.66 -33116221.44 0.0543 0.0192
 Mars -95380-01-15 05:30 J -33116107.35 -33116107.27 -33116107.18 0.1607 0.1403
 Saturn -95374-08-10 12:42 J -33113709.15 -33113708.97 -33113708.78 0.0275 0.0178
 Saturn -95373-08-22 06:13 J -33113331.46 -33113331.24 -33113331.01 0.0274 0.0106
 Jupiter -95369-09-28 00:13 J -33111833.68 -33111833.49 -33111833.28 0.0544 0.0257
 Saturn -95358-02-08 16:18 J -33108048.06 -33108047.82 -33108047.58 0.0284 0.0023

Jupiter -95351-03-14 16:03 J -33105456.99 -33105456.83 -33105456.66 0.0485 0.0347
 Pluto -95349-11-01 22:47 J -33104493.55 -33104493.55 -33104493.51 0.0078 0.0078
 Uranus -95348-04-03 01:39 J -33104341.54 -33104341.43 -33104341.31 0.0147 0.0131
 Pluto -95348-11-03 21:49 J -33104126.75 -33104126.59 -33104126.40 0.0077 0.0055
 Uranus -95347-04-08 12:42 J -33103971.19 -33103970.97 -33103970.74 0.0147 0.0073
 Uranus -95346-04-13 23:44 J -33103600.77 -33103600.51 -33103600.25 0.0146 0.0015
 Uranus -95345-04-18 10:32 J -33103230.31 -33103230.06 -33103229.81 0.0146 0.0043
 Uranus -95344-04-23 20:23 J -33102859.82 -33102859.65 -33102859.45 0.0145 0.0101
 Saturn -95344-08-16 19:54 J -33102744.91 -33102744.67 -33102744.42 0.0275 0.0024
 Saturn -95343-08-29 11:01 J -33102367.11 -33102367.04 -33102366.94 0.0275 0.0257
 Jupiter -95339-03-18 23:30 J -33101069.76 -33101069.52 -33101069.28 0.0485 0.0031
 Mars -95333-01-10 18:42 J -33098945.91 -33098945.72 -33098945.54 0.1608 0.0055
 Saturn -95329-02-03 08:08 J -33097461.38 -33097461.16 -33097460.94 0.0284 0.0113
 Saturn -95328-02-15 18:42 J -33097082.88 -33097082.72 -33097082.53 0.0284 0.0201
 Neptune -95327-02-23 19:25 J -33096709.87 -33096709.69 -33096709.48 0.0089 0.0060
 Jupiter -95327-03-23 08:51 J -33096682.32 -33096682.13 -33096681.94 0.0485 0.0291
 Neptune -95326-02-26 08:37 J -33096342.39 -33096342.14 -33096341.89 0.0089 0.0028
 Neptune -95325-02-28 21:20 J -33095974.86 -33095974.61 -33095974.34 0.0089 0.0004
 Neptune -95324-03-02 10:47 J -33095607.29 -33095607.05 -33095606.81 0.0089 0.0035
 Neptune -95323-03-04 23:01 J -33095239.68 -33095239.54 -33095239.34 0.0089 0.0068
 Saturn -95315-08-11 20:23 J -33092157.86 -33092157.65 -33092157.44 0.0275 0.0142
 Saturn -95314-08-24 13:25 J -33091780.15 -33091779.94 -33091779.73 0.0274 0.0140
 Uranus -95305-10-09 08:37 J -33088446.28 -33088446.14 -33088445.97 0.0132 0.0103
 Uranus -95304-10-13 08:37 J -33088077.36 -33088077.14 -33088076.93 0.0132 0.0064
 Uranus -95303-10-17 07:54 J -33087708.40 -33087708.17 -33087707.91 0.0133 0.0025
 Uranus -95302-10-21 08:08 J -33087339.40 -33087339.16 -33087338.91 0.0133 0.0016
 Uranus -95301-10-24 07:54 J -33086970.38 -33086970.17 -33086969.94 0.0133 0.0056
 Saturn -95300-01-27 14:37 J -33086874.98 -33086874.89 -33086874.76 0.0284 0.0251
 Uranus -95300-10-28 08:23 J -33086601.31 -33086601.15 -33086600.97 0.0134 0.0097
 Saturn -95299-02-09 22:18 J -33086496.80 -33086496.57 -33086496.32 0.0284 0.0059

Jupiter -95298-09-23 01:54 J -33085906.63 -33085906.42 -33085906.22 0.0543 0.0249
 Mars -95286-01-05 08:37 J -33081784.21 -33081784.14 -33081784.07 0.1612 0.1481
 Saturn -95286-08-06 06:13 J -33081571.24 -33081571.24 -33081571.24 0.0275 0.0275
 Jupiter -95286-09-28 05:44 J -33081518.47 -33081518.26 -33081518.04 0.0543 0.0200
 Saturn -95285-08-18 02:08 J -33081193.65 -33081193.41 -33081193.16 0.0275 0.0010
 Saturn -95270-02-04 11:30 J -33075910.26 -33075910.02 -33075909.79 0.0284 0.0080
 Saturn -95269-02-17 22:47 J -33075531.68 -33075531.55 -33075531.40 0.0284 0.0232
 Jupiter -95268-03-13 22:47 J -33075141.69 -33075141.55 -33075141.41 0.0485 0.0385
 Uranus -95264-04-03 14:08 J -33073660.04 -33073659.91 -33073659.77 0.0147 0.0125
 Uranus -95263-04-09 01:11 J -33073289.68 -33073289.45 -33073289.22 0.0147 0.0068
 Uranus -95262-04-14 12:13 J -33072919.25 -33072918.99 -33072918.73 0.0146 0.0010
 Uranus -95261-04-18 22:32 J -33072548.80 -33072548.56 -33072548.30 0.0146 0.0048
 Uranus -95260-04-24 08:37 J -33072178.31 -33072178.14 -33072177.94 0.0145 0.0104
 Jupiter -95256-03-18 08:51 J -33070754.37 -33070754.13 -33070753.90 0.0485 0.0064
 Saturn -95256-08-13 02:08 J -33070606.63 -33070606.41 -33070606.17 0.0275 0.0108
 Saturn -95255-08-25 18:42 J -33070228.90 -33070228.72 -33070228.52 0.0274 0.0173
 Mars -95254-01-12 17:30 J -33070088.94 -33070088.77 -33070088.60 0.1608 0.0590
 Neptune -95246-09-01 21:20 J -33066934.64 -33066934.61 -33066934.51 0.0088 0.0086
 Neptune -95245-09-03 07:54 J -33066567.35 -33066567.17 -33066566.95 0.0088 0.0055
 Jupiter -95244-03-22 17:15 J -33066366.98 -33066366.78 -33066366.57 0.0484 0.0252
 Neptune -95244-09-05 18:13 J -33066199.97 -33066199.74 -33066199.48 0.0088 0.0024
 Neptune -95243-09-08 04:47 J -33065832.56 -33065832.30 -33065832.05 0.0088 0.0006
 Neptune -95242-09-10 14:37 J -33065465.12 -33065464.89 -33065464.66 0.0088 0.0037
 Saturn -95241-01-29 18:42 J -33065323.88 -33065323.72 -33065323.57 0.0284 0.0217
 Neptune -95241-09-11 23:59 J -33065097.64 -33065097.50 -33065097.31 0.0088 0.0068
 Saturn -95240-02-11 02:37 J -33064945.62 -33064945.39 -33064945.16 0.0284 0.0091
 Mars -95231-07-17 15:35 J -33061502.04 -33061501.85 -33061501.66 0.1917 0.0820
 Saturn -95227-08-07 11:01 J -33060020.15 -33060020.04 -33060019.92 0.0275 0.0241
 Saturn -95226-08-20 06:42 J -33059642.47 -33059642.22 -33059641.98 0.0274 0.0042
 Uranus -95221-10-09 22:18 J -33057764.72 -33057764.57 -33057764.39 0.0132 0.0098

Uranus	-95220-10-13 22:03 J	-33057395.79	-33057395.58	-33057395.35	0.0132	0.0059
Uranus	-95219-10-17 22:03 J	-33057026.82	-33057026.58	-33057026.34	0.0132	0.0020
Uranus	-95218-10-21 21:49 J	-33056657.83	-33056657.59	-33056657.34	0.0133	0.0020
Uranus	-95217-10-24 21:49 J	-33056288.80	-33056288.59	-33056288.36	0.0133	0.0061
Uranus	-95216-10-28 22:18 J	-33055919.71	-33055919.57	-33055919.39	0.0134	0.0101
Jupiter	-95215-09-22 05:30 J	-33055591.46	-33055591.27	-33055591.08	0.0543	0.0310
Saturn	-95211-02-05 12:42 J	-33054359.21	-33054358.97	-33054358.73	0.0284	0.0049
Saturn	-95210-02-19 00:42 J	-33053980.56	-33053980.47	-33053980.38	0.0284	0.0262
Mars	-95207-01-07 07:11 J	-33052927.36	-33052927.20	-33052927.05	0.1611	0.0841
Jupiter	-95203-09-27 02:51 J	-33051203.60	-33051203.38	-33051203.16	0.0544	0.0112
Saturn	-95197-08-14 06:56 J	-33049055.45	-33049055.21	-33049054.97	0.0275	0.0074
Saturn	-95196-08-26 23:01 J	-33048677.69	-33048677.54	-33048677.37	0.0274	0.0204
Pluto	-95186-05-03 08:51 J	-33045141.39	-33045141.13	-33045140.87	0.0067	0.0013
Jupiter	-95185-03-13 08:23 J	-33044826.26	-33044826.15	-33044826.02	0.0485	0.0418
Saturn	-95182-01-30 20:08 J	-33043772.83	-33043772.66	-33043772.47	0.0284	0.0186
Saturn	-95181-02-13 04:32 J	-33043394.52	-33043394.31	-33043394.08	0.0284	0.0122
Uranus	-95180-04-04 00:13 J	-33042978.62	-33042978.49	-33042978.33	0.0147	0.0122
Uranus	-95179-04-09 11:01 J	-33042608.26	-33042608.04	-33042607.79	0.0147	0.0065
Uranus	-95178-04-14 22:18 J	-33042237.83	-33042237.57	-33042237.31	0.0146	0.0007
Uranus	-95177-04-19 08:37 J	-33041867.38	-33041867.14	-33041866.89	0.0146	0.0050
Uranus	-95176-04-24 18:27 J	-33041496.89	-33041496.73	-33041496.54	0.0145	0.0107
Mars	-95175-01-14 16:03 J	-33041231.95	-33041231.83	-33041231.71	0.1607	0.1212
Jupiter	-95173-03-17 17:30 J	-33040439.00	-33040438.77	-33040438.53	0.0485	0.0100
Saturn	-95168-08-08 14:51 J	-33038469.04	-33038468.88	-33038468.71	0.0275	0.0208
Saturn	-95167-08-21 10:03 J	-33038091.32	-33038091.08	-33038090.84	0.0274	0.0073
Neptune	-95163-02-23 00:13 J	-33036809.60	-33036809.49	-33036809.34	0.0089	0.0077
Neptune	-95162-02-25 13:11 J	-33036442.16	-33036441.95	-33036441.72	0.0089	0.0045
Neptune	-95161-02-28 02:08 J	-33036074.66	-33036074.41	-33036074.14	0.0089	0.0014
Jupiter	-95161-03-22 01:25 J	-33036051.65	-33036051.44	-33036051.22	0.0485	0.0216
Neptune	-95160-03-01 15:06 J	-33035707.12	-33035706.87	-33035706.61	0.0089	0.0018

Neptune -95159-03-04 04:03 J -33035339.53 -33035339.33 -33035339.10 0.0089 0.0050
 Neptune -95158-03-06 17:15 J -33034971.86 -33034971.78 -33034971.67 0.0089 0.0082
 Saturn -95152-02-06 12:27 J -33032808.22 -33032807.98 -33032807.74 0.0284 0.0020
 Mars -95152-07-21 18:27 J -33032642.87 -33032642.73 -33032642.58 0.1920 0.1409
 Saturn -95138-08-16 10:03 J -33027504.32 -33027504.08 -33027503.83 0.0275 0.0043
 Saturn -95137-08-28 01:54 J -33027126.54 -33027126.42 -33027126.28 0.0275 0.0234
 Uranus -95137-10-10 11:15 J -33027083.19 -33027083.03 -33027082.84 0.0132 0.0094
 Uranus -95136-10-14 11:15 J -33026714.25 -33026714.03 -33026713.80 0.0132 0.0055
 Uranus -95135-10-18 11:01 J -33026345.28 -33026345.04 -33026344.79 0.0132 0.0016
 Uranus -95134-10-22 11:01 J -33025976.28 -33025976.04 -33025975.80 0.0133 0.0024
 Uranus -95133-10-25 11:01 J -33025607.25 -33025607.04 -33025606.81 0.0133 0.0064
 Jupiter -95132-09-21 04:03 J -33025276.49 -33025276.33 -33025276.17 0.0543 0.0392
 Uranus -95132-10-29 11:30 J -33025238.16 -33025238.02 -33025237.85 0.0134 0.0104
 Mars -95128-01-09 05:30 J -33024070.45 -33024070.27 -33024070.09 0.1610 0.0218
 Saturn -95123-01-31 21:06 J -33022221.82 -33022221.62 -33022221.41 0.0284 0.0156
 Saturn -95122-02-14 05:30 J -33021843.47 -33021843.27 -33021843.06 0.0284 0.0151
 Jupiter -95120-09-26 10:32 J -33020888.29 -33020888.06 -33020887.84 0.0544 0.0062
 Saturn -95109-08-09 17:44 J -33016917.94 -33016917.76 -33016917.57 0.0275 0.0176
 Saturn -95108-08-22 12:42 J -33016540.19 -33016539.97 -33016539.74 0.0274 0.0103
 Jupiter -95108-10-01 15:20 J -33016499.92 -33016499.86 -33016499.77 0.0544 0.0512
 Jupiter -95102-03-13 17:15 J -33014510.86 -33014510.78 -33014510.69 0.0486 0.0451
 Pluto -95100-11-04 23:30 J -33013543.76 -33013543.52 -33013543.26 0.0077 0.0010
 Uranus -95096-04-04 11:30 J -33012297.16 -33012297.02 -33012296.85 0.0147 0.0117
 Uranus -95095-04-09 22:18 J -33011926.80 -33011926.57 -33011926.32 0.0147 0.0061
 Uranus -95094-04-15 09:20 J -33011556.37 -33011556.11 -33011555.85 0.0146 0.0003
 Saturn -95093-02-08 11:30 J -33011257.26 -33011257.02 -33011256.77 0.0284 0.0010
 Uranus -95093-04-19 19:25 J -33011185.92 -33011185.69 -33011185.43 0.0146 0.0054
 Uranus -95092-04-25 05:30 J -33010815.42 -33010815.27 -33010815.08 0.0145 0.0110
 Jupiter -95090-03-18 02:51 J -33010123.60 -33010123.38 -33010123.14 0.0485 0.0132
 Neptune -95081-09-02 15:06 J -33006667.01 -33006666.87 -33006666.70 0.0088 0.0071

Neptune -95080-09-05 01:25 J -33006299.65 -33006299.44 -33006299.19 0.0088 0.0040
 Saturn -95079-08-17 12:42 J -33005953.22 -33005952.97 -33005952.73 0.0275 0.0012
 Neptune -95079-09-07 11:59 J -33005932.25 -33005932.00 -33005931.74 0.0088 0.0010
 Jupiter -95078-03-22 13:25 J -33005736.16 -33005735.94 -33005735.72 0.0485 0.0189
 Saturn -95078-08-30 04:18 J -33005575.38 -33005575.32 -33005575.25 0.0275 0.0263
 Neptune -95078-09-09 21:49 J -33005564.82 -33005564.59 -33005564.33 0.0088 0.0022
 Neptune -95077-09-11 07:39 J -33005197.37 -33005197.18 -33005196.96 0.0088 0.0051
 Neptune -95076-09-13 17:30 J -33004829.84 -33004829.77 -33004829.65 0.0088 0.0082
 Saturn -95064-02-01 21:35 J -33000670.81 -33000670.60 -33000670.38 0.0284 0.0126
 Saturn -95063-02-15 05:59 J -33000292.43 -33000292.25 -33000292.05 0.0284 0.0180
 Uranus -95054-10-08 00:27 J -32996770.53 -32996770.48 -32996770.42 0.0132 0.0128
 Uranus -95053-10-10 23:59 J -32996401.67 -32996401.50 -32996401.31 0.0132 0.0090
 Uranus -95052-10-14 23:59 J -32996032.72 -32996032.50 -32996032.27 0.0132 0.0051
 Uranus -95051-10-18 23:59 J -32995663.75 -32995663.50 -32995663.26 0.0133 0.0012
 Saturn -95050-08-11 20:23 J -32995366.85 -32995366.65 -32995366.43 0.0275 0.0145
 Uranus -95050-10-22 23:44 J -32995294.74 -32995294.51 -32995294.26 0.0133 0.0027
 Mars -95049-01-12 04:03 J -32995213.50 -32995213.33 -32995213.15 0.1609 0.0413
 Saturn -95049-08-23 15:06 J -32994989.08 -32994988.87 -32994988.65 0.0274 0.0133
 Jupiter -95049-09-20 13:25 J -32994961.07 -32994960.94 -32994960.80 0.0543 0.0433
 Uranus -95049-10-26 00:13 J -32994925.70 -32994925.49 -32994925.28 0.0133 0.0067
 Uranus -95048-10-30 00:27 J -32994556.60 -32994556.48 -32994556.31 0.0134 0.0107
 Jupiter -95037-09-25 17:01 J -32990573.01 -32990572.79 -32990572.56 0.0543 0.0012
 Saturn -95035-01-27 04:32 J -32990084.39 -32990084.31 -32990084.21 0.0284 0.0263
 Saturn -95034-02-09 11:01 J -32989706.28 -32989706.04 -32989705.80 0.0284 0.0038
 Jupiter -95025-09-30 14:08 J -32986185.05 -32986184.91 -32986184.77 0.0544 0.0427
 Saturn -95021-08-05 16:18 J -32984779.89 -32984779.82 -32984779.74 0.0276 0.0261
 Saturn -95020-08-18 14:23 J -32984402.15 -32984401.90 -32984401.65 0.0275 0.0019
 Jupiter -95019-03-13 05:01 J -32984195.32 -32984195.29 -32984195.25 0.0486 0.0478
 Uranus -95012-04-04 21:20 J -32981615.77 -32981615.61 -32981615.44 0.0147 0.0114
 Uranus -95011-04-10 07:39 J -32981245.41 -32981245.18 -32981244.93 0.0147 0.0058

Uranus	-95010-04-15 18:42 J	-32980874.98	-32980874.72	-32980874.46	0.0146	0.0001
Uranus	-95009-04-20 04:47 J	-32980504.53	-32980504.30	-32980504.05	0.0146	0.0056
Uranus	-95008-04-25 14:37 J	-32980134.03	-32980133.89	-32980133.70	0.0145	0.0112
Jupiter	-95007-03-17 13:11 J	-32979808.17	-32979807.95	-32979807.72	0.0485	0.0163
Saturn	-95005-02-03 23:01 J	-32979119.76	-32979119.54	-32979119.31	0.0283	0.0095
Saturn	-95004-02-16 07:39 J	-32978741.34	-32978741.18	-32978741.01	0.0284	0.0209
Mars	-95002-01-06 17:44 J	-32978051.90	-32978051.76	-32978051.61	0.1613	0.1012

95TH MILLENNIUM BCE

This is a list of transits of Earth in the 95th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Neptune	-94998-02-24 18:42 J	-32976541.88	-32976541.72	-32976541.50	0.0089	0.0062		
Neptune	-94997-02-27 07:54 J	-32976174.41	-32976174.17	-32976173.92	0.0089	0.0030		
Neptune	-94996-02-28 21:06 J	-32975806.88	-32975806.62	-32975806.36	0.0089	0.0002		
Neptune	-94995-03-03 10:03 J	-32975439.32	-32975439.08	-32975438.84	0.0089	0.0033		
Jupiter	-94995-03-21 22:18 J	-32975420.79	-32975420.57	-32975420.34	0.0484	0.0155		
Neptune	-94994-03-05 23:01 J	-32975071.71	-32975071.54	-32975071.35	0.0089	0.0065		
Saturn	-94991-08-12 23:15 J	-32973815.75	-32973815.53	-32973815.30	0.0275	0.0114		
Saturn	-94990-08-25 17:59 J	-32973437.95	-32973437.75	-32973437.55	0.0275	0.0163		
Jupiter	-94983-03-26 06:42 J	-32971033.28	-32971033.22	-32971033.16	0.0484	0.0467		
Saturn	-94976-01-28 05:01 J	-32968533.41	-32968533.29	-32968533.14	0.0283	0.0233		
Saturn	-94975-02-10 11:15 J	-32968155.26	-32968155.03	-32968154.79	0.0284	0.0067		
Mars	-94970-01-14 02:37 J	-32966356.53	-32966356.39	-32966356.25	0.1608	0.1039		

Uranus -94970-10-08 12:13 J -32966089.05 -32966088.99 -32966088.89 0.0132 0.0125
 Uranus -94969-10-11 12:27 J -32965720.16 -32965719.98 -32965719.79 0.0132 0.0086
 Uranus -94968-10-15 12:13 J -32965351.22 -32965350.99 -32965350.75 0.0132 0.0048
 Uranus -94967-10-19 12:13 J -32964982.24 -32964981.99 -32964981.75 0.0133 0.0009
 Jupiter -94966-09-20 11:59 J -32964646.06 -32964646.00 -32964645.92 0.0542 0.0514
 Uranus -94966-10-23 12:13 J -32964613.23 -32964612.99 -32964612.74 0.0133 0.0030
 Uranus -94965-10-26 12:27 J -32964244.17 -32964243.98 -32964243.75 0.0133 0.0070
 Uranus -94964-10-30 13:11 J -32963875.07 -32963874.95 -32963874.79 0.0134 0.0109
 Saturn -94962-08-07 18:13 J -32963228.86 -32963228.74 -32963228.59 0.0276 0.0231
 Saturn -94961-08-19 16:32 J -32962851.05 -32962850.81 -32962850.56 0.0275 0.0049
 Jupiter -94954-09-25 14:51 J -32960258.10 -32960257.88 -32960257.65 0.0543 0.0077
 Mars -94947-07-16 02:08 J -32957772.56 -32957772.41 -32957772.25 0.1915 0.1292
 Saturn -94946-02-05 02:08 J -32957568.65 -32957568.41 -32957568.18 0.0283 0.0064
 Saturn -94945-02-18 10:47 J -32957190.18 -32957190.05 -32957189.92 0.0284 0.0239
 Jupiter -94942-09-30 19:54 J -32955869.84 -32955869.67 -32955869.51 0.0544 0.0370
 Pluto -94938-05-04 05:44 J -32954558.40 -32954558.26 -32954558.11 0.0066 0.0056
 Pluto -94937-05-04 22:32 J -32954191.78 -32954191.56 -32954191.32 0.0067 0.0034
 Saturn -94932-08-14 02:37 J -32952264.62 -32952264.39 -32952264.14 0.0275 0.0083
 Saturn -94931-08-26 21:06 J -32951886.78 -32951886.62 -32951886.43 0.0275 0.0193
 Uranus -94928-04-05 07:39 J -32950934.34 -32950934.18 -32950933.99 0.0147 0.0110
 Uranus -94927-04-10 18:27 J -32950563.97 -32950563.73 -32950563.48 0.0147 0.0054
 Uranus -94926-04-16 05:30 J -32950193.54 -32950193.27 -32950193.01 0.0146 0.0003
 Uranus -94925-04-20 15:20 J -32949823.09 -32949822.86 -32949822.61 0.0146 0.0059
 Jupiter -94924-03-16 21:35 J -32949492.81 -32949492.60 -32949492.38 0.0485 0.0199
 Uranus -94924-04-26 01:39 J -32949452.58 -32949452.43 -32949452.25 0.0145 0.0114
 Mars -94923-01-08 16:32 J -32949194.99 -32949194.81 -32949194.63 0.1611 0.0373
 Saturn -94917-01-30 07:54 J -32946982.33 -32946982.17 -32946981.99 0.0283 0.0201
 Neptune -94917-09-01 23:44 J -32946766.56 -32946766.51 -32946766.45 0.0088 0.0086
 Saturn -94916-02-11 14:08 J -32946604.14 -32946603.91 -32946603.68 0.0284 0.0098
 Neptune -94916-09-04 09:49 J -32946399.27 -32946399.09 -32946398.87 0.0088 0.0055

Neptune -94915-09-06 20:37 J -32946031.88 -32946031.64 -32946031.39 0.0088 0.0025
 Neptune -94914-09-09 06:42 J -32945664.48 -32945664.22 -32945663.97 0.0088 0.0006
 Neptune -94913-09-10 16:18 J -32945297.03 -32945296.82 -32945296.57 0.0088 0.0037
 Jupiter -94912-03-21 07:11 J -32945105.43 -32945105.20 -32945104.97 0.0485 0.0118
 Neptune -94912-09-13 02:08 J -32944929.55 -32944929.41 -32944929.22 0.0088 0.0067
 Saturn -94903-08-08 21:06 J -32941677.77 -32941677.62 -32941677.44 0.0276 0.0201
 Saturn -94902-08-21 19:39 J -32941299.91 -32941299.68 -32941299.44 0.0276 0.0079
 Jupiter -94900-03-25 16:47 J -32940717.90 -32940717.80 -32940717.69 0.0485 0.0435
 Saturn -94887-02-06 06:42 J -32936017.46 -32936017.22 -32936016.97 0.0283 0.0032
 Saturn -94886-02-19 15:35 J -32935638.92 -32935638.85 -32935638.77 0.0284 0.0270
 Uranus -94886-10-09 00:27 J -32935407.56 -32935407.48 -32935407.36 0.0132 0.0120
 Uranus -94885-10-12 00:42 J -32935038.66 -32935038.47 -32935038.28 0.0132 0.0082
 Uranus -94884-10-16 00:13 J -32934669.71 -32934669.49 -32934669.24 0.0132 0.0045
 Uranus -94883-10-20 00:27 J -32934300.72 -32934300.48 -32934300.23 0.0133 0.0006
 Uranus -94882-10-24 00:42 J -32933931.70 -32933931.47 -32933931.23 0.0133 0.0033
 Uranus -94881-10-27 00:56 J -32933562.65 -32933562.46 -32933562.24 0.0133 0.0073
 Uranus -94880-10-31 01:54 J -32933193.55 -32933193.42 -32933193.28 0.0134 0.0111
 Saturn -94873-08-15 07:39 J -32930713.42 -32930713.18 -32930712.94 0.0275 0.0051
 Saturn -94872-08-28 02:08 J -32930335.55 -32930335.41 -32930335.27 0.0275 0.0223
 Jupiter -94871-09-24 21:49 J -32929942.81 -32929942.59 -32929942.36 0.0543 0.0127
 Mars -94868-07-20 06:42 J -32928913.41 -32928913.22 -32928913.04 0.1918 0.0947
 Jupiter -94859-09-30 01:39 J -32925554.61 -32925554.43 -32925554.24 0.0544 0.0315
 Saturn -94858-01-31 12:56 J -32925431.15 -32925430.96 -32925430.76 0.0283 0.0167
 Saturn -94857-02-13 18:56 J -32925052.92 -32925052.71 -32925052.48 0.0284 0.0131
 Pluto -94852-11-05 18:56 J -32922960.88 -32922960.71 -32922960.53 0.0078 0.0055
 Pluto -94851-11-07 17:15 J -32922593.78 -32922593.78 -32922593.74 0.0077 0.0077
 Mars -94844-01-10 14:23 J -32920338.08 -32920337.90 -32920337.72 0.1610 0.0238
 Uranus -94844-04-05 17:30 J -32920252.94 -32920252.77 -32920252.59 0.0147 0.0106
 Saturn -94844-08-10 01:25 J -32920126.63 -32920126.44 -32920126.24 0.0276 0.0170
 Uranus -94843-04-11 03:49 J -32919882.57 -32919882.34 -32919882.08 0.0146 0.0051

Saturn -94843-08-22 23:44 J -32919748.74 -32919748.51 -32919748.28 0.0276 0.0109
 Uranus -94842-04-16 14:51 J -32919512.14 -32919511.88 -32919511.62 0.0146 0.0006
 Jupiter -94841-03-16 05:59 J -32919177.45 -32919177.25 -32919177.03 0.0486 0.0236
 Uranus -94841-04-21 00:56 J -32919141.69 -32919141.46 -32919141.21 0.0146 0.0061
 Uranus -94840-04-26 11:15 J -32918771.18 -32918771.03 -32918770.86 0.0145 0.0116
 Neptune -94834-02-24 01:54 J -32916641.54 -32916641.42 -32916641.29 0.0089 0.0078
 Neptune -94833-02-26 14:08 J -32916274.11 -32916273.91 -32916273.67 0.0089 0.0047
 Neptune -94832-02-28 03:20 J -32915906.62 -32915906.36 -32915906.11 0.0089 0.0015
 Neptune -94831-03-02 16:03 J -32915539.08 -32915538.83 -32915538.57 0.0089 0.0017
 Neptune -94830-03-05 05:01 J -32915171.49 -32915171.29 -32915171.06 0.0089 0.0049
 Neptune -94829-03-06 17:44 J -32914803.84 -32914803.76 -32914803.62 0.0089 0.0081
 Jupiter -94829-03-20 14:08 J -32914790.15 -32914789.91 -32914789.68 0.0485 0.0078
 Saturn -94828-02-07 14:08 J -32914466.15 -32914465.91 -32914465.66 0.0283 0.0005
 Jupiter -94817-03-24 23:15 J -32910402.67 -32910402.53 -32910402.39 0.0484 0.0393
 Saturn -94814-08-17 13:25 J -32909162.18 -32909161.94 -32909161.69 0.0275 0.0019
 Saturn -94813-08-29 07:54 J -32908784.25 -32908784.17 -32908784.07 0.0275 0.0254
 Uranus -94802-10-09 11:59 J -32904726.11 -32904726.00 -32904725.88 0.0132 0.0116
 Uranus -94801-10-12 11:44 J -32904357.19 -32904357.01 -32904356.80 0.0132 0.0079
 Uranus -94800-10-16 12:13 J -32903988.23 -32903987.99 -32903987.76 0.0132 0.0041
 Saturn -94799-02-01 20:23 J -32903879.85 -32903879.65 -32903879.43 0.0283 0.0132
 Uranus -94799-10-20 12:13 J -32903619.23 -32903618.99 -32903618.74 0.0133 0.0003
 Saturn -94798-02-15 02:51 J -32903501.58 -32903501.38 -32903501.18 0.0284 0.0165
 Uranus -94798-10-24 12:27 J -32903250.21 -32903249.98 -32903249.73 0.0133 0.0036
 Mars -94797-01-06 04:18 J -32903176.45 -32903176.32 -32903176.20 0.1615 0.1165
 Uranus -94797-10-27 12:56 J -32902881.15 -32902880.96 -32902880.75 0.0133 0.0075
 Uranus -94796-10-31 13:11 J -32902512.05 -32902511.95 -32902511.80 0.0134 0.0114
 Jupiter -94788-09-23 20:08 J -32899627.87 -32899627.66 -32899627.45 0.0542 0.0208
 Saturn -94785-08-11 07:25 J -32898575.41 -32898575.19 -32898574.98 0.0276 0.0138
 Saturn -94784-08-24 05:30 J -32898197.48 -32898197.27 -32898197.06 0.0276 0.0140
 Jupiter -94776-09-28 21:35 J -32895239.81 -32895239.60 -32895239.40 0.0543 0.0221

Saturn -94770-01-27 20:23 J -32893292.75 -32893292.65 -32893292.54 0.0282 0.0253
 Saturn -94769-02-09 23:30 J -32892914.76 -32892914.52 -32892914.28 0.0283 0.0039
 Mars -94765-01-13 13:11 J -32891481.11 -32891480.95 -32891480.80 0.1609 0.0864
 Uranus -94760-04-06 02:51 J -32889571.55 -32889571.38 -32889571.17 0.0147 0.0102
 Uranus -94759-04-11 13:39 J -32889201.16 -32889200.93 -32889200.67 0.0146 0.0047
 Jupiter -94758-03-16 12:13 J -32888862.18 -32888861.99 -32888861.79 0.0486 0.0277
 Uranus -94758-04-17 00:42 J -32888830.73 -32888830.47 -32888830.21 0.0146 0.0009
 Uranus -94757-04-21 10:47 J -32888460.28 -32888460.05 -32888459.81 0.0146 0.0064
 Uranus -94756-04-26 21:20 J -32888089.76 -32888089.61 -32888089.46 0.0145 0.0118
 Saturn -94756-08-05 20:37 J -32887988.70 -32887988.64 -32887988.55 0.0276 0.0263
 Saturn -94755-08-18 21:20 J -32887610.86 -32887610.61 -32887610.37 0.0275 0.0015
 Neptune -94752-09-03 18:42 J -32886498.84 -32886498.72 -32886498.53 0.0088 0.0071
 Neptune -94751-09-06 05:44 J -32886131.48 -32886131.26 -32886131.02 0.0088 0.0039
 Neptune -94750-09-08 16:18 J -32885764.07 -32885763.82 -32885763.56 0.0088 0.0009
 Neptune -94749-09-10 02:37 J -32885396.63 -32885396.39 -32885396.14 0.0088 0.0021
 Neptune -94748-09-12 12:27 J -32885029.18 -32885028.98 -32885028.76 0.0088 0.0052
 Neptune -94747-09-14 22:18 J -32884661.65 -32884661.57 -32884661.46 0.0088 0.0082
 Jupiter -94746-03-20 19:25 J -32884474.93 -32884474.69 -32884474.45 0.0485 0.0033
 Saturn -94740-02-03 06:27 J -32882328.45 -32882328.23 -32882327.99 0.0283 0.0095
 Saturn -94739-02-16 12:56 J -32881950.12 -32881949.96 -32881949.78 0.0283 0.0201
 Jupiter -94734-03-25 04:47 J -32880087.46 -32880087.30 -32880087.13 0.0485 0.0347
 Saturn -94726-08-13 14:08 J -32877024.13 -32877023.91 -32877023.67 0.0276 0.0106
 Saturn -94725-08-25 12:13 J -32876646.18 -32876645.99 -32876645.80 0.0276 0.0172
 Mars -94718-01-08 02:51 J -32874319.55 -32874319.38 -32874319.21 0.1614 0.0546
 Uranus -94718-10-09 23:15 J -32874044.64 -32874044.53 -32874044.39 0.0132 0.0112
 Uranus -94717-10-12 23:30 J -32873675.71 -32873675.52 -32873675.30 0.0132 0.0075
 Uranus -94716-10-16 23:44 J -32873306.74 -32873306.51 -32873306.27 0.0132 0.0037
 Uranus -94715-10-21 00:13 J -32872937.74 -32872937.49 -32872937.25 0.0133 0.0001
 Uranus -94714-10-25 00:27 J -32872568.71 -32872568.48 -32872568.24 0.0133 0.0039
 Uranus -94713-10-28 00:42 J -32872199.66 -32872199.47 -32872199.26 0.0133 0.0078

Uranus -94712-11-01 01:11 J -32871830.56 -32871830.45 -32871830.31 0.0134 0.0116
 Saturn -94711-01-29 06:56 J -32871741.36 -32871741.21 -32871741.05 0.0282 0.0216
 Saturn -94710-02-11 10:32 J -32871363.29 -32871363.06 -32871362.82 0.0283 0.0076
 Jupiter -94705-09-22 17:59 J -32869312.94 -32869312.75 -32869312.55 0.0543 0.0289
 Saturn -94697-08-07 06:42 J -32866437.35 -32866437.22 -32866437.07 0.0276 0.0227
 Saturn -94696-08-20 06:56 J -32866059.45 -32866059.21 -32866058.97 0.0276 0.0050
 Jupiter -94693-09-27 23:15 J -32864924.75 -32864924.53 -32864924.31 0.0543 0.0155
 Pluto -94689-05-05 18:27 J -32863608.99 -32863608.73 -32863608.46 0.0067 0.0012
 Mars -94686-01-15 11:30 J -32862624.08 -32862624.02 -32862623.94 0.1608 0.1481
 Saturn -94681-02-05 17:59 J -32860776.99 -32860776.75 -32860776.51 0.0283 0.0057
 Saturn -94680-02-18 00:27 J -32860398.60 -32860398.48 -32860398.34 0.0283 0.0238
 Uranus -94676-04-06 12:27 J -32858890.17 -32858889.98 -32858889.79 0.0147 0.0098
 Jupiter -94675-03-15 16:18 J -32858546.98 -32858546.82 -32858546.63 0.0486 0.0326
 Uranus -94675-04-11 22:47 J -32858519.79 -32858519.55 -32858519.29 0.0146 0.0043
 Uranus -94674-04-17 09:20 J -32858149.37 -32858149.11 -32858148.85 0.0146 0.0012
 Uranus -94673-04-21 19:39 J -32857778.91 -32857778.68 -32857778.44 0.0146 0.0066
 Uranus -94672-04-27 05:44 J -32857408.40 -32857408.26 -32857408.10 0.0145 0.0120
 Neptune -94669-02-25 22:32 J -32856373.73 -32856373.56 -32856373.36 0.0089 0.0061
 Neptune -94668-02-27 11:01 J -32856006.27 -32856006.04 -32856005.78 0.0089 0.0030
 Neptune -94667-03-01 23:59 J -32855638.76 -32855638.50 -32855638.24 0.0089 0.0002
 Saturn -94667-08-14 23:01 J -32855472.78 -32855472.54 -32855472.30 0.0276 0.0071
 Neptune -94666-03-04 12:27 J -32855271.21 -32855270.98 -32855270.73 0.0089 0.0033
 Saturn -94666-08-27 20:08 J -32855094.81 -32855094.66 -32855094.49 0.0276 0.0204
 Neptune -94665-03-06 01:25 J -32854903.60 -32854903.44 -32854903.25 0.0089 0.0065
 Jupiter -94663-03-19 23:44 J -32854159.74 -32854159.51 -32854159.27 0.0486 0.0017
 Mars -94663-07-14 11:59 J -32854043.08 -32854043.00 -32854042.91 0.1912 0.1742
 Saturn -94652-01-30 18:42 J -32850189.91 -32850189.72 -32850189.54 0.0283 0.0178
 Saturn -94651-02-12 22:47 J -32849811.77 -32849811.55 -32849811.32 0.0283 0.0114
 Jupiter -94651-03-24 07:54 J -32849772.36 -32849772.17 -32849771.98 0.0485 0.0298
 Mars -94639-01-10 01:25 J -32845462.63 -32845462.44 -32845462.26 0.1612 0.0087

Saturn	-94638-08-09 17:44 J	-32844885.94	-32844885.76	-32844885.58	0.0276	0.0190
Saturn	-94637-08-21 17:01 J	-32844508.02	-32844507.79	-32844507.55	0.0276	0.0085
Uranus	-94634-10-10 09:49 J	-32843363.21	-32843363.09	-32843362.93	0.0132	0.0109
Uranus	-94633-10-13 10:32 J	-32842994.26	-32842994.06	-32842993.85	0.0132	0.0071
Uranus	-94632-10-17 10:32 J	-32842625.29	-32842625.06	-32842624.81	0.0132	0.0035
Uranus	-94631-10-21 11:01 J	-32842256.28	-32842256.04	-32842255.79	0.0133	0.0004
Uranus	-94630-10-25 11:01 J	-32841887.26	-32841887.04	-32841886.79	0.0133	0.0042
Uranus	-94629-10-28 11:30 J	-32841518.21	-32841518.02	-32841517.81	0.0133	0.0079
Uranus	-94628-11-01 12:13 J	-32841149.10	-32841148.99	-32841148.87	0.0134	0.0117
Saturn	-94622-02-07 06:13 J	-32839225.48	-32839225.24	-32839224.99	0.0283	0.0018
Jupiter	-94622-09-22 20:51 J	-32838997.80	-32838997.63	-32838997.45	0.0542	0.0353
Saturn	-94621-02-20 13:11 J	-32838846.99	-32838846.95	-32838846.88	0.0283	0.0275
Jupiter	-94610-09-27 22:32 J	-32834609.79	-32834609.56	-32834609.33	0.0542	0.0077
Saturn	-94608-08-16 08:37 J	-32833921.38	-32833921.14	-32833920.89	0.0276	0.0037
Saturn	-94607-08-29 05:15 J	-32833543.40	-32833543.28	-32833543.15	0.0276	0.0236
Pluto	-94603-11-08 13:39 J	-32832011.17	-32832010.93	-32832010.68	0.0077	0.0015
Jupiter	-94598-10-02 22:47 J	-32830221.63	-32830221.55	-32830221.46	0.0543	0.0500
Saturn	-94593-02-02 05:44 J	-32828638.46	-32828638.26	-32828638.04	0.0283	0.0140
Mars	-94592-01-04 15:06 J	-32828300.98	-32828300.87	-32828300.77	0.1618	0.1323
Saturn	-94592-02-14 10:32 J	-32828260.26	-32828260.06	-32828259.85	0.0283	0.0151
Jupiter	-94592-03-14 19:25 J	-32828231.84	-32828231.69	-32828231.54	0.0486	0.0373
Uranus	-94592-04-06 21:06 J	-32828208.80	-32828208.62	-32828208.41	0.0147	0.0095
Uranus	-94591-04-12 07:39 J	-32827838.42	-32827838.18	-32827837.92	0.0146	0.0040
Uranus	-94590-04-17 18:27 J	-32827467.99	-32827467.73	-32827467.47	0.0146	0.0014
Uranus	-94589-04-22 04:18 J	-32827097.54	-32827097.32	-32827097.08	0.0146	0.0069
Uranus	-94588-04-27 14:08 J	-32826727.03	-32826726.91	-32826726.74	0.0145	0.0122
Neptune	-94588-09-03 04:18 J	-32826598.37	-32826598.32	-32826598.22	0.0088	0.0085
Neptune	-94587-09-05 15:35 J	-32826231.05	-32826230.85	-32826230.64	0.0088	0.0054
Neptune	-94586-09-08 02:08 J	-32825863.64	-32825863.41	-32825863.15	0.0088	0.0024
Neptune	-94585-09-09 12:42 J	-32825496.22	-32825495.97	-32825495.71	0.0088	0.0008

Mars -94584-07-18 17:30 J -32825183.98 -32825183.77 -32825183.57 0.1916 0.0484
 Neptune -94584-09-11 23:01 J -32825128.76 -32825128.54 -32825128.30 0.0088 0.0037
 Neptune -94583-09-14 08:51 J -32824761.28 -32824761.13 -32824760.96 0.0088 0.0068
 Jupiter -94580-03-19 04:32 J -32823844.55 -32823844.31 -32823844.08 0.0485 0.0060
 Saturn -94579-08-11 05:15 J -32823334.48 -32823334.28 -32823334.07 0.0276 0.0153
 Saturn -94578-08-24 03:49 J -32822956.56 -32822956.34 -32822956.12 0.0275 0.0120
 Jupiter -94568-03-23 11:59 J -32819457.20 -32819457.00 -32819456.79 0.0485 0.0249
 Saturn -94564-01-26 16:32 J -32818051.89 -32818051.81 -32818051.73 0.0283 0.0266
 Saturn -94563-02-08 18:13 J -32817673.99 -32817673.74 -32817673.50 0.0283 0.0020
 Mars -94560-01-11 23:30 J -32816605.69 -32816605.52 -32816605.36 0.1611 0.0696
 Uranus -94550-10-10 20:51 J -32812681.77 -32812681.63 -32812681.47 0.0132 0.0105
 Saturn -94549-08-17 18:42 J -32812369.97 -32812369.72 -32812369.47 0.0276 0.0003
 Uranus -94549-10-13 21:20 J -32812312.82 -32812312.61 -32812312.39 0.0132 0.0068
 Saturn -94548-08-30 14:23 J -32811991.95 -32811991.90 -32811991.84 0.0276 0.0268
 Uranus -94548-10-17 21:20 J -32811943.85 -32811943.61 -32811943.36 0.0132 0.0031
 Uranus -94547-10-21 21:35 J -32811574.84 -32811574.60 -32811574.35 0.0133 0.0007
 Uranus -94546-10-25 21:35 J -32811205.82 -32811205.60 -32811205.35 0.0133 0.0044
 Uranus -94545-10-28 22:03 J -32810836.76 -32810836.58 -32810836.37 0.0133 0.0081
 Uranus -94544-11-01 22:32 J -32810467.65 -32810467.56 -32810467.43 0.0134 0.0119
 Jupiter -94539-09-21 17:30 J -32808682.89 -32808682.77 -32808682.63 0.0541 0.0436
 Saturn -94534-02-03 16:32 J -32807087.04 -32807086.81 -32807086.59 0.0283 0.0103
 Saturn -94533-02-16 21:49 J -32806708.77 -32806708.59 -32806708.41 0.0283 0.0187
 Jupiter -94527-09-26 17:01 J -32804295.02 -32804294.79 -32804294.56 0.0543 0.0015
 Saturn -94520-08-12 16:32 J -32801783.03 -32801782.81 -32801782.58 0.0276 0.0116
 Saturn -94519-08-25 14:08 J -32801405.10 -32801404.91 -32801404.69 0.0275 0.0156
 Jupiter -94515-10-01 21:20 J -32799906.75 -32799906.61 -32799906.46 0.0544 0.0423
 Mars -94513-01-07 13:11 J -32799444.12 -32799443.95 -32799443.79 0.1616 0.0700
 Jupiter -94509-03-14 00:27 J -32797916.59 -32797916.48 -32797916.35 0.0486 0.0418
 Uranus -94509-04-01 19:25 J -32797897.72 -32797897.69 -32797897.64 0.0147 0.0145
 Uranus -94508-04-07 05:44 J -32797527.45 -32797527.26 -32797527.04 0.0147 0.0092

Uranus -94507-04-12 16:18 J -32797157.07 -32797156.82 -32797156.56 0.0146 0.0038
 Uranus -94506-04-18 02:37 J -32796786.65 -32796786.39 -32796786.13 0.0146 0.0016
 Saturn -94505-01-29 02:23 J -32796500.53 -32796500.40 -32796500.25 0.0283 0.0230
 Neptune -94505-02-25 06:56 J -32796473.31 -32796473.21 -32796473.05 0.0089 0.0077
 Uranus -94505-04-22 12:27 J -32796416.20 -32796415.98 -32796415.74 0.0146 0.0070
 Saturn -94504-02-10 04:47 J -32796122.54 -32796122.30 -32796122.06 0.0283 0.0057
 Neptune -94504-02-26 19:39 J -32796105.88 -32796105.68 -32796105.44 0.0089 0.0045
 Uranus -94504-04-27 22:03 J -32796045.70 -32796045.58 -32796045.41 0.0145 0.0123
 Neptune -94503-03-01 08:23 J -32795738.40 -32795738.15 -32795737.89 0.0089 0.0013
 Neptune -94502-03-03 21:06 J -32795370.87 -32795370.62 -32795370.36 0.0089 0.0018
 Neptune -94501-03-05 09:35 J -32795003.29 -32795003.10 -32795002.86 0.0089 0.0050
 Neptune -94500-03-07 23:01 J -32794635.63 -32794635.54 -32794635.43 0.0089 0.0081
 Jupiter -94497-03-18 08:51 J -32793529.36 -32793529.13 -32793528.90 0.0486 0.0109
 Saturn -94491-08-07 02:51 J -32791196.50 -32791196.38 -32791196.26 0.0276 0.0241
 Saturn -94490-08-20 04:18 J -32790818.56 -32790818.32 -32790818.07 0.0276 0.0033
 Jupiter -94485-03-22 15:35 J -32789142.06 -32789141.85 -32789141.63 0.0485 0.0201
 Mars -94481-01-14 22:03 J -32787748.69 -32787748.58 -32787748.48 0.1610 0.1308
 Saturn -94475-02-05 00:56 J -32785535.69 -32785535.46 -32785535.22 0.0283 0.0068
 Saturn -94474-02-18 06:42 J -32785157.35 -32785157.22 -32785157.05 0.0283 0.0223
 Uranus -94466-10-11 06:56 J -32782000.36 -32782000.21 -32782000.05 0.0132 0.0102
 Uranus -94465-10-14 06:56 J -32781631.41 -32781631.21 -32781630.98 0.0132 0.0066
 Uranus -94464-10-18 07:11 J -32781262.44 -32781262.20 -32781261.95 0.0132 0.0029
 Uranus -94463-10-22 07:39 J -32780893.43 -32780893.18 -32780892.94 0.0133 0.0008
 Uranus -94462-10-26 07:39 J -32780524.41 -32780524.18 -32780523.94 0.0133 0.0045
 Saturn -94461-08-14 03:20 J -32780231.60 -32780231.36 -32780231.12 0.0276 0.0079
 Uranus -94461-10-29 08:08 J -32780155.35 -32780155.16 -32780154.96 0.0133 0.0082
 Saturn -94460-08-26 23:59 J -32779853.66 -32779853.50 -32779853.31 0.0275 0.0190
 Uranus -94460-11-02 08:37 J -32779786.23 -32779786.14 -32779786.02 0.0134 0.0120
 Jupiter -94456-09-20 14:37 J -32778367.96 -32778367.89 -32778367.83 0.0542 0.0518
 Saturn -94446-01-30 11:01 J -32774949.21 -32774949.04 -32774948.87 0.0283 0.0194

Saturn -94445-02-12 13:54 J -32774571.15 -32774570.92 -32774570.69 0.0283 0.0092
 Jupiter -94444-09-25 20:51 J -32773979.85 -32773979.63 -32773979.40 0.0543 0.0076
 Pluto -94440-05-08 02:37 J -32772659.64 -32772659.39 -32772659.13 0.0067 0.0021
 Mars -94434-01-09 11:59 J -32770587.18 -32770587.00 -32770586.81 0.1615 0.0081
 Saturn -94432-08-08 11:59 J -32769645.15 -32769645.00 -32769644.82 0.0276 0.0206
 Jupiter -94432-10-01 00:42 J -32769591.64 -32769591.47 -32769591.30 0.0543 0.0360
 Saturn -94431-08-21 12:42 J -32769267.21 -32769266.97 -32769266.73 0.0276 0.0067
 Jupiter -94426-03-14 04:32 J -32767601.36 -32767601.31 -32767601.23 0.0487 0.0465
 Uranus -94425-04-02 03:49 J -32767216.38 -32767216.34 -32767216.25 0.0147 0.0142
 Uranus -94424-04-07 14:08 J -32766846.10 -32766845.91 -32766845.69 0.0147 0.0089
 Uranus -94423-04-13 00:27 J -32766475.73 -32766475.48 -32766475.22 0.0146 0.0035
 Neptune -94423-09-05 02:23 J -32766330.55 -32766330.40 -32766330.22 0.0088 0.0067
 Uranus -94422-04-18 10:47 J -32766105.31 -32766105.05 -32766104.79 0.0146 0.0018
 Neptune -94422-09-07 12:56 J -32765963.17 -32765962.96 -32765962.71 0.0088 0.0037
 Uranus -94421-04-22 20:51 J -32765734.86 -32765734.63 -32765734.40 0.0146 0.0071
 Neptune -94421-09-08 23:59 J -32765595.75 -32765595.50 -32765595.24 0.0088 0.0007
 Uranus -94420-04-28 06:27 J -32765364.36 -32765364.23 -32765364.09 0.0145 0.0123
 Neptune -94420-09-11 10:03 J -32765228.31 -32765228.08 -32765227.82 0.0088 0.0024
 Neptune -94419-09-13 20:08 J -32764860.83 -32764860.66 -32764860.43 0.0088 0.0055
 Neptune -94418-09-16 06:13 J -32764493.29 -32764493.24 -32764493.13 0.0088 0.0084
 Saturn -94416-02-06 07:11 J -32763984.43 -32763984.20 -32763983.95 0.0283 0.0035
 Saturn -94415-02-19 13:54 J -32763606.01 -32763605.92 -32763605.80 0.0283 0.0255
 Jupiter -94414-03-18 13:25 J -32763214.16 -32763213.94 -32763213.71 0.0486 0.0152
 Jupiter -94402-03-22 23:15 J -32758826.76 -32758826.53 -32758826.31 0.0485 0.0163
 Saturn -94402-08-16 12:27 J -32758680.23 -32758679.98 -32758679.74 0.0276 0.0044
 Saturn -94401-08-28 08:51 J -32758302.27 -32758302.13 -32758301.98 0.0275 0.0222
 Jupiter -94390-03-27 07:11 J -32754439.25 -32754439.20 -32754439.15 0.0485 0.0472
 Mars -94387-01-04 01:11 J -32753425.52 -32753425.45 -32753425.37 0.1622 0.1479
 Saturn -94387-01-31 17:01 J -32753397.99 -32753397.79 -32753397.59 0.0283 0.0161
 Saturn -94386-02-13 20:08 J -32753019.87 -32753019.66 -32753019.43 0.0283 0.0125

Uranus -94382-10-11 16:47 J -32751318.95 -32751318.80 -32751318.63 0.0132 0.0099
 Uranus -94381-10-14 17:01 J -32750950.00 -32750949.79 -32750949.56 0.0132 0.0063
 Uranus -94380-10-18 17:15 J -32750581.02 -32750580.78 -32750580.54 0.0132 0.0026
 Uranus -94379-10-22 17:30 J -32750212.02 -32750211.77 -32750211.52 0.0133 0.0010
 Uranus -94378-10-26 17:30 J -32749842.99 -32749842.77 -32749842.53 0.0133 0.0047
 Uranus -94377-10-29 17:44 J -32749473.93 -32749473.76 -32749473.55 0.0133 0.0084
 Uranus -94376-11-02 18:27 J -32749104.82 -32749104.73 -32749104.61 0.0134 0.0121
 Saturn -94373-08-09 19:54 J -32748093.85 -32748093.67 -32748093.46 0.0276 0.0171
 Saturn -94372-08-22 19:54 J -32747715.90 -32747715.67 -32747715.44 0.0275 0.0099
 Jupiter -94361-09-24 22:18 J -32743664.79 -32743664.57 -32743664.34 0.0542 0.0143
 Saturn -94357-02-08 11:15 J -32742433.28 -32742433.03 -32742432.79 0.0283 0.0006
 Mars -94355-01-11 10:47 J -32741730.22 -32741730.05 -32741729.88 0.1613 0.0544
 Pluto -94355-11-09 02:08 J -32741428.50 -32741428.41 -32741428.30 0.0078 0.0071
 Pluto -94354-11-11 00:42 J -32741061.59 -32741061.47 -32741061.29 0.0077 0.0062
 Jupiter -94349-09-29 20:23 J -32739276.85 -32739276.65 -32739276.45 0.0543 0.0270
 Saturn -94343-08-17 19:25 J -32737128.94 -32737128.69 -32737128.44 0.0276 0.0010
 Saturn -94342-08-30 15:20 J -32736750.95 -32736750.86 -32736750.76 0.0275 0.0253
 Uranus -94341-04-02 12:42 J -32736535.04 -32736534.97 -32736534.86 0.0147 0.0138
 Neptune -94340-02-26 05:30 J -32736205.45 -32736205.27 -32736205.06 0.0089 0.0059
 Uranus -94340-04-07 22:32 J -32736164.75 -32736164.56 -32736164.33 0.0147 0.0086
 Neptune -94339-02-28 17:59 J -32735837.98 -32735837.75 -32735837.49 0.0089 0.0028
 Uranus -94339-04-13 08:51 J -32735794.38 -32735794.13 -32735793.87 0.0146 0.0033
 Neptune -94338-03-03 06:42 J -32735470.48 -32735470.22 -32735469.96 0.0089 0.0004
 Uranus -94338-04-18 18:56 J -32735423.96 -32735423.71 -32735423.45 0.0146 0.0020
 Neptune -94337-03-04 19:11 J -32735102.92 -32735102.70 -32735102.45 0.0089 0.0035
 Uranus -94337-04-23 04:32 J -32735053.52 -32735053.31 -32735053.07 0.0146 0.0073
 Neptune -94336-03-07 07:39 J -32734735.32 -32734735.18 -32734734.98 0.0089 0.0068
 Uranus -94336-04-28 14:23 J -32734683.03 -32734682.90 -32734682.76 0.0145 0.0124
 Jupiter -94331-03-17 22:03 J -32732898.80 -32732898.58 -32732898.36 0.0486 0.0187
 Saturn -94328-02-01 21:06 J -32731846.82 -32731846.62 -32731846.40 0.0283 0.0130

Saturn -94327-02-15 00:42 J -32731468.66 -32731468.47 -32731468.26 0.0283 0.0156
 Jupiter -94319-03-22 06:42 J -32728511.45 -32728511.22 -32728510.99 0.0485 0.0124
 Saturn -94314-08-12 02:08 J -32726542.62 -32726542.41 -32726542.19 0.0276 0.0138
 Saturn -94313-08-24 01:11 J -32726164.65 -32726164.45 -32726164.22 0.0275 0.0131
 Mars -94308-01-06 00:13 J -32724568.64 -32724568.49 -32724568.33 0.1620 0.0851
 Jupiter -94307-03-26 13:39 J -32724124.02 -32724123.93 -32724123.81 0.0485 0.0433
 Mars -94300-07-17 04:32 J -32721454.52 -32721454.31 -32721454.09 0.1912 0.0073
 Saturn -94299-01-27 11:01 J -32721260.13 -32721260.04 -32721259.93 0.0283 0.0254
 Uranus -94299-10-08 01:39 J -32721006.43 -32721006.43 -32721006.40 0.0132 0.0131
 Saturn -94298-02-09 12:42 J -32720882.21 -32720881.97 -32720881.72 0.0283 0.0026
 Uranus -94298-10-12 01:54 J -32720637.58 -32720637.42 -32720637.24 0.0132 0.0096
 Uranus -94297-10-15 02:08 J -32720268.62 -32720268.41 -32720268.18 0.0132 0.0061
 Uranus -94296-10-19 02:23 J -32719899.64 -32719899.40 -32719899.15 0.0132 0.0025
 Uranus -94295-10-23 02:51 J -32719530.63 -32719530.38 -32719530.13 0.0133 0.0012
 Uranus -94294-10-27 02:37 J -32719161.60 -32719161.39 -32719161.14 0.0133 0.0049
 Uranus -94293-10-30 03:20 J -32718792.54 -32718792.36 -32718792.16 0.0133 0.0085
 Uranus -94292-11-03 04:18 J -32718423.41 -32718423.32 -32718423.22 0.0134 0.0122
 Saturn -94285-08-05 22:47 J -32715955.65 -32715955.55 -32715955.43 0.0277 0.0247
 Saturn -94284-08-19 00:56 J -32715577.71 -32715577.46 -32715577.21 0.0276 0.0022
 Jupiter -94278-09-24 20:08 J -32713349.87 -32713349.66 -32713349.45 0.0542 0.0225
 Mars -94276-01-13 08:51 J -32712873.26 -32712873.13 -32712873.00 0.1612 0.1153
 Saturn -94269-02-03 23:15 J -32710295.75 -32710295.53 -32710295.30 0.0283 0.0100
 Saturn -94268-02-16 03:06 J -32709917.54 -32709917.37 -32709917.17 0.0283 0.0185
 Jupiter -94266-09-30 02:51 J -32708961.59 -32708961.38 -32708961.17 0.0543 0.0218
 Neptune -94259-09-04 13:39 J -32706430.02 -32706429.93 -32706429.82 0.0088 0.0081
 Neptune -94258-09-07 00:27 J -32706062.67 -32706062.48 -32706062.25 0.0088 0.0051
 Uranus -94257-04-02 20:51 J -32705853.72 -32705853.63 -32705853.51 0.0147 0.0134
 Neptune -94257-09-08 11:01 J -32705695.28 -32705695.04 -32705694.78 0.0088 0.0020
 Uranus -94256-04-08 06:56 J -32705483.42 -32705483.21 -32705482.99 0.0147 0.0082
 Neptune -94256-09-10 21:49 J -32705327.84 -32705327.59 -32705327.33 0.0088 0.0010

Uranus -94255-04-13 17:01 J -32705113.05 -32705112.79 -32705112.54 0.0146 0.0030
 Saturn -94255-08-13 06:56 J -32704991.44 -32704991.21 -32704990.98 0.0276 0.0106
 Neptune -94255-09-13 08:08 J -32704960.38 -32704960.16 -32704959.92 0.0088 0.0040
 Uranus -94254-04-19 02:51 J -32704742.64 -32704742.38 -32704742.12 0.0146 0.0023
 Saturn -94254-08-26 05:30 J -32704613.46 -32704613.27 -32704613.06 0.0275 0.0160
 Neptune -94254-09-15 18:27 J -32704592.87 -32704592.73 -32704592.57 0.0088 0.0071
 Uranus -94253-04-23 12:42 J -32704372.20 -32704371.97 -32704371.75 0.0146 0.0074
 Uranus -94252-04-28 21:20 J -32704001.71 -32704001.61 -32704001.45 0.0145 0.0126
 Jupiter -94248-03-17 05:59 J -32702583.46 -32702583.25 -32702583.04 0.0486 0.0224
 Saturn -94240-01-28 11:15 J -32699709.17 -32699709.03 -32699708.88 0.0283 0.0226
 Saturn -94239-02-10 13:11 J -32699331.19 -32699330.95 -32699330.71 0.0283 0.0054
 Jupiter -94236-03-21 14:51 J -32698196.11 -32698195.88 -32698195.64 0.0486 0.0091
 Mars -94229-01-08 22:47 J -32695711.73 -32695711.55 -32695711.37 0.1618 0.0226
 Saturn -94226-08-08 02:23 J -32694404.54 -32694404.40 -32694404.24 0.0277 0.0216
 Saturn -94225-08-20 04:18 J -32694026.56 -32694026.32 -32694026.08 0.0276 0.0052
 Jupiter -94224-03-26 01:25 J -32693808.57 -32693808.44 -32693808.31 0.0485 0.0404
 Uranus -94215-10-08 11:15 J -32690325.08 -32690325.03 -32690324.97 0.0132 0.0128
 Uranus -94214-10-12 11:15 J -32689956.19 -32689956.03 -32689955.84 0.0132 0.0093
 Uranus -94213-10-15 11:59 J -32689587.22 -32689587.00 -32689586.78 0.0132 0.0058
 Uranus -94212-10-19 11:59 J -32689218.24 -32689218.00 -32689217.75 0.0132 0.0022
 Uranus -94211-10-23 12:13 J -32688849.23 -32688848.99 -32688848.74 0.0133 0.0015
 Saturn -94210-02-05 00:13 J -32688744.72 -32688744.49 -32688744.25 0.0283 0.0071
 Uranus -94210-10-27 12:27 J -32688480.19 -32688479.98 -32688479.74 0.0133 0.0051
 Saturn -94209-02-18 04:32 J -32688366.46 -32688366.31 -32688366.14 0.0283 0.0211
 Uranus -94209-10-30 12:56 J -32688111.13 -32688110.96 -32688110.75 0.0133 0.0088
 Uranus -94208-11-03 13:39 J -32687742.00 -32687741.93 -32687741.81 0.0134 0.0124
 Saturn -94196-08-14 10:18 J -32683440.30 -32683440.07 -32683439.83 0.0276 0.0076
 Saturn -94195-08-27 08:51 J -32683062.30 -32683062.13 -32683061.94 0.0275 0.0188
 Jupiter -94195-09-24 05:15 J -32683034.48 -32683034.28 -32683034.08 0.0542 0.0266
 Pluto -94192-05-08 16:32 J -32682077.00 -32682076.81 -32682076.57 0.0066 0.0039

Pluto -94191-05-10 09:20 J -32681710.25 -32681710.11 -32681709.92 0.0067 0.0053
 Jupiter -94183-09-29 09:06 J -32678646.34 -32678646.12 -32678645.91 0.0543 0.0166
 Saturn -94181-01-30 10:32 J -32678158.23 -32678158.06 -32678157.89 0.0282 0.0198
 Saturn -94180-02-11 12:13 J -32677780.22 -32677779.99 -32677779.75 0.0283 0.0081
 Neptune -94176-02-25 16:03 J -32676304.95 -32676304.83 -32676304.66 0.0089 0.0073
 Neptune -94175-02-28 04:18 J -32675937.52 -32675937.32 -32675937.07 0.0089 0.0042
 Neptune -94174-03-02 17:15 J -32675570.03 -32675569.78 -32675569.52 0.0089 0.0010
 Neptune -94173-03-04 05:44 J -32675202.50 -32675202.26 -32675202.00 0.0089 0.0021
 Uranus -94173-04-03 05:01 J -32675172.40 -32675172.29 -32675172.16 0.0147 0.0130
 Neptune -94172-03-06 18:27 J -32674834.93 -32674834.73 -32674834.52 0.0089 0.0053
 Uranus -94172-04-08 14:37 J -32674802.10 -32674801.89 -32674801.67 0.0147 0.0079
 Neptune -94171-03-09 06:56 J -32674467.27 -32674467.21 -32674467.10 0.0089 0.0084
 Uranus -94171-04-14 00:27 J -32674431.73 -32674431.48 -32674431.22 0.0146 0.0027
 Uranus -94170-04-19 10:18 J -32674061.32 -32674061.07 -32674060.80 0.0146 0.0025
 Uranus -94169-04-23 19:54 J -32673690.88 -32673690.67 -32673690.44 0.0146 0.0076
 Uranus -94168-04-29 05:15 J -32673320.40 -32673320.28 -32673320.14 0.0145 0.0126
 Saturn -94167-08-09 04:47 J -32672853.48 -32672853.30 -32672853.12 0.0277 0.0186
 Saturn -94166-08-22 06:27 J -32672475.46 -32672475.23 -32672474.99 0.0276 0.0081
 Jupiter -94165-03-16 17:44 J -32672267.96 -32672267.76 -32672267.55 0.0487 0.0251
 Jupiter -94153-03-21 01:54 J -32667880.65 -32667880.42 -32667880.18 0.0486 0.0062
 Saturn -94151-02-06 01:11 J -32667193.69 -32667193.45 -32667193.21 0.0282 0.0043
 Mars -94150-01-10 21:35 J -32666854.78 -32666854.60 -32666854.42 0.1616 0.0387
 Saturn -94150-02-19 05:30 J -32666815.39 -32666815.27 -32666815.13 0.0283 0.0238
 Jupiter -94141-03-25 10:47 J -32663493.19 -32663493.05 -32663492.89 0.0485 0.0371
 Saturn -94137-08-15 12:42 J -32661889.21 -32661888.97 -32661888.72 0.0276 0.0046
 Saturn -94136-08-28 11:01 J -32661511.19 -32661511.04 -32661510.88 0.0275 0.0216
 Uranus -94131-10-08 19:39 J -32659643.74 -32659643.68 -32659643.59 0.0132 0.0125
 Uranus -94130-10-12 20:08 J -32659274.83 -32659274.66 -32659274.47 0.0132 0.0090
 Uranus -94129-10-15 20:23 J -32658905.86 -32658905.65 -32658905.41 0.0132 0.0055
 Uranus -94128-10-19 20:51 J -32658536.87 -32658536.63 -32658536.38 0.0132 0.0020

Uranus -94127-10-23 21:20 J -32658167.85 -32658167.61 -32658167.36 0.0133 0.0017
 Uranus -94126-10-27 21:20 J -32657798.82 -32657798.61 -32657798.37 0.0133 0.0053
 Uranus -94125-10-30 22:18 J -32657429.74 -32657429.57 -32657429.38 0.0133 0.0089
 Uranus -94124-11-03 23:01 J -32657060.60 -32657060.54 -32657060.43 0.0134 0.0125
 Saturn -94122-01-31 09:35 J -32656607.29 -32656607.10 -32656606.90 0.0282 0.0170
 Saturn -94121-02-13 11:30 J -32656229.25 -32656229.02 -32656228.80 0.0283 0.0107
 Jupiter -94112-09-23 03:49 J -32652719.51 -32652719.34 -32652719.16 0.0541 0.0344
 Saturn -94108-08-10 06:13 J -32651302.43 -32651302.24 -32651302.02 0.0277 0.0158
 Saturn -94107-08-23 08:23 J -32650924.37 -32650924.15 -32650923.92 0.0276 0.0109
 Pluto -94106-11-11 13:39 J -32650479.16 -32650478.93 -32650478.68 0.0078 0.0023
 Mars -94103-01-05 11:01 J -32649693.19 -32649693.04 -32649692.90 0.1623 0.0996
 Jupiter -94100-09-28 07:25 J -32648331.42 -32648331.19 -32648330.97 0.0542 0.0084
 Neptune -94094-09-06 12:13 J -32646162.14 -32646161.99 -32646161.79 0.0088 0.0064
 Neptune -94093-09-07 23:15 J -32645794.75 -32645794.53 -32645794.28 0.0088 0.0033
 Saturn -94092-02-07 02:08 J -32645642.66 -32645642.41 -32645642.17 0.0282 0.0016
 Neptune -94092-09-10 10:03 J -32645427.33 -32645427.08 -32645426.82 0.0088 0.0003
 Saturn -94091-02-20 06:13 J -32645264.31 -32645264.24 -32645264.14 0.0283 0.0264
 Neptune -94091-09-12 20:23 J -32645059.88 -32645059.65 -32645059.40 0.0088 0.0028
 Neptune -94090-09-15 06:27 J -32644692.40 -32644692.23 -32644692.02 0.0088 0.0058
 Uranus -94089-04-03 12:27 J -32644491.10 -32644490.98 -32644490.84 0.0147 0.0127
 Neptune -94089-09-16 16:32 J -32644324.82 -32644324.81 -32644324.75 0.0088 0.0088
 Uranus -94088-04-08 22:18 J -32644120.79 -32644120.57 -32644120.35 0.0147 0.0076
 Jupiter -94088-10-03 12:42 J -32643943.02 -32643942.97 -32643942.90 0.0544 0.0524
 Uranus -94087-04-14 07:54 J -32643750.42 -32643750.17 -32643749.91 0.0146 0.0025
 Uranus -94086-04-19 17:30 J -32643380.02 -32643379.77 -32643379.50 0.0146 0.0027
 Uranus -94085-04-24 02:51 J -32643009.58 -32643009.38 -32643009.14 0.0146 0.0078
 Uranus -94084-04-29 12:13 J -32642639.10 -32642638.99 -32642638.85 0.0145 0.0127
 Jupiter -94082-03-17 04:03 J -32641952.53 -32641952.33 -32641952.14 0.0486 0.0281
 Saturn -94078-08-17 15:20 J -32640338.11 -32640337.86 -32640337.61 0.0276 0.0017
 Saturn -94077-08-29 13:25 J -32639960.05 -32639959.94 -32639959.82 0.0275 0.0243

Mars -94071-01-12 20:37 J -32637997.78 -32637997.64 -32637997.49 0.1614 0.1007
 Jupiter -94070-03-21 11:01 J -32637565.28 -32637565.04 -32637564.80 0.0486 0.0027
 Saturn -94063-02-01 09:49 J -32635056.30 -32635056.09 -32635055.88 0.0282 0.0142
 Saturn -94062-02-14 11:30 J -32634678.23 -32634678.02 -32634677.80 0.0283 0.0134
 Jupiter -94058-03-25 20:23 J -32633177.81 -32633177.65 -32633177.47 0.0485 0.0339
 Saturn -94049-08-11 08:08 J -32629751.38 -32629751.16 -32629750.94 0.0277 0.0130
 Saturn -94048-08-24 10:18 J -32629373.29 -32629373.07 -32629372.86 0.0277 0.0136
 Uranus -94047-10-09 04:47 J -32628962.38 -32628962.30 -32628962.20 0.0132 0.0122
 Uranus -94046-10-13 05:15 J -32628593.46 -32628593.28 -32628593.09 0.0132 0.0087
 Uranus -94045-10-16 05:30 J -32628224.49 -32628224.27 -32628224.03 0.0132 0.0053
 Uranus -94044-10-20 05:59 J -32627855.49 -32627855.25 -32627855.00 0.0132 0.0017
 Uranus -94043-10-24 06:27 J -32627486.47 -32627486.23 -32627485.98 0.0133 0.0018
 Uranus -94042-10-28 06:56 J -32627117.43 -32627117.21 -32627116.98 0.0133 0.0054
 Uranus -94041-10-31 07:39 J -32626748.35 -32626748.18 -32626747.99 0.0133 0.0090
 Uranus -94040-11-04 08:37 J -32626379.20 -32626379.14 -32626379.04 0.0134 0.0126
 Saturn -94034-01-27 06:13 J -32624469.33 -32624469.24 -32624469.14 0.0281 0.0257
 Saturn -94033-02-09 04:18 J -32624091.56 -32624091.32 -32624091.08 0.0282 0.0013
 Jupiter -94029-09-22 08:37 J -32622404.29 -32622404.14 -32622403.98 0.0542 0.0400
 Mars -94024-01-07 10:03 J -32620836.26 -32620836.08 -32620835.90 0.1621 0.0378
 Saturn -94020-08-05 13:25 J -32619165.02 -32619164.94 -32619164.84 0.0277 0.0255
 Saturn -94019-08-18 18:27 J -32618786.97 -32618786.73 -32618786.48 0.0276 0.0012
 Saturn -94018-08-31 16:32 J -32618408.84 -32618408.81 -32618408.75 0.0276 0.0270
 Jupiter -94017-09-27 15:35 J -32618016.07 -32618015.85 -32618015.62 0.0543 0.0042
 Mars -94016-07-15 16:47 J -32617725.01 -32617724.80 -32617724.58 0.1908 0.0315
 Neptune -94012-02-25 03:20 J -32616404.42 -32616404.36 -32616404.30 0.0089 0.0087
 Neptune -94011-02-27 15:35 J -32616037.05 -32616036.85 -32616036.65 0.0089 0.0055
 Neptune -94010-03-02 04:03 J -32615669.58 -32615669.33 -32615669.08 0.0089 0.0024
 Neptune -94009-03-03 16:18 J -32615302.07 -32615301.82 -32615301.55 0.0089 0.0007
 Neptune -94008-03-06 05:01 J -32614934.52 -32614934.29 -32614934.05 0.0089 0.0038
 Neptune -94007-03-08 17:15 J -32614566.91 -32614566.78 -32614566.59 0.0089 0.0070

Uranus	-94005-04-03 20:23 J	-32613809.78	-32613809.65	-32613809.50	0.0147	0.0124
Jupiter	-94005-10-02 20:08 J	-32613627.77	-32613627.66	-32613627.55	0.0543	0.0473
Saturn	-94004-02-02 11:30 J	-32613505.23	-32613505.02	-32613504.79	0.0282	0.0114
Uranus	-94004-04-09 05:30 J	-32613439.48	-32613439.27	-32613439.03	0.0147	0.0074
Saturn	-94003-02-15 13:11 J	-32613127.14	-32613126.95	-32613126.74	0.0283	0.0162
Uranus	-94003-04-14 15:35 J	-32613069.11	-32613068.85	-32613068.59	0.0146	0.0023
Uranus	-94002-04-20 01:11 J	-32612698.70	-32612698.45	-32612698.19	0.0146	0.0028
Uranus	-94001-04-24 10:32 J	-32612328.27	-32612328.06	-32612327.83	0.0146	0.0079

94TH MILLENNIUM BCE

This is a list of transits of Earth in the 94th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-94000-04-29 19:54 J	-32611957.78	-32611957.67	-32611957.54	0.0145	0.0128		
Jupiter	-93999-03-16 12:27 J	-32611637.15	-32611636.98	-32611636.79	0.0487	0.0315		
Mars	-93992-01-14 19:11 J	-32609140.70	-32609140.70	-32609140.69	0.1613	0.1610		
Saturn	-93990-08-13 10:32 J	-32608200.29	-32608200.06	-32608199.83	0.0277	0.0102		
Saturn	-93989-08-25 12:42 J	-32607822.17	-32607821.97	-32607821.77	0.0277	0.0163		
Jupiter	-93987-03-20 21:20 J	-32607249.85	-32607249.61	-32607249.37	0.0486	0.0005		
Saturn	-93975-01-28 09:49 J	-32602918.22	-32602918.09	-32602917.94	0.0281	0.0228		
Jupiter	-93975-03-25 05:15 J	-32602862.46	-32602862.28	-32602862.09	0.0485	0.0306		
Saturn	-93974-02-10 08:08 J	-32602540.40	-32602540.16	-32602539.92	0.0282	0.0042		
Uranus	-93963-10-09 12:27 J	-32598281.06	-32598280.98	-32598280.86	0.0132	0.0120		
Uranus	-93962-10-13 13:25 J	-32597912.13	-32597911.94	-32597911.75	0.0132	0.0085		

Saturn -93961-08-06 17:44 J -32597613.90 -32597613.76 -32597613.61 0.0277 0.0225
 Uranus -93961-10-16 13:54 J -32597543.14 -32597542.92 -32597542.69 0.0132 0.0051
 Saturn -93960-08-19 22:47 J -32597235.80 -32597235.55 -32597235.31 0.0276 0.0041
 Uranus -93960-10-20 14:23 J -32597174.15 -32597173.90 -32597173.65 0.0132 0.0015
 Uranus -93959-10-24 14:51 J -32596805.12 -32596804.88 -32596804.63 0.0133 0.0020
 Uranus -93958-10-28 15:20 J -32596436.07 -32596435.86 -32596435.62 0.0133 0.0056
 Uranus -93957-10-31 16:18 J -32596066.98 -32596066.82 -32596066.63 0.0133 0.0091
 Uranus -93956-11-04 17:30 J -32595697.83 -32595697.77 -32595697.68 0.0134 0.0127
 Jupiter -93946-09-22 15:06 J -32592088.99 -32592088.87 -32592088.73 0.0541 0.0449
 Mars -93945-01-10 09:06 J -32591979.30 -32591979.12 -32591978.94 0.1619 0.0254
 Saturn -93945-02-04 15:49 J -32591954.07 -32591953.84 -32591953.61 0.0282 0.0083
 Saturn -93944-02-16 17:30 J -32591575.95 -32591575.77 -32591575.59 0.0283 0.0191
 Pluto -93943-05-10 19:54 J -32591127.92 -32591127.67 -32591127.40 0.0066 0.0018
 Mars -93937-07-19 20:51 J -32588865.68 -32588865.63 -32588865.57 0.1912 0.1841
 Jupiter -93934-09-27 14:51 J -32587701.11 -32587700.88 -32587700.65 0.0542 0.0035
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 Saturn -93930-08-27 16:18 J -32586271.00 -32586270.82 -32586270.64 0.0277 0.0190
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 Neptune -93928-09-09 22:47 J -32585526.80 -32585526.55 -32585526.30 0.0088 0.0016
 Neptune -93927-09-12 09:20 J -32585159.36 -32585159.11 -32585158.86 0.0088 0.0015
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 Neptune -93925-09-16 05:44 J -32584424.38 -32584424.26 -32584424.11 0.0088 0.0075
 Jupiter -93922-10-02 16:47 J -32583312.95 -32583312.80 -32583312.64 0.0543 0.0387
 Uranus -93921-04-04 03:35 J -32583128.49 -32583128.35 -32583128.20 0.0147 0.0121
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 Uranus -93919-04-14 22:32 J -32582387.81 -32582387.56 -32582387.29 0.0146 0.0021
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Jupiter -93916-03-15 20:23 J -32581321.81 -32581321.65 -32581321.49 0.0487 0.0350
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 Jupiter -93904-03-20 05:01 J -32576934.52 -32576934.29 -32576934.05 0.0486 0.0041
 Saturn -93902-08-08 23:44 J -32576062.69 -32576062.51 -32576062.33 0.0277 0.0195
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 Jupiter -93892-03-24 12:13 J -32572547.18 -32572546.99 -32572546.79 0.0485 0.0264
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 Mars -93866-01-12 07:39 J -32563122.33 -32563122.18 -32563122.02 0.1618 0.0860
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 Mars -93819-01-06 20:51 J -32545960.81 -32545960.63 -32545960.46 0.1625 0.0515
 Saturn -93813-08-17 02:23 J -32543546.64 -32543546.40 -32543546.15 0.0278 0.0014
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 Uranus -93794-10-14 05:44 J -32536549.44 -32536549.26 -32536549.05 0.0132 0.0081
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Saturn -93784-08-11 17:01 J -32532960.00 -32532959.79 -32532959.56 0.0277 0.0130
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 Neptune -93765-09-07 00:13 J -32525993.67 -32525993.49 -32525993.28 0.0088 0.0059
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 Jupiter -93738-03-19 14:23 J -32516304.12 -32516303.90 -32516303.67 0.0487 0.0130
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 Jupiter -93726-03-23 23:01 J -32511916.75 -32511916.54 -32511916.31 0.0486 0.0180
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 Jupiter -93655-03-18 19:11 J -32485988.91 -32485988.70 -32485988.47 0.0487 0.0176
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 Saturn -93636-08-22 06:42 J -32478892.45 -32478892.22 -32478891.98 0.0277 0.0083
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 Uranus -93627-10-10 22:03 J -32475555.71 -32475555.58 -32475555.43 0.0132 0.0108
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 Saturn -93562-02-09 02:37 J -32452058.63 -32452058.39 -32452058.15 0.0282 0.0007
 Saturn -93561-02-22 04:03 J -32451680.37 -32451680.33 -32451680.25 0.0282 0.0272
 Jupiter -93560-03-22 06:27 J -32451286.47 -32451286.23 -32451286.00 0.0487 0.0083
 Saturn -93549-08-05 06:56 J -32447132.31 -32447132.21 -32447132.09 0.0278 0.0248
 Jupiter -93548-03-26 15:49 J -32446898.98 -32446898.84 -32446898.70 0.0486 0.0391
 Saturn -93548-08-18 14:51 J -32446754.13 -32446753.88 -32446753.63 0.0277 0.0011
 Saturn -93547-08-31 15:49 J -32446375.91 -32446375.84 -32446375.76 0.0276 0.0262
 Uranus -93543-10-11 06:56 J -32444874.35 -32444874.21 -32444874.05 0.0132 0.0105
 Uranus -93542-10-15 07:54 J -32444505.37 -32444505.17 -32444504.95 0.0132 0.0072
 Uranus -93541-10-18 08:51 J -32444136.36 -32444136.13 -32444135.89 0.0132 0.0038
 Uranus -93540-10-22 09:35 J -32443767.34 -32443767.10 -32443766.85 0.0132 0.0006
 Uranus -93539-10-26 10:32 J -32443398.30 -32443398.06 -32443397.82 0.0133 0.0029

Uranus -93538-10-30 11:01 J -32443029.25 -32443029.04 -32443028.82 0.0133 0.0063
 Uranus -93537-11-02 11:44 J -32442660.17 -32442660.01 -32442659.83 0.0133 0.0097
 Uranus -93536-11-06 12:42 J -32442291.01 -32442290.97 -32442290.90 0.0134 0.0130
 Mars -93535-01-08 06:42 J -32442228.41 -32442228.22 -32442228.04 0.1627 0.0048
 Saturn -93533-02-03 15:20 J -32441472.08 -32441471.86 -32441471.63 0.0281 0.0109
 Saturn -93532-02-15 13:54 J -32441094.13 -32441093.92 -32441093.72 0.0282 0.0154
 Saturn -93519-08-12 21:35 J -32436167.82 -32436167.60 -32436167.37 0.0277 0.0109
 Jupiter -93519-09-23 14:37 J -32436126.04 -32436125.89 -32436125.72 0.0540 0.0384
 Neptune -93518-02-28 14:08 J -32435968.07 -32435967.91 -32435967.72 0.0089 0.0065
 Saturn -93518-08-26 02:23 J -32435789.60 -32435789.40 -32435789.18 0.0277 0.0148
 Neptune -93517-03-02 02:08 J -32435600.63 -32435600.41 -32435600.15 0.0089 0.0034
 Neptune -93516-03-04 14:37 J -32435233.14 -32435232.89 -32435232.63 0.0089 0.0003
 Neptune -93515-03-07 02:51 J -32434865.62 -32434865.38 -32434865.13 0.0089 0.0029
 Neptune -93514-03-09 15:06 J -32434498.03 -32434497.87 -32434497.65 0.0089 0.0060
 Jupiter -93507-09-28 17:01 J -32431738.01 -32431737.79 -32431737.56 0.0541 0.0034
 Saturn -93504-01-28 12:56 J -32430885.11 -32430884.96 -32430884.81 0.0281 0.0220
 Saturn -93503-02-10 09:20 J -32430507.35 -32430507.11 -32430506.87 0.0282 0.0038
 Uranus -93501-04-05 17:30 J -32429721.94 -32429721.77 -32429721.58 0.0147 0.0105
 Uranus -93500-04-11 03:06 J -32429351.61 -32429351.37 -32429351.13 0.0147 0.0057
 Uranus -93499-04-16 12:42 J -32428981.23 -32428980.97 -32428980.71 0.0146 0.0008
 Uranus -93498-04-21 22:03 J -32428610.82 -32428610.58 -32428610.32 0.0146 0.0040
 Uranus -93497-04-26 07:39 J -32428240.38 -32428240.18 -32428239.96 0.0146 0.0088
 Uranus -93496-05-01 16:32 J -32427869.89 -32427869.81 -32427869.69 0.0145 0.0135
 Jupiter -93495-10-03 15:20 J -32427349.99 -32427349.86 -32427349.72 0.0542 0.0436
 Saturn -93490-08-07 17:30 J -32425580.92 -32425580.77 -32425580.60 0.0278 0.0213
 Jupiter -93489-03-17 05:44 J -32425358.45 -32425358.26 -32425358.05 0.0488 0.0261
 Saturn -93489-08-20 00:56 J -32425202.71 -32425202.46 -32425202.21 0.0277 0.0045
 Mars -93488-01-02 17:30 J -32425066.85 -32425066.77 -32425066.68 0.1637 0.1448
 Jupiter -93477-03-21 13:39 J -32420971.17 -32420970.93 -32420970.69 0.0487 0.0043
 Saturn -93474-02-04 22:03 J -32419920.80 -32419920.58 -32419920.34 0.0281 0.0078

Saturn -93473-02-17 20:51 J -32419542.80 -32419542.63 -32419542.43 0.0282 0.0185
 Jupiter -93465-03-25 21:35 J -32416583.75 -32416583.60 -32416583.43 0.0486 0.0348
 Saturn -93460-08-14 06:27 J -32414616.46 -32414616.23 -32414615.98 0.0277 0.0076
 Saturn -93459-08-27 10:32 J -32414238.24 -32414238.06 -32414237.87 0.0277 0.0179
 Uranus -93459-10-11 15:20 J -32414193.01 -32414192.86 -32414192.70 0.0132 0.0102
 Uranus -93458-10-15 16:32 J -32413824.02 -32413823.81 -32413823.60 0.0132 0.0069
 Uranus -93457-10-18 17:15 J -32413455.02 -32413454.78 -32413454.54 0.0132 0.0036
 Mars -93456-01-10 05:30 J -32413371.44 -32413371.27 -32413371.10 0.1625 0.0571
 Uranus -93456-10-22 17:59 J -32413086.00 -32413085.75 -32413085.50 0.0132 0.0003
 Uranus -93455-10-26 18:27 J -32412716.96 -32412716.73 -32412716.48 0.0133 0.0031
 Uranus -93454-10-30 19:11 J -32412347.91 -32412347.70 -32412347.47 0.0133 0.0064
 Uranus -93453-11-02 19:39 J -32411978.83 -32411978.68 -32411978.49 0.0133 0.0098
 Uranus -93452-11-06 20:37 J -32411609.66 -32411609.64 -32411609.56 0.0134 0.0131
 Mars -93448-07-12 20:51 J -32410265.82 -32410265.63 -32410265.45 0.1897 0.0908
 Pluto -93446-05-13 12:27 J -32409596.09 -32409595.98 -32409595.83 0.0066 0.0058
 Saturn -93445-01-30 16:47 J -32409333.97 -32409333.80 -32409333.62 0.0281 0.0190
 Pluto -93445-05-14 05:15 J -32409229.49 -32409229.28 -32409229.03 0.0067 0.0034
 Saturn -93444-02-11 13:54 J -32408956.15 -32408955.92 -32408955.68 0.0282 0.0068
 Neptune -93437-09-06 00:13 J -32406192.57 -32406192.49 -32406192.41 0.0088 0.0084
 Neptune -93436-09-08 11:30 J -32405825.22 -32405825.02 -32405824.82 0.0088 0.0054
 Jupiter -93436-09-22 09:06 J -32405811.23 -32405811.12 -32405811.01 0.0540 0.0473
 Neptune -93435-09-10 22:32 J -32405457.80 -32405457.56 -32405457.31 0.0088 0.0024
 Neptune -93434-09-13 09:35 J -32405090.35 -32405090.10 -32405089.84 0.0088 0.0007
 Neptune -93433-09-14 20:08 J -32404722.89 -32404722.66 -32404722.42 0.0088 0.0036
 Neptune -93432-09-17 06:13 J -32404355.39 -32404355.24 -32404355.05 0.0088 0.0067
 Saturn -93431-08-09 02:08 J -32404029.59 -32404029.41 -32404029.21 0.0278 0.0179
 Saturn -93430-08-22 09:06 J -32403651.36 -32403651.12 -32403650.88 0.0277 0.0077
 Jupiter -93424-09-27 13:39 J -32401423.16 -32401422.93 -32401422.70 0.0541 0.0051
 Uranus -93417-04-06 01:25 J -32399040.61 -32399040.44 -32399040.24 0.0147 0.0102
 Uranus -93416-04-11 11:01 J -32398670.28 -32398670.04 -32398669.80 0.0147 0.0054

Saturn -93415-02-06 02:37 J -32398369.62 -32398369.39 -32398369.15 0.0281 0.0048
 Uranus -93415-04-16 20:37 J -32398299.90 -32398299.64 -32398299.38 0.0146 0.0006
 Saturn -93414-02-19 01:54 J -32397991.57 -32397991.42 -32397991.26 0.0282 0.0213
 Uranus -93414-04-22 05:59 J -32397929.49 -32397929.25 -32397928.99 0.0146 0.0042
 Uranus -93413-04-26 15:35 J -32397559.05 -32397558.85 -32397558.64 0.0146 0.0089
 Uranus -93412-05-02 00:13 J -32397188.56 -32397188.49 -32397188.37 0.0145 0.0135
 Jupiter -93412-10-02 20:08 J -32397034.82 -32397034.66 -32397034.50 0.0543 0.0380
 Mars -93409-01-05 16:32 J -32396209.97 -32396209.81 -32396209.65 0.1635 0.0820
 Jupiter -93406-03-17 13:25 J -32395043.12 -32395042.94 -32395042.75 0.0488 0.0298
 Saturn -93401-08-15 14:23 J -32393065.15 -32393064.90 -32393064.66 0.0277 0.0043
 Saturn -93400-08-28 17:15 J -32392686.93 -32392686.78 -32392686.61 0.0276 0.0209
 Jupiter -93394-03-21 19:39 J -32390655.92 -32390655.68 -32390655.44 0.0487 0.0005
 Saturn -93386-01-31 18:27 J -32387782.92 -32387782.73 -32387782.52 0.0281 0.0162
 Saturn -93385-02-13 15:49 J -32387405.06 -32387404.84 -32387404.61 0.0282 0.0096
 Jupiter -93382-03-26 04:18 J -32386268.50 -32386268.32 -32386268.13 0.0486 0.0309
 Mars -93377-01-13 04:32 J -32384514.44 -32384514.31 -32384514.19 0.1623 0.1186
 Uranus -93376-10-07 23:01 J -32383880.54 -32383880.54 -32383880.52 0.0132 0.0131
 Uranus -93375-10-11 23:59 J -32383511.64 -32383511.50 -32383511.32 0.0132 0.0100
 Uranus -93374-10-16 01:11 J -32383142.65 -32383142.45 -32383142.22 0.0132 0.0067
 Uranus -93373-10-19 01:54 J -32382773.65 -32382773.42 -32382773.17 0.0132 0.0034
 Saturn -93372-08-10 08:51 J -32382478.33 -32382478.13 -32382477.91 0.0278 0.0147
 Uranus -93372-10-23 02:51 J -32382404.63 -32382404.38 -32382404.14 0.0132 0.0002
 Saturn -93371-08-23 15:20 J -32382100.08 -32382099.86 -32382099.63 0.0277 0.0108
 Uranus -93371-10-27 03:20 J -32382035.60 -32382035.36 -32382035.12 0.0133 0.0032
 Uranus -93370-10-31 03:49 J -32381666.54 -32381666.34 -32381666.11 0.0133 0.0065
 Mars -93369-07-16 23:15 J -32381406.70 -32381406.53 -32381406.36 0.1903 0.1138
 Uranus -93369-11-03 04:32 J -32381297.46 -32381297.31 -32381297.13 0.0133 0.0098
 Uranus -93368-11-07 05:44 J -32380928.29 -32380928.26 -32380928.20 0.0134 0.0131
 Pluto -93360-11-15 11:01 J -32377998.17 -32377998.04 -32377997.85 0.0078 0.0059
 Pluto -93359-11-17 09:49 J -32377631.10 -32377631.09 -32377631.01 0.0077 0.0076

Saturn -93357-01-26 11:59 J -32377196.05 -32377196.00 -32377195.93 0.0280 0.0271
 Saturn -93356-02-07 05:30 J -32376818.51 -32376818.27 -32376818.03 0.0281 0.0020
 Saturn -93355-02-20 05:01 J -32376440.41 -32376440.29 -32376440.16 0.0282 0.0240
 Neptune -93354-02-28 01:54 J -32376067.54 -32376067.42 -32376067.29 0.0089 0.0078
 Neptune -93353-03-01 13:25 J -32375700.14 -32375699.94 -32375699.70 0.0089 0.0047
 Jupiter -93353-09-21 14:08 J -32375495.96 -32375495.91 -32375495.86 0.0540 0.0526
 Neptune -93352-03-04 01:39 J -32375332.67 -32375332.43 -32375332.17 0.0089 0.0016
 Neptune -93351-03-06 13:54 J -32374965.16 -32374964.92 -32374964.65 0.0089 0.0015
 Neptune -93350-03-09 01:54 J -32374597.62 -32374597.42 -32374597.18 0.0089 0.0046
 Neptune -93349-03-10 14:37 J -32374229.99 -32374229.89 -32374229.74 0.0089 0.0077
 Saturn -93343-08-04 10:03 J -32371892.13 -32371892.08 -32371892.01 0.0278 0.0269
 Saturn -93342-08-17 19:54 J -32371513.91 -32371513.67 -32371513.42 0.0277 0.0014
 Saturn -93341-08-29 22:32 J -32371135.68 -32371135.56 -32371135.43 0.0276 0.0237
 Jupiter -93341-09-26 21:06 J -32371107.84 -32371107.62 -32371107.39 0.0541 0.0095
 Uranus -93334-04-02 00:27 J -32368729.50 -32368729.48 -32368729.42 0.0147 0.0145
 Uranus -93333-04-06 09:35 J -32368359.28 -32368359.10 -32368358.89 0.0147 0.0099
 Uranus -93332-04-11 18:56 J -32367988.94 -32367988.71 -32367988.45 0.0147 0.0052
 Uranus -93331-04-17 04:32 J -32367618.57 -32367618.31 -32367618.05 0.0146 0.0004
 Mars -93330-01-07 16:03 J -32367353.01 -32367352.83 -32367352.65 0.1632 0.0198
 Uranus -93330-04-22 13:54 J -32367248.16 -32367247.92 -32367247.66 0.0146 0.0043
 Uranus -93329-04-26 23:30 J -32366877.72 -32366877.52 -32366877.31 0.0146 0.0090
 Jupiter -93329-10-02 00:56 J -32366719.64 -32366719.46 -32366719.28 0.0542 0.0325
 Uranus -93328-05-02 08:08 J -32366507.24 -32366507.16 -32366507.06 0.0145 0.0136
 Saturn -93327-02-01 18:56 J -32366231.92 -32366231.71 -32366231.49 0.0281 0.0135
 Saturn -93326-02-14 16:18 J -32365854.04 -32365853.82 -32365853.60 0.0282 0.0122
 Jupiter -93323-03-16 21:06 J -32364727.79 -32364727.62 -32364727.45 0.0488 0.0335
 Saturn -93313-08-11 13:39 J -32360927.15 -32360926.93 -32360926.69 0.0278 0.0117
 Saturn -93312-08-24 19:39 J -32360548.88 -32360548.68 -32360548.45 0.0277 0.0138
 Jupiter -93311-03-21 06:42 J -32360340.46 -32360340.22 -32360339.98 0.0487 0.0026
 Jupiter -93299-03-25 14:51 J -32355953.07 -32355952.88 -32355952.69 0.0486 0.0279

Saturn -93298-01-27 12:56 J -32355645.07 -32355644.96 -32355644.83 0.0280 0.0244
 Saturn -93297-02-09 06:42 J -32355267.47 -32355267.22 -32355266.98 0.0281 0.0008
 Saturn -93296-02-21 06:27 J -32354889.30 -32354889.23 -32354889.15 0.0282 0.0265
 Uranus -93292-10-08 07:25 J -32353199.23 -32353199.19 -32353199.13 0.0132 0.0129
 Uranus -93291-10-12 08:37 J -32352830.30 -32352830.14 -32352829.96 0.0132 0.0097
 Uranus -93290-10-16 09:20 J -32352461.31 -32352461.11 -32352460.88 0.0132 0.0065
 Uranus -93289-10-19 10:03 J -32352092.31 -32352092.08 -32352091.83 0.0132 0.0032
 Uranus -93288-10-23 11:01 J -32351723.29 -32351723.04 -32351722.80 0.0132 0.0002
 Uranus -93287-10-27 11:15 J -32351354.26 -32351354.03 -32351353.78 0.0133 0.0033
 Uranus -93286-10-31 11:59 J -32350985.20 -32350985.00 -32350984.78 0.0133 0.0066
 Uranus -93285-11-03 12:56 J -32350616.12 -32350615.96 -32350615.79 0.0133 0.0099
 Saturn -93284-08-05 14:37 J -32350341.00 -32350340.89 -32350340.75 0.0278 0.0239
 Uranus -93284-11-07 13:39 J -32350246.95 -32350246.93 -32350246.86 0.0134 0.0132
 Mars -93283-01-02 01:54 J -32350191.45 -32350191.42 -32350191.40 0.1643 0.1620
 Saturn -93283-08-19 00:13 J -32349962.73 -32349962.49 -32349962.24 0.0277 0.0017
 Saturn -93282-09-01 02:23 J -32349584.46 -32349584.40 -32349584.31 0.0276 0.0264
 Neptune -93272-09-07 22:47 J -32345924.71 -32345924.55 -32345924.37 0.0088 0.0067
 Neptune -93271-09-10 10:03 J -32345557.30 -32345557.08 -32345556.83 0.0088 0.0037
 Neptune -93270-09-12 21:20 J -32345189.86 -32345189.61 -32345189.35 0.0088 0.0007
 Neptune -93269-09-14 08:08 J -32344822.40 -32344822.16 -32344821.91 0.0088 0.0024
 Saturn -93268-02-02 18:13 J -32344680.95 -32344680.74 -32344680.51 0.0281 0.0110
 Neptune -93268-09-16 18:42 J -32344454.91 -32344454.72 -32344454.50 0.0088 0.0053
 Saturn -93267-02-15 15:35 J -32344303.05 -32344302.85 -32344302.64 0.0282 0.0147
 Neptune -93267-09-19 04:47 J -32344087.35 -32344087.30 -32344087.18 0.0088 0.0084
 Jupiter -93258-09-26 19:11 J -32340792.92 -32340792.70 -32340792.48 0.0540 0.0173
 Saturn -93254-08-13 16:32 J -32339376.04 -32339375.81 -32339375.56 0.0278 0.0089
 Saturn -93253-08-25 22:47 J -32338997.75 -32338997.55 -32338997.35 0.0277 0.0164
 Mars -93251-01-09 15:49 J -32338496.02 -32338495.84 -32338495.67 0.1630 0.0436
 Uranus -93250-04-02 09:35 J -32338048.16 -32338048.10 -32338048.03 0.0147 0.0141
 Uranus -93249-04-06 18:27 J -32337677.92 -32337677.73 -32337677.53 0.0147 0.0095

Uranus	-93248-04-12 03:35 J	-32337307.59	-32337307.35	-32337307.10	0.0147	0.0049
Uranus	-93247-04-17 13:11 J	-32336937.21	-32336936.95	-32336936.69	0.0146	0.0002
Uranus	-93246-04-22 22:18 J	-32336566.81	-32336566.57	-32336566.32	0.0146	0.0045
Jupiter	-93246-10-01 23:01 J	-32336404.74	-32336404.54	-32336404.33	0.0542	0.0245
Uranus	-93245-04-27 07:39 J	-32336196.38	-32336196.18	-32336195.97	0.0146	0.0091
Uranus	-93244-05-02 16:18 J	-32335825.89	-32335825.82	-32335825.72	0.0145	0.0137
Jupiter	-93240-03-16 08:08 J	-32334412.31	-32334412.16	-32334412.00	0.0488	0.0361
Saturn	-93239-01-28 13:54 J	-32334094.07	-32334093.92	-32334093.77	0.0280	0.0217
Saturn	-93238-02-10 07:11 J	-32333716.44	-32333716.20	-32333715.96	0.0281	0.0033
Jupiter	-93228-03-20 17:01 J	-32330025.02	-32330024.79	-32330024.55	0.0487	0.0056
Saturn	-93225-08-06 17:44 J	-32328789.91	-32328789.76	-32328789.59	0.0278	0.0211
Saturn	-93224-08-20 03:20 J	-32328411.61	-32328411.36	-32328411.12	0.0277	0.0044
Jupiter	-93216-03-24 23:44 J	-32325637.72	-32325637.51	-32325637.31	0.0486	0.0245
Saturn	-93209-02-04 17:30 J	-32323130.00	-32323129.77	-32323129.54	0.0281	0.0084
Saturn	-93208-02-16 14:37 J	-32322752.08	-32322751.89	-32322751.69	0.0282	0.0171
Uranus	-93208-10-08 17:01 J	-32322517.86	-32322517.79	-32322517.71	0.0132	0.0125
Uranus	-93207-10-12 17:30 J	-32322148.92	-32322148.77	-32322148.58	0.0132	0.0094
Uranus	-93206-10-16 18:27 J	-32321779.93	-32321779.73	-32321779.49	0.0132	0.0062
Uranus	-93205-10-19 19:11 J	-32321410.94	-32321410.70	-32321410.45	0.0132	0.0030
Mars	-93204-01-04 01:39 J	-32321334.57	-32321334.43	-32321334.28	0.1640	0.0979
Uranus	-93204-10-23 19:54 J	-32321041.91	-32321041.67	-32321041.42	0.0132	0.0004
Uranus	-93203-10-27 20:23 J	-32320672.88	-32320672.65	-32320672.40	0.0133	0.0035
Uranus	-93202-10-31 21:06 J	-32320303.83	-32320303.62	-32320303.40	0.0133	0.0067
Uranus	-93201-11-03 22:03 J	-32319934.74	-32319934.58	-32319934.41	0.0133	0.0100
Uranus	-93200-11-07 23:15 J	-32319565.56	-32319565.53	-32319565.49	0.0134	0.0132
Pluto	-93197-05-14 22:03 J	-32318646.81	-32318646.58	-32318646.30	0.0066	0.0021
Saturn	-93195-08-14 18:42 J	-32317824.96	-32317824.72	-32317824.47	0.0278	0.0063
Saturn	-93194-08-28 00:42 J	-32317446.64	-32317446.47	-32317446.28	0.0278	0.0190
Neptune	-93189-03-01 00:27 J	-32315799.65	-32315799.48	-32315799.28	0.0089	0.0060
Neptune	-93188-03-03 12:27 J	-32315432.21	-32315431.98	-32315431.72	0.0089	0.0030

Neptune -93187-03-06 00:42 J -32315064.73 -32315064.47 -32315064.21 0.0089 0.0001
 Neptune -93186-03-08 12:27 J -32314697.20 -32314696.98 -32314696.72 0.0089 0.0033
 Neptune -93185-03-10 00:42 J -32314329.63 -32314329.47 -32314329.26 0.0089 0.0063
 Saturn -93180-01-29 14:23 J -32312543.06 -32312542.90 -32312542.72 0.0280 0.0192
 Saturn -93179-02-11 07:54 J -32312165.41 -32312165.17 -32312164.94 0.0281 0.0058
 Jupiter -93175-09-26 00:27 J -32310477.69 -32310477.48 -32310477.27 0.0540 0.0225
 Mars -93172-01-11 14:08 J -32309639.05 -32309638.91 -32309638.77 0.1627 0.1032
 Uranus -93166-04-02 17:44 J -32307366.84 -32307366.76 -32307366.66 0.0147 0.0137
 Saturn -93166-08-08 20:23 J -32307238.83 -32307238.65 -32307238.46 0.0278 0.0184
 Uranus -93165-04-07 02:23 J -32306996.59 -32306996.40 -32306996.18 0.0147 0.0092
 Saturn -93165-08-21 05:44 J -32306860.50 -32306860.26 -32306860.02 0.0277 0.0070
 Uranus -93164-04-12 11:44 J -32306626.25 -32306626.01 -32306625.75 0.0147 0.0046
 Mars -93164-07-11 10:32 J -32306536.22 -32306536.06 -32306535.89 0.1891 0.1164
 Uranus -93163-04-17 21:20 J -32306255.88 -32306255.61 -32306255.35 0.0146 0.0003
 Jupiter -93163-10-01 07:54 J -32306089.38 -32306089.17 -32306088.96 0.0542 0.0206
 Uranus -93162-04-23 06:27 J -32305885.47 -32305885.23 -32305884.98 0.0146 0.0047
 Uranus -93161-04-27 15:35 J -32305515.04 -32305514.85 -32305514.64 0.0146 0.0093
 Uranus -93160-05-03 00:27 J -32305144.55 -32305144.48 -32305144.39 0.0145 0.0138
 Jupiter -93157-03-15 17:30 J -32304096.90 -32304096.77 -32304096.63 0.0489 0.0394
 Saturn -93150-02-05 17:30 J -32301579.00 -32301578.77 -32301578.53 0.0281 0.0059
 Saturn -93149-02-18 14:37 J -32301201.06 -32301200.89 -32301200.71 0.0282 0.0195
 Jupiter -93145-03-20 02:08 J -32299709.64 -32299709.41 -32299709.18 0.0488 0.0089
 Saturn -93136-08-15 20:08 J -32296273.91 -32296273.66 -32296273.41 0.0279 0.0037
 Saturn -93135-08-29 02:23 J -32295895.55 -32295895.40 -32295895.24 0.0278 0.0214
 Jupiter -93133-03-24 11:01 J -32295322.25 -32295322.04 -32295321.83 0.0487 0.0218
 Mars -93125-01-07 00:42 J -32292477.65 -32292477.47 -32292477.29 0.1638 0.0349
 Uranus -93124-10-09 01:25 J -32291836.52 -32291836.44 -32291836.33 0.0132 0.0122
 Uranus -93123-10-13 02:23 J -32291467.57 -32291467.40 -32291467.21 0.0132 0.0091
 Uranus -93122-10-17 03:20 J -32291098.58 -32291098.36 -32291098.14 0.0132 0.0059
 Saturn -93121-01-31 15:49 J -32290992.02 -32290991.84 -32290991.64 0.0280 0.0166

Uranus -93121-10-20 04:03 J -32290729.58 -32290729.33 -32290729.09 0.0132 0.0028
 Saturn -93120-02-12 09:20 J -32290614.34 -32290614.11 -32290613.88 0.0281 0.0083
 Uranus -93120-10-24 04:47 J -32290360.55 -32290360.30 -32290360.05 0.0132 0.0005
 Uranus -93119-10-28 05:01 J -32289991.52 -32289991.29 -32289991.04 0.0133 0.0037
 Uranus -93118-11-01 05:44 J -32289622.46 -32289622.26 -32289622.04 0.0133 0.0069
 Uranus -93117-11-04 06:27 J -32289253.37 -32289253.23 -32289253.05 0.0133 0.0101
 Uranus -93116-11-08 07:54 J -32288884.18 -32288884.17 -32288884.14 0.0134 0.0133
 Pluto -93111-11-18 00:42 J -32287048.71 -32287048.47 -32287048.21 0.0077 0.0005
 Neptune -93108-09-07 09:35 J -32286024.20 -32286024.10 -32286023.98 0.0088 0.0080
 Saturn -93107-08-09 23:15 J -32285687.73 -32285687.53 -32285687.31 0.0278 0.0157
 Neptune -93107-09-09 21:06 J -32285656.83 -32285656.62 -32285656.41 0.0088 0.0050
 Saturn -93106-08-23 08:51 J -32285309.36 -32285309.13 -32285308.90 0.0278 0.0097
 Neptune -93106-09-12 08:08 J -32285289.41 -32285289.16 -32285288.91 0.0088 0.0020
 Neptune -93105-09-13 19:11 J -32284921.95 -32284921.70 -32284921.44 0.0088 0.0010
 Neptune -93104-09-16 05:44 J -32284554.47 -32284554.26 -32284554.01 0.0088 0.0041
 Neptune -93103-09-18 16:47 J -32284186.94 -32284186.80 -32284186.63 0.0088 0.0070
 Saturn -93092-01-25 04:18 J -32280405.35 -32280405.32 -32280405.27 0.0280 0.0275
 Jupiter -93092-09-25 08:08 J -32280162.36 -32280162.16 -32280161.96 0.0540 0.0268
 Saturn -93091-02-06 18:56 J -32280027.95 -32280027.71 -32280027.47 0.0281 0.0033
 Saturn -93090-02-19 15:49 J -32279649.98 -32279649.84 -32279649.68 0.0281 0.0219
 Mars -93085-07-15 11:01 J -32277677.23 -32277677.04 -32277676.84 0.1896 0.0813
 Uranus -93082-04-03 02:23 J -32276685.50 -32276685.40 -32276685.29 0.0147 0.0134
 Uranus -93081-04-07 11:15 J -32276315.23 -32276315.03 -32276314.82 0.0147 0.0088
 Uranus -93080-04-12 20:08 J -32275944.90 -32275944.66 -32275944.40 0.0147 0.0043
 Jupiter -93080-09-30 07:54 J -32275774.39 -32275774.17 -32275773.95 0.0541 0.0134
 Uranus -93079-04-18 05:44 J -32275574.52 -32275574.26 -32275574.00 0.0146 0.0004
 Uranus -93078-04-23 15:06 J -32275204.11 -32275203.87 -32275203.62 0.0146 0.0049
 Saturn -93078-08-04 07:54 J -32275101.22 -32275101.17 -32275101.08 0.0280 0.0268
 Uranus -93077-04-27 23:59 J -32274833.68 -32274833.50 -32274833.29 0.0146 0.0095
 Saturn -93077-08-16 21:49 J -32274722.84 -32274722.59 -32274722.34 0.0279 0.0012

Uranus -93076-05-03 09:06 J -32274463.18 -32274463.12 -32274463.03 0.0145 0.0139
 Saturn -93076-08-30 04:03 J -32274344.45 -32274344.33 -32274344.19 0.0278 0.0238
 Jupiter -93074-03-16 03:06 J -32273781.47 -32273781.37 -32273781.24 0.0490 0.0425
 Saturn -93062-02-01 19:11 J -32269440.91 -32269440.70 -32269440.49 0.0280 0.0139
 Jupiter -93062-03-20 11:44 J -32269394.24 -32269394.01 -32269393.78 0.0488 0.0118
 Saturn -93061-02-14 12:42 J -32269063.19 -32269062.97 -32269062.74 0.0281 0.0110
 Jupiter -93050-03-24 20:23 J -32265006.87 -32265006.65 -32265006.43 0.0487 0.0187
 Saturn -93048-08-11 02:37 J -32264136.60 -32264136.39 -32264136.15 0.0279 0.0130
 Saturn -93047-08-24 12:13 J -32263758.21 -32263757.99 -32263757.76 0.0278 0.0123
 Mars -93046-01-08 23:59 J -32263620.68 -32263620.50 -32263620.32 0.1635 0.0270
 Uranus -93040-10-09 11:01 J -32261155.12 -32261155.04 -32261154.91 0.0132 0.0119
 Uranus -93039-10-13 11:59 J -32260786.17 -32260786.00 -32260785.80 0.0132 0.0088
 Jupiter -93038-03-29 03:35 J -32260619.36 -32260619.35 -32260619.33 0.0486 0.0485
 Uranus -93038-10-17 13:11 J -32260417.17 -32260416.95 -32260416.72 0.0132 0.0056
 Uranus -93037-10-20 13:39 J -32260048.17 -32260047.93 -32260047.68 0.0132 0.0025
 Uranus -93036-10-24 14:23 J -32259679.14 -32259678.90 -32259678.65 0.0132 0.0008
 Uranus -93035-10-28 15:06 J -32259310.11 -32259309.87 -32259309.63 0.0133 0.0039
 Uranus -93034-11-01 15:35 J -32258941.04 -32258940.85 -32258940.63 0.0133 0.0071
 Saturn -93033-01-27 07:39 J -32258854.28 -32258854.18 -32258854.06 0.0280 0.0248
 Uranus -93033-11-04 16:47 J -32258571.95 -32258571.80 -32258571.64 0.0133 0.0102
 Saturn -93032-02-07 22:03 J -32258476.82 -32258476.58 -32258476.33 0.0281 0.0007
 Saturn -93031-02-20 19:11 J -32258098.82 -32258098.70 -32258098.58 0.0281 0.0245
 Neptune -93025-02-29 11:01 J -32255899.16 -32255899.04 -32255898.88 0.0089 0.0074
 Neptune -93024-03-02 22:32 J -32255531.76 -32255531.56 -32255531.31 0.0089 0.0044
 Neptune -93023-03-05 11:01 J -32255164.29 -32255164.04 -32255163.78 0.0089 0.0013
 Neptune -93022-03-07 23:01 J -32254796.79 -32254796.54 -32254796.28 0.0089 0.0018
 Neptune -93021-03-09 11:15 J -32254429.24 -32254429.03 -32254428.81 0.0089 0.0048
 Neptune -93020-03-11 23:15 J -32254061.63 -32254061.53 -32254061.39 0.0089 0.0080
 Saturn -93019-08-05 11:15 J -32253550.15 -32253550.03 -32253549.90 0.0280 0.0241
 Saturn -93018-08-19 00:42 J -32253171.72 -32253171.47 -32253171.22 0.0279 0.0015

Saturn -93017-08-31 07:11 J -32252793.27 -32252793.20 -32252793.11 0.0278 0.0262

Jupiter -93009-09-24 05:59 J -32249847.43 -32249847.25 -32249847.07 0.0539 0.0343

Saturn -93003-02-02 23:59 J -32247889.72 -32247889.50 -32247889.28 0.0280 0.0111

Saturn -93002-02-15 17:44 J -32247511.97 -32247511.76 -32247511.54 0.0280 0.0137

93RD MILLENNIUM BCE

This is a list of transits of Earth in the 93rd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Mars	-92999-01-03 08:51 J	-32246459.26	-32246459.13	-32246459.00	0.1647	0.1155		
Uranus	-92998-04-03 11:01 J	-32246004.16	-32246004.04	-32246003.92	0.0147	0.0130		
Uranus	-92997-04-07 19:25 J	-32245633.89	-32245633.69	-32245633.47	0.0147	0.0085		
Jupiter	-92997-09-29 09:20 J	-32245459.33	-32245459.11	-32245458.88	0.0541	0.0073		
Uranus	-92996-04-13 04:32 J	-32245263.55	-32245263.31	-32245263.05	0.0147	0.0040		
Uranus	-92995-04-18 14:08 J	-32244893.17	-32244892.91	-32244892.65	0.0146	0.0006		
Uranus	-92994-04-23 23:30 J	-32244522.76	-32244522.52	-32244522.28	0.0146	0.0052		
Uranus	-92993-04-28 08:37 J	-32244152.32	-32244152.14	-32244151.93	0.0146	0.0097		
Uranus	-92992-05-03 17:44 J	-32243781.81	-32243781.76	-32243781.68	0.0145	0.0141		
Jupiter	-92991-03-15 12:13 J	-32243466.07	-32243465.99	-32243465.90	0.0490	0.0455		
Saturn	-92989-08-12 07:54 J	-32242585.40	-32242585.17	-32242584.93	0.0279	0.0101		
Saturn	-92988-08-25 17:15 J	-32242206.99	-32242206.78	-32242206.57	0.0278	0.0150		
Jupiter	-92985-10-04 16:03 J	-32241070.92	-32241070.83	-32241070.74	0.0542	0.0497		
Jupiter	-92979-03-19 19:11 J	-32239078.92	-32239078.70	-32239078.47	0.0488	0.0156		
Saturn	-92974-01-28 12:56 J	-32237303.09	-32237302.96	-32237302.80	0.0280	0.0220		

Saturn -92973-02-10 03:49 J -32236925.58 -32236925.34 -32236925.10 0.0280 0.0023
 Saturn -92972-02-22 00:42 J -32236547.51 -32236547.47 -32236547.40 0.0281 0.0272
 Mars -92967-01-10 23:44 J -32234763.66 -32234763.51 -32234763.36 0.1632 0.0892
 Jupiter -92967-03-24 03:35 J -32234691.57 -32234691.35 -32234691.12 0.0487 0.0148
 Saturn -92960-08-06 15:35 J -32231999.00 -32231998.85 -32231998.68 0.0280 0.0214
 Saturn -92959-08-20 05:15 J -32231620.53 -32231620.28 -32231620.04 0.0279 0.0041
 Uranus -92956-10-09 20:37 J -32230473.75 -32230473.64 -32230473.51 0.0131 0.0115
 Jupiter -92955-03-28 10:47 J -32230304.12 -32230304.05 -32230303.95 0.0487 0.0450
 Uranus -92955-10-13 21:20 J -32230104.79 -32230104.61 -32230104.41 0.0132 0.0085
 Uranus -92954-10-17 22:03 J -32229735.79 -32229735.58 -32229735.34 0.0132 0.0054
 Uranus -92953-10-20 23:01 J -32229366.78 -32229366.54 -32229366.29 0.0132 0.0022
 Uranus -92952-10-24 23:44 J -32228997.75 -32228997.51 -32228997.26 0.0132 0.0010
 Uranus -92951-10-29 00:13 J -32228628.72 -32228628.49 -32228628.25 0.0132 0.0041
 Uranus -92950-11-02 01:11 J -32228259.65 -32228259.45 -32228259.23 0.0133 0.0072
 Uranus -92949-11-05 01:54 J -32227890.55 -32227890.42 -32227890.24 0.0133 0.0104
 Pluto -92948-05-17 08:08 J -32227697.41 -32227697.16 -32227696.89 0.0067 0.0019
 Saturn -92944-02-04 06:42 J -32226338.44 -32226338.22 -32226337.98 0.0280 0.0082
 Saturn -92943-02-17 00:56 J -32225960.66 -32225960.46 -32225960.26 0.0280 0.0165
 Neptune -92943-09-09 06:42 J -32225756.37 -32225756.22 -32225756.02 0.0088 0.0064
 Neptune -92942-09-11 18:13 J -32225388.97 -32225388.74 -32225388.49 0.0088 0.0033
 Neptune -92941-09-13 05:30 J -32225021.52 -32225021.27 -32225021.01 0.0088 0.0004
 Neptune -92940-09-15 16:32 J -32224654.05 -32224653.81 -32224653.56 0.0088 0.0026
 Neptune -92939-09-18 02:51 J -32224286.56 -32224286.38 -32224286.16 0.0088 0.0056
 Neptune -92938-09-20 13:54 J -32223918.97 -32223918.92 -32223918.85 0.0088 0.0086
 Saturn -92930-08-14 15:06 J -32221034.11 -32221033.87 -32221033.63 0.0279 0.0071
 Saturn -92929-08-26 23:59 J -32220655.68 -32220655.50 -32220655.30 0.0278 0.0178
 Jupiter -92926-09-24 08:37 J -32219532.29 -32219532.14 -32219531.99 0.0539 0.0400
 Mars -92920-01-05 09:06 J -32217602.29 -32217602.12 -32217601.94 0.1643 0.0512
 Saturn -92915-01-29 20:23 J -32215751.82 -32215751.65 -32215751.47 0.0280 0.0189
 Saturn -92914-02-11 11:30 J -32215374.26 -32215374.02 -32215373.78 0.0280 0.0053

Uranus	-92914-04-03 19:54 J	-32215322.78	-32215322.67	-32215322.52	0.0147	0.0127
Jupiter	-92914-09-29 14:51 J	-32215144.11	-32215143.88	-32215143.65	0.0540	0.0022
Uranus	-92913-04-08 04:47 J	-32214952.50	-32214952.30	-32214952.07	0.0147	0.0082
Uranus	-92912-04-13 14:08 J	-32214582.16	-32214581.91	-32214581.66	0.0147	0.0037
Uranus	-92911-04-18 23:30 J	-32214211.78	-32214211.52	-32214211.26	0.0146	0.0009
Uranus	-92910-04-24 08:51 J	-32213841.37	-32213841.13	-32213840.88	0.0146	0.0054
Uranus	-92909-04-28 17:59 J	-32213470.93	-32213470.75	-32213470.54	0.0146	0.0099
Uranus	-92908-05-04 03:06 J	-32213100.40	-32213100.37	-32213100.29	0.0145	0.0143
Jupiter	-92902-10-04 15:49 J	-32210755.98	-32210755.84	-32210755.70	0.0541	0.0427
Saturn	-92901-08-07 22:18 J	-32210447.74	-32210447.57	-32210447.37	0.0280	0.0185
Saturn	-92900-08-21 11:44 J	-32210069.25	-32210069.01	-32210068.77	0.0279	0.0069
Jupiter	-92896-03-19 00:27 J	-32208763.69	-32208763.48	-32208763.26	0.0489	0.0197
Mars	-92888-01-12 22:32 J	-32205906.63	-32205906.56	-32205906.49	0.1630	0.1490
Saturn	-92885-02-06 15:20 J	-32204787.10	-32204786.86	-32204786.62	0.0280	0.0051
Saturn	-92884-02-18 09:49 J	-32204409.26	-32204409.09	-32204408.91	0.0280	0.0195
Jupiter	-92884-03-23 08:37 J	-32204376.37	-32204376.14	-32204375.91	0.0488	0.0107
Mars	-92880-07-10 01:54 J	-32202806.57	-32202806.42	-32202806.27	0.1884	0.1370
Jupiter	-92872-03-27 17:15 J	-32199988.90	-32199988.78	-32199988.65	0.0487	0.0410
Uranus	-92872-10-10 06:42 J	-32199792.33	-32199792.22	-32199792.07	0.0132	0.0112
Saturn	-92871-08-16 00:13 J	-32199482.74	-32199482.49	-32199482.24	0.0279	0.0040
Uranus	-92871-10-14 07:25 J	-32199423.37	-32199423.19	-32199422.98	0.0132	0.0082
Saturn	-92870-08-29 08:37 J	-32199104.30	-32199104.14	-32199103.97	0.0278	0.0206
Uranus	-92870-10-18 08:37 J	-32199054.36	-32199054.14	-32199053.90	0.0132	0.0051
Uranus	-92869-10-21 09:20 J	-32198685.35	-32198685.11	-32198684.86	0.0132	0.0020
Uranus	-92868-10-25 10:18 J	-32198316.32	-32198316.07	-32198315.82	0.0132	0.0012
Uranus	-92867-10-29 11:01 J	-32197947.28	-32197947.04	-32197946.81	0.0132	0.0043
Uranus	-92866-11-02 11:59 J	-32197578.20	-32197578.00	-32197577.79	0.0133	0.0074
Uranus	-92865-11-05 12:56 J	-32197209.10	-32197208.96	-32197208.80	0.0133	0.0105
Pluto	-92862-11-20 14:37 J	-32196099.04	-32196098.89	-32196098.69	0.0077	0.0054
Neptune	-92861-02-28 20:08 J	-32195998.67	-32195998.66	-32195998.61	0.0089	0.0089

Neptune -92860-03-02 07:54 J -32195631.34 -32195631.17 -32195630.95 0.0089 0.0059
 Neptune -92859-03-04 20:23 J -32195263.90 -32195263.65 -32195263.41 0.0089 0.0028
 Neptune -92858-03-07 08:23 J -32194896.41 -32194896.15 -32194895.90 0.0089 0.0003
 Neptune -92857-03-08 19:54 J -32194528.89 -32194528.67 -32194528.41 0.0089 0.0035
 Saturn -92856-01-31 05:30 J -32194200.45 -32194200.27 -32194200.06 0.0280 0.0159
 Neptune -92856-03-11 08:37 J -32194161.32 -32194161.14 -32194160.96 0.0089 0.0065
 Saturn -92855-02-12 21:06 J -32193822.84 -32193822.62 -32193822.38 0.0280 0.0085
 Jupiter -92843-09-23 09:35 J -32189217.22 -32189217.10 -32189216.99 0.0538 0.0461
 Saturn -92842-08-10 07:11 J -32188896.40 -32188896.20 -32188895.99 0.0280 0.0154
 Mars -92841-01-08 08:23 J -32188745.33 -32188745.15 -32188744.97 0.1641 0.0115
 Saturn -92841-08-22 19:54 J -32188517.90 -32188517.67 -32188517.44 0.0279 0.0098
 Jupiter -92831-09-28 11:15 J -32184829.26 -32184829.03 -32184828.80 0.0539 0.0058
 Uranus -92830-04-04 05:44 J -32184641.39 -32184641.26 -32184641.11 0.0147 0.0123
 Uranus -92829-04-08 14:37 J -32184271.11 -32184270.89 -32184270.68 0.0147 0.0079
 Uranus -92828-04-13 23:30 J -32183900.76 -32183900.52 -32183900.26 0.0147 0.0034
 Saturn -92827-01-26 12:13 J -32183613.08 -32183612.99 -32183612.90 0.0279 0.0256
 Uranus -92827-04-19 09:06 J -32183530.38 -32183530.12 -32183529.86 0.0147 0.0012
 Saturn -92826-02-08 01:11 J -32183235.69 -32183235.45 -32183235.21 0.0280 0.0019
 Uranus -92826-04-24 18:27 J -32183159.96 -32183159.73 -32183159.48 0.0146 0.0056
 Saturn -92825-02-20 20:08 J -32182857.80 -32182857.66 -32182857.51 0.0281 0.0225
 Uranus -92825-04-29 03:49 J -32182789.51 -32182789.34 -32182789.14 0.0146 0.0101
 Uranus -92824-05-04 13:25 J -32182418.97 -32182418.94 -32182418.89 0.0145 0.0144
 Jupiter -92819-10-03 11:59 J -32180441.17 -32180441.00 -32180440.82 0.0541 0.0347
 Jupiter -92813-03-18 06:42 J -32178448.42 -32178448.22 -32178448.01 0.0489 0.0236
 Saturn -92813-08-03 20:23 J -32178309.73 -32178309.65 -32178309.54 0.0280 0.0259
 Saturn -92812-08-17 11:15 J -32177931.28 -32177931.03 -32177930.78 0.0279 0.0008
 Saturn -92811-08-30 18:56 J -32177552.83 -32177552.71 -32177552.57 0.0278 0.0236
 Jupiter -92801-03-22 13:54 J -32174061.15 -32174060.92 -32174060.69 0.0488 0.0064
 Mars -92801-07-14 00:27 J -32173947.68 -32173947.48 -32173947.27 0.1890 0.0535
 Saturn -92797-02-02 16:03 J -32172649.04 -32172648.83 -32172648.61 0.0280 0.0126

Saturn -92796-02-14 08:08 J -32172271.38 -32172271.16 -32172270.94 0.0280 0.0116
 Mars -92794-01-02 15:49 J -32171583.95 -32171583.84 -32171583.73 0.1653 0.1327
 Jupiter -92789-03-26 21:49 J -32169673.75 -32169673.59 -32169673.43 0.0487 0.0363
 Uranus -92788-10-10 16:32 J -32169110.94 -32169110.81 -32169110.66 0.0131 0.0109
 Uranus -92787-10-14 17:30 J -32168741.96 -32168741.77 -32168741.56 0.0132 0.0079
 Uranus -92786-10-18 18:42 J -32168372.95 -32168372.72 -32168372.49 0.0132 0.0048
 Uranus -92785-10-21 19:25 J -32168003.94 -32168003.69 -32168003.45 0.0132 0.0017
 Uranus -92784-10-25 20:08 J -32167634.91 -32167634.66 -32167634.41 0.0132 0.0014
 Saturn -92783-08-11 17:44 J -32167344.98 -32167344.76 -32167344.53 0.0279 0.0122
 Uranus -92783-10-29 20:51 J -32167265.86 -32167265.63 -32167265.40 0.0132 0.0045
 Saturn -92782-08-25 05:30 J -32166966.49 -32166966.27 -32166966.05 0.0279 0.0128
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 Uranus -92781-11-05 22:47 J -32166527.69 -32166527.55 -32166527.39 0.0133 0.0106
 Neptune -92779-09-08 16:03 J -32165855.93 -32165855.83 -32165855.68 0.0088 0.0077
 Neptune -92778-09-11 03:35 J -32165488.55 -32165488.35 -32165488.11 0.0088 0.0047
 Neptune -92777-09-12 15:06 J -32165121.11 -32165120.87 -32165120.61 0.0088 0.0018
 Neptune -92776-09-15 02:23 J -32164753.65 -32164753.40 -32164753.14 0.0088 0.0012
 Neptune -92775-09-17 12:56 J -32164386.17 -32164385.96 -32164385.72 0.0088 0.0042
 Neptune -92774-09-19 23:44 J -32164018.64 -32164018.51 -32164018.35 0.0088 0.0072
 Saturn -92768-01-27 21:20 J -32162061.73 -32162061.61 -32162061.45 0.0279 0.0225
 Saturn -92767-02-09 11:30 J -32161684.26 -32161684.02 -32161683.78 0.0280 0.0013
 Saturn -92766-02-22 07:25 J -32161306.28 -32161306.19 -32161306.09 0.0281 0.0256
 Mars -92762-01-10 07:54 J -32159888.33 -32159888.17 -32159888.00 0.1638 0.0736
 Saturn -92754-08-06 09:06 J -32156758.26 -32156758.12 -32156757.96 0.0280 0.0224
 Saturn -92753-08-18 23:15 J -32156379.77 -32156379.53 -32156379.28 0.0279 0.0026
 Saturn -92752-09-01 06:27 J -32156001.30 -32156001.23 -32156001.16 0.0278 0.0266
 Jupiter -92748-09-27 08:37 J -32154514.36 -32154514.14 -32154513.92 0.0540 0.0134
 Uranus -92746-04-04 15:35 J -32153959.98 -32153959.85 -32153959.68 0.0147 0.0120
 Uranus -92745-04-09 00:27 J -32153589.68 -32153589.48 -32153589.24 0.0147 0.0076
 Uranus -92744-04-14 10:03 J -32153219.33 -32153219.08 -32153218.82 0.0147 0.0031

Uranus -92743-04-19 19:25 J -32152848.94 -32152848.69 -32152848.42 0.0147 0.0015
 Uranus -92742-04-25 05:15 J -32152478.52 -32152478.28 -32152478.04 0.0146 0.0059
 Uranus -92741-04-29 14:37 J -32152108.06 -32152107.89 -32152107.69 0.0146 0.0102
 Uranus -92740-05-05 00:13 J -32151737.50 -32151737.49 -32151737.46 0.0145 0.0145
 Saturn -92738-02-04 02:51 J -32151097.60 -32151097.38 -32151097.15 0.0280 0.0094
 Saturn -92737-02-16 19:25 J -32150719.89 -32150719.69 -32150719.48 0.0281 0.0148
 Jupiter -92736-10-02 14:51 J -32150126.07 -32150125.88 -32150125.69 0.0541 0.0287
 Jupiter -92730-03-18 10:47 J -32148133.24 -32148133.05 -32148132.85 0.0489 0.0283
 Saturn -92724-08-13 05:30 J -32145793.51 -32145793.27 -32145793.03 0.0279 0.0088
 Saturn -92723-08-26 16:18 J -32145415.02 -32145414.82 -32145414.61 0.0278 0.0159
 Jupiter -92718-03-22 16:32 J -32143746.05 -32143745.81 -32143745.58 0.0489 0.0017
 Mars -92715-01-04 15:35 J -32142727.02 -32142726.85 -32142726.68 0.1650 0.0689
 Saturn -92709-01-30 06:42 J -32140510.39 -32140510.22 -32140510.04 0.0279 0.0193
 Saturn -92708-02-10 21:20 J -32140132.84 -32140132.61 -32140132.37 0.0280 0.0044
 Jupiter -92706-03-26 23:59 J -32139358.67 -32139358.50 -32139358.31 0.0488 0.0317
 Uranus -92704-10-11 03:35 J -32138429.49 -32138429.35 -32138429.19 0.0131 0.0105
 Uranus -92703-10-15 04:32 J -32138060.51 -32138060.31 -32138060.10 0.0132 0.0075
 Uranus -92702-10-19 05:30 J -32137691.50 -32137691.27 -32137691.03 0.0132 0.0045
 Uranus -92701-10-22 06:13 J -32137322.48 -32137322.24 -32137321.98 0.0132 0.0015
 Pluto -92700-05-18 06:13 J -32137114.47 -32137114.24 -32137113.96 0.0067 0.0021
 Uranus -92700-10-26 07:11 J -32136953.45 -32136953.20 -32136952.95 0.0132 0.0016
 Uranus -92699-10-30 07:54 J -32136584.40 -32136584.17 -32136583.93 0.0132 0.0047
 Uranus -92698-11-03 08:37 J -32136215.32 -32136215.14 -32136214.92 0.0133 0.0078
 Uranus -92697-11-06 09:20 J -32135846.23 -32135846.11 -32135845.94 0.0133 0.0108
 Neptune -92696-03-01 17:15 J -32135730.92 -32135730.78 -32135730.63 0.0089 0.0072
 Neptune -92695-03-04 04:47 J -32135363.51 -32135363.30 -32135363.06 0.0089 0.0042
 Saturn -92695-08-07 22:32 J -32135206.73 -32135206.56 -32135206.36 0.0279 0.0189
 Neptune -92694-03-06 16:47 J -32134996.04 -32134995.80 -32134995.53 0.0089 0.0013
 Saturn -92694-08-21 11:44 J -32134828.24 -32134828.01 -32134827.76 0.0279 0.0060
 Neptune -92693-03-08 04:32 J -32134628.55 -32134628.31 -32134628.04 0.0089 0.0019

Neptune -92692-03-10 16:47 J -32134261.00 -32134260.80 -32134260.57 0.0089 0.0049
 Neptune -92691-03-13 04:47 J -32133893.39 -32133893.30 -32133893.17 0.0089 0.0080
 Mars -92683-01-12 07:25 J -32131031.29 -32131031.19 -32131031.08 0.1635 0.1349
 Saturn -92679-02-05 13:11 J -32129546.18 -32129545.95 -32129545.71 0.0280 0.0061
 Saturn -92678-02-18 06:13 J -32129168.42 -32129168.24 -32129168.05 0.0281 0.0180
 Saturn -92665-08-14 17:01 J -32124242.03 -32124241.79 -32124241.54 0.0279 0.0055
 Jupiter -92665-09-26 10:47 J -32124199.27 -32124199.05 -32124198.84 0.0539 0.0191
 Saturn -92664-08-28 03:06 J -32123863.54 -32123863.37 -32123863.18 0.0278 0.0190
 Uranus -92662-04-05 02:08 J -32123278.55 -32123278.41 -32123278.23 0.0147 0.0115
 Uranus -92661-04-09 11:01 J -32122908.25 -32122908.04 -32122907.80 0.0147 0.0071
 Uranus -92660-04-14 20:37 J -32122537.89 -32122537.64 -32122537.38 0.0147 0.0027
 Uranus -92659-04-20 06:13 J -32122167.50 -32122167.24 -32122166.98 0.0147 0.0017
 Uranus -92658-04-25 15:35 J -32121797.07 -32121796.85 -32121796.60 0.0146 0.0062
 Uranus -92657-04-30 00:56 J -32121426.62 -32121426.46 -32121426.25 0.0146 0.0105
 Jupiter -92653-10-01 12:56 J -32119811.17 -32119810.96 -32119810.75 0.0540 0.0214
 Saturn -92650-01-31 14:51 J -32118959.06 -32118958.88 -32118958.67 0.0279 0.0163
 Saturn -92649-02-13 06:27 J -32118581.46 -32118581.23 -32118580.99 0.0280 0.0075
 Jupiter -92647-03-17 13:25 J -32117818.11 -32117817.94 -32117817.76 0.0490 0.0330
 Mars -92636-01-06 16:03 J -32113870.01 -32113869.83 -32113869.64 0.1647 0.0065
 Saturn -92636-08-09 11:15 J -32113655.23 -32113655.03 -32113654.81 0.0279 0.0154
 Jupiter -92635-03-21 22:47 J -32113430.78 -32113430.55 -32113430.31 0.0489 0.0026
 Saturn -92635-08-22 23:44 J -32113276.74 -32113276.51 -32113276.27 0.0279 0.0093
 Jupiter -92623-03-26 06:13 J -32109043.43 -32109043.24 -32109043.04 0.0487 0.0274
 Saturn -92621-01-26 10:03 J -32108372.15 -32108372.08 -32108371.99 0.0279 0.0262
 Uranus -92621-10-07 12:56 J -32108116.97 -32108116.96 -32108116.92 0.0131 0.0131
 Saturn -92620-02-06 22:03 J -32107994.82 -32107994.58 -32107994.34 0.0280 0.0030
 Uranus -92620-10-11 13:54 J -32107748.05 -32107747.92 -32107747.74 0.0131 0.0102
 Saturn -92619-02-19 15:49 J -32107616.99 -32107616.84 -32107616.67 0.0281 0.0210
 Uranus -92619-10-15 15:06 J -32107379.06 -32107378.87 -32107378.65 0.0132 0.0072
 Uranus -92618-10-19 16:18 J -32107010.05 -32107009.82 -32107009.58 0.0132 0.0042

Uranus -92617-10-22 17:01 J -32106641.03 -32106640.79 -32106640.54 0.0132 0.0012
 Uranus -92616-10-26 17:59 J -32106271.99 -32106271.75 -32106271.50 0.0132 0.0018
 Uranus -92615-10-30 18:27 J -32105902.95 -32105902.73 -32105902.49 0.0132 0.0049
 Neptune -92614-09-10 11:59 J -32105588.17 -32105588.00 -32105587.80 0.0088 0.0062
 Uranus -92614-11-03 19:25 J -32105533.88 -32105533.69 -32105533.48 0.0133 0.0079
 Pluto -92614-11-21 12:27 J -32105516.23 -32105515.98 -32105515.73 0.0077 0.0003
 Neptune -92613-09-11 23:30 J -32105220.76 -32105220.52 -32105220.27 0.0088 0.0032
 Uranus -92613-11-06 19:54 J -32105164.79 -32105164.67 -32105164.51 0.0133 0.0109
 Neptune -92612-09-14 10:47 J -32104853.31 -32104853.05 -32104852.79 0.0088 0.0002
 Neptune -92611-09-16 21:35 J -32104485.84 -32104485.60 -32104485.35 0.0088 0.0028
 Neptune -92610-09-19 08:08 J -32104118.33 -32104118.16 -32104117.94 0.0088 0.0058
 Neptune -92609-09-20 18:56 J -32103750.74 -32103750.71 -32103750.64 0.0088 0.0087
 Saturn -92607-08-03 12:42 J -32103069.03 -32103068.97 -32103068.90 0.0280 0.0268
 Saturn -92606-08-17 04:47 J -32102690.55 -32102690.30 -32102690.05 0.0279 0.0021
 Saturn -92605-08-29 13:54 J -32102312.06 -32102311.92 -32102311.76 0.0278 0.0220
 Mars -92596-07-08 19:25 J -32099076.82 -32099076.69 -32099076.57 0.1876 0.1507
 Saturn -92591-02-01 21:35 J -32097407.81 -32097407.60 -32097407.39 0.0280 0.0132
 Saturn -92590-02-14 13:25 J -32097030.16 -32097029.94 -32097029.71 0.0280 0.0105
 Mars -92589-01-01 21:35 J -32096708.66 -32096708.60 -32096708.53 0.1660 0.1524
 Jupiter -92582-09-26 04:03 J -32093884.53 -32093884.33 -32093884.13 0.0538 0.0281
 Uranus -92578-04-05 12:27 J -32092597.13 -32092596.98 -32092596.79 0.0147 0.0111
 Uranus -92577-04-09 21:35 J -32092226.81 -32092226.60 -32092226.35 0.0147 0.0068
 Saturn -92577-08-10 22:47 J -32092103.77 -32092103.55 -32092103.32 0.0279 0.0119
 Uranus -92576-04-15 07:39 J -32091856.44 -32091856.18 -32091855.92 0.0147 0.0023
 Saturn -92576-08-24 10:32 J -32091725.28 -32091725.06 -32091724.83 0.0279 0.0125
 Uranus -92575-04-20 17:01 J -32091486.04 -32091485.79 -32091485.53 0.0147 0.0021
 Uranus -92574-04-26 02:51 J -32091115.60 -32091115.38 -32091115.14 0.0146 0.0064
 Uranus -92573-04-30 12:27 J -32090745.14 -32090744.98 -32090744.79 0.0146 0.0107
 Jupiter -92570-10-01 08:23 J -32089496.37 -32089496.15 -32089495.92 0.0540 0.0130
 Jupiter -92564-03-16 20:51 J -32087502.78 -32087502.63 -32087502.47 0.0490 0.0367

Saturn -92562-01-27 17:01 J -32086820.91 -32086820.79 -32086820.65 0.0279 0.0232
 Saturn -92561-02-09 05:30 J -32086443.51 -32086443.27 -32086443.03 0.0280 0.0002
 Saturn -92560-02-20 23:44 J -32086065.62 -32086065.51 -32086065.37 0.0281 0.0239
 Mars -92557-01-09 16:03 J -32085013.00 -32085012.83 -32085012.66 0.1644 0.0584
 Jupiter -92552-03-21 05:01 J -32083115.52 -32083115.29 -32083115.05 0.0489 0.0066
 Saturn -92548-08-04 23:15 J -32081517.65 -32081517.53 -32081517.38 0.0279 0.0235
 Saturn -92547-08-18 14:37 J -32081139.14 -32081138.89 -32081138.64 0.0279 0.0011
 Saturn -92546-08-31 22:47 J -32080760.64 -32080760.55 -32080760.42 0.0278 0.0249
 Jupiter -92540-03-25 10:32 J -32078728.26 -32078728.06 -32078727.85 0.0488 0.0229
 Uranus -92537-10-08 00:56 J -32077435.52 -32077435.46 -32077435.38 0.0131 0.0126
 Uranus -92536-10-12 02:23 J -32077066.56 -32077066.40 -32077066.23 0.0131 0.0097
 Uranus -92535-10-16 03:20 J -32076697.57 -32076697.36 -32076697.14 0.0131 0.0067
 Uranus -92534-10-20 04:32 J -32076328.55 -32076328.31 -32076328.07 0.0132 0.0038
 Uranus -92533-10-23 05:15 J -32075959.52 -32075959.28 -32075959.03 0.0132 0.0009
 Saturn -92532-02-03 01:54 J -32075856.63 -32075856.42 -32075856.19 0.0280 0.0104
 Neptune -92532-03-01 01:11 J -32075830.48 -32075830.45 -32075830.39 0.0089 0.0087
 Uranus -92532-10-27 05:59 J -32075590.49 -32075590.25 -32075590.00 0.0132 0.0022
 Saturn -92531-02-15 18:13 J -32075478.94 -32075478.74 -32075478.51 0.0280 0.0134
 Neptune -92531-03-03 12:42 J -32075463.15 -32075462.97 -32075462.76 0.0089 0.0057
 Uranus -92531-10-31 06:42 J -32075221.44 -32075221.22 -32075220.99 0.0132 0.0051
 Neptune -92530-03-06 00:27 J -32075095.72 -32075095.48 -32075095.23 0.0089 0.0027
 Uranus -92530-11-04 07:11 J -32074852.38 -32074852.20 -32074851.99 0.0133 0.0082
 Neptune -92529-03-07 12:42 J -32074728.23 -32074727.97 -32074727.71 0.0089 0.0003
 Uranus -92529-11-07 07:39 J -32074483.30 -32074483.18 -32074483.02 0.0133 0.0111
 Neptune -92528-03-10 00:13 J -32074360.71 -32074360.49 -32074360.23 0.0089 0.0034
 Neptune -92527-03-12 12:27 J -32073993.14 -32073992.98 -32073992.79 0.0089 0.0064
 Saturn -92518-08-13 08:51 J -32070552.37 -32070552.13 -32070551.89 0.0279 0.0086
 Mars -92517-07-12 16:03 J -32070218.04 -32070217.83 -32070217.61 0.1882 0.0322
 Saturn -92517-08-25 20:08 J -32070173.86 -32070173.66 -32070173.45 0.0279 0.0155
 Mars -92510-01-03 22:32 J -32067851.72 -32067851.56 -32067851.41 0.1657 0.0863

Saturn	-92503-01-28 21:49 J	-32065269.75	-32065269.59	-32065269.42	0.0279	0.0204
Saturn	-92502-02-10 10:47 J	-32064892.29	-32064892.05	-32064891.81	0.0280	0.0028
Saturn	-92501-02-23 05:15 J	-32064514.34	-32064514.28	-32064514.19	0.0281	0.0266
Jupiter	-92499-09-25 07:11 J	-32063569.37	-32063569.20	-32063569.01	0.0538	0.0338
Uranus	-92495-03-31 14:37 J	-32062285.89	-32062285.89	-32062285.87	0.0148	0.0147
Uranus	-92494-04-05 23:15 J	-32061915.69	-32061915.53	-32061915.33	0.0147	0.0106
Uranus	-92493-04-10 08:51 J	-32061545.36	-32061545.13	-32061544.90	0.0147	0.0063
Uranus	-92492-04-15 18:27 J	-32061174.99	-32061174.73	-32061174.47	0.0147	0.0019
Uranus	-92491-04-21 04:03 J	-32060804.58	-32060804.33	-32060804.07	0.0147	0.0024
Uranus	-92490-04-26 13:39 J	-32060434.14	-32060433.93	-32060433.68	0.0146	0.0068
Uranus	-92489-04-30 23:44 J	-32060063.68	-32060063.51	-32060063.34	0.0146	0.0109
Saturn	-92489-08-06 08:23 J	-32059966.32	-32059966.15	-32059965.97	0.0279	0.0203
Saturn	-92488-08-19 23:01 J	-32059587.79	-32059587.54	-32059587.30	0.0279	0.0042
Saturn	-92487-09-02 06:27 J	-32059209.24	-32059209.23	-32059209.20	0.0278	0.0277
Jupiter	-92487-09-30 14:08 J	-32059181.13	-32059180.91	-32059180.68	0.0540	0.0083
Jupiter	-92481-03-16 02:23 J	-32057187.52	-32057187.40	-32057187.27	0.0491	0.0409
Mars	-92478-01-11 15:49 J	-32056155.96	-32056155.84	-32056155.72	0.1641	0.1198
Jupiter	-92475-10-05 17:44 J	-32054792.85	-32054792.76	-32054792.66	0.0541	0.0490
Saturn	-92473-02-05 04:47 J	-32054305.53	-32054305.30	-32054305.07	0.0280	0.0077
Saturn	-92472-02-16 21:20 J	-32053927.80	-32053927.61	-32053927.40	0.0281	0.0160
Jupiter	-92469-03-20 10:32 J	-32052800.29	-32052800.06	-32052799.83	0.0489	0.0107
Saturn	-92459-08-14 16:03 J	-32049001.07	-32049000.83	-32049000.58	0.0279	0.0056
Saturn	-92458-08-28 03:06 J	-32048622.55	-32048622.37	-32048622.18	0.0279	0.0184
Jupiter	-92457-03-24 20:08 J	-32048412.87	-32048412.66	-32048412.44	0.0488	0.0197
Uranus	-92453-10-08 12:27 J	-32046754.05	-32046753.98	-32046753.87	0.0131	0.0122
Pluto	-92452-05-19 04:03 J	-32046531.41	-32046531.33	-32046531.17	0.0066	0.0060
Uranus	-92452-10-12 13:54 J	-32046385.08	-32046384.92	-32046384.73	0.0131	0.0093
Pluto	-92451-05-20 21:06 J	-32046164.83	-32046164.62	-32046164.36	0.0067	0.0033
Uranus	-92451-10-16 15:06 J	-32046016.08	-32046015.87	-32046015.64	0.0131	0.0064
Neptune	-92450-09-09 19:11 J	-32045687.82	-32045687.70	-32045687.56	0.0088	0.0077

Uranus -92450-10-20 16:18 J -32045647.06 -32045646.82 -32045646.57 0.0132 0.0034
 Neptune -92449-09-11 06:56 J -32045320.43 -32045320.21 -32045319.99 0.0088 0.0047
 Uranus -92449-10-23 17:01 J -32045278.04 -32045277.79 -32045277.54 0.0132 0.0005
 Neptune -92448-09-13 17:59 J -32044952.99 -32044952.75 -32044952.48 0.0088 0.0018
 Uranus -92448-10-27 17:44 J -32044909.01 -32044908.76 -32044908.52 0.0132 0.0024
 Neptune -92447-09-16 05:30 J -32044585.52 -32044585.27 -32044585.01 0.0088 0.0013
 Uranus -92447-10-31 17:59 J -32044539.96 -32044539.75 -32044539.51 0.0132 0.0054
 Neptune -92446-09-18 16:03 J -32044218.03 -32044217.83 -32044217.58 0.0088 0.0043
 Uranus -92446-11-04 18:42 J -32044170.91 -32044170.72 -32044170.52 0.0133 0.0083
 Neptune -92445-09-20 03:06 J -32043850.51 -32043850.37 -32043850.21 0.0088 0.0072
 Uranus -92445-11-07 19:25 J -32043801.81 -32043801.69 -32043801.55 0.0133 0.0112
 Saturn -92444-01-30 00:56 J -32043718.64 -32043718.46 -32043718.27 0.0279 0.0177
 Saturn -92443-02-11 13:54 J -32043341.16 -32043340.92 -32043340.68 0.0280 0.0054
 Mars -92431-01-05 23:01 J -32038994.72 -32038994.54 -32038994.36 0.1654 0.0214
 Saturn -92430-08-08 15:20 J -32038415.05 -32038414.86 -32038414.66 0.0279 0.0172
 Saturn -92429-08-21 05:44 J -32038036.50 -32038036.26 -32038036.02 0.0278 0.0071
 Jupiter -92416-09-24 12:13 J -32033254.15 -32033253.99 -32033253.83 0.0538 0.0387
 Saturn -92415-01-24 18:27 J -32033131.75 -32033131.73 -32033131.69 0.0279 0.0277
 Saturn -92414-02-06 05:15 J -32032754.51 -32032754.28 -32032754.04 0.0280 0.0052
 Saturn -92413-02-18 22:18 J -32032376.75 -32032376.57 -32032376.39 0.0281 0.0184
 Uranus -92411-04-01 01:25 J -32031604.48 -32031604.44 -32031604.36 0.0148 0.0143
 Uranus -92410-04-06 10:18 J -32031234.24 -32031234.07 -32031233.87 0.0147 0.0102
 Uranus -92409-04-10 19:54 J -32030863.90 -32030863.67 -32030863.43 0.0147 0.0059
 Uranus -92408-04-16 05:30 J -32030493.52 -32030493.27 -32030493.00 0.0147 0.0016
 Uranus -92407-04-21 15:06 J -32030123.12 -32030122.87 -32030122.61 0.0147 0.0028
 Uranus -92406-04-27 01:11 J -32029752.68 -32029752.45 -32029752.22 0.0146 0.0070
 Uranus -92405-05-01 11:01 J -32029382.21 -32029382.04 -32029381.88 0.0146 0.0112
 Jupiter -92404-09-29 10:47 J -32028866.28 -32028866.05 -32028865.82 0.0539 0.0003
 Saturn -92401-08-02 03:20 J -32027828.41 -32027828.36 -32027828.29 0.0281 0.0272
 Saturn -92400-08-15 21:20 J -32027449.86 -32027449.61 -32027449.36 0.0280 0.0028

Saturn -92399-08-29 07:54 J -32027071.32 -32027071.17 -32027071.00 0.0279 0.0211
 Jupiter -92398-03-16 12:42 J -32026872.07 -32026871.97 -32026871.86 0.0491 0.0439
 Jupiter -92392-10-04 14:37 J -32024478.03 -32024477.89 -32024477.74 0.0541 0.0410
 Jupiter -92386-03-20 21:20 J -32022484.84 -32022484.61 -32022484.39 0.0490 0.0135
 Saturn -92385-02-01 02:23 J -32022167.59 -32022167.40 -32022167.19 0.0279 0.0152
 Saturn -92384-02-12 15:35 J -32021790.08 -32021789.85 -32021789.62 0.0280 0.0079
 Jupiter -92374-03-25 05:44 J -32018097.48 -32018097.26 -32018097.04 0.0488 0.0165
 Saturn -92371-08-09 20:23 J -32016863.87 -32016863.65 -32016863.44 0.0280 0.0144
 Saturn -92370-08-23 10:32 J -32016485.30 -32016485.06 -32016484.83 0.0279 0.0098
 Uranus -92369-10-09 01:39 J -32016072.54 -32016072.43 -32016072.31 0.0131 0.0116
 Uranus -92368-10-13 02:51 J -32015703.55 -32015703.38 -32015703.18 0.0131 0.0089
 Neptune -92367-03-02 19:54 J -32015562.79 -32015562.67 -32015562.50 0.0089 0.0073
 Uranus -92367-10-17 04:18 J -32015334.53 -32015334.32 -32015334.09 0.0131 0.0060
 Neptune -92366-03-05 07:25 J -32015195.39 -32015195.19 -32015194.94 0.0089 0.0043
 Uranus -92366-10-21 05:15 J -32014965.52 -32014965.28 -32014965.03 0.0132 0.0030
 Pluto -92366-11-22 10:03 J -32014933.24 -32014933.08 -32014932.91 0.0078 0.0058
 Neptune -92365-03-06 19:11 J -32014827.94 -32014827.70 -32014827.43 0.0089 0.0013
 Uranus -92365-10-24 05:59 J -32014596.50 -32014596.25 -32014596.00 0.0132 0.0002
 Neptune -92364-03-09 06:56 J -32014460.45 -32014460.21 -32014459.94 0.0089 0.0018
 Uranus -92364-10-28 06:27 J -32014227.47 -32014227.23 -32014226.98 0.0132 0.0028
 Neptune -92363-03-11 18:56 J -32014092.91 -32014092.71 -32014092.48 0.0089 0.0048
 Uranus -92363-11-01 06:56 J -32013858.43 -32013858.21 -32013857.98 0.0132 0.0057
 Neptune -92362-03-14 07:25 J -32013725.31 -32013725.19 -32013725.07 0.0089 0.0078
 Jupiter -92362-03-29 12:13 J -32013710.06 -32013709.99 -32013709.91 0.0487 0.0458
 Uranus -92362-11-05 07:25 J -32013489.36 -32013489.19 -32013488.99 0.0133 0.0086
 Uranus -92361-11-08 08:08 J -32013120.27 -32013120.16 -32013120.03 0.0133 0.0114
 Saturn -92356-01-25 18:27 J -32011580.83 -32011580.73 -32011580.63 0.0279 0.0252
 Saturn -92355-02-07 05:15 J -32011203.52 -32011203.28 -32011203.04 0.0280 0.0027
 Saturn -92354-02-19 21:49 J -32010825.74 -32010825.59 -32010825.42 0.0280 0.0207
 Mars -92352-01-07 23:30 J -32010137.69 -32010137.52 -32010137.34 0.1650 0.0418

Saturn -92342-08-04 06:42 J -32006277.33 -32006277.22 -32006277.09 0.0281 0.0246
 Saturn -92341-08-17 00:56 J -32005898.71 -32005898.46 -32005898.21 0.0280 0.0003
 Saturn -92340-08-30 11:15 J -32005520.15 -32005520.03 -32005519.89 0.0279 0.0236
 Jupiter -92333-09-23 09:49 J -32002939.20 -32002939.09 -32002938.96 0.0537 0.0461
 Uranus -92327-04-01 13:39 J -32000923.00 -32000922.93 -32000922.82 0.0148 0.0138
 Saturn -92326-02-02 03:06 J -32000616.58 -32000616.37 -32000616.16 0.0279 0.0128
 Uranus -92326-04-06 22:32 J -32000552.73 -32000552.56 -32000552.34 0.0147 0.0097
 Saturn -92325-02-14 16:03 J -32000239.05 -32000238.83 -32000238.60 0.0280 0.0103
 Uranus -92325-04-11 08:08 J -32000182.39 -32000182.16 -32000181.91 0.0147 0.0054
 Uranus -92324-04-16 17:44 J -31999812.01 -31999811.76 -31999811.50 0.0147 0.0012
 Uranus -92323-04-22 03:20 J -31999441.61 -31999441.36 -31999441.10 0.0147 0.0031
 Uranus -92322-04-27 13:25 J -31999071.16 -31999070.94 -31999070.71 0.0146 0.0073
 Uranus -92321-05-01 22:47 J -31998700.70 -31998700.55 -31998700.38 0.0146 0.0114
 Jupiter -92321-09-28 15:49 J -31998551.07 -31998550.84 -31998550.61 0.0539 0.0048
 Jupiter -92315-03-15 23:30 J -31996556.59 -31996556.52 -31996556.44 0.0491 0.0465
 Mars -92312-07-07 16:03 J -31995346.94 -31995346.83 -31995346.72 0.1868 0.1578
 Saturn -92312-08-10 23:59 J -31995312.72 -31995312.50 -31995312.27 0.0280 0.0117
 Saturn -92311-08-24 14:08 J -31994934.13 -31994933.91 -31994933.68 0.0279 0.0124
 Jupiter -92309-10-03 23:15 J -31994162.69 -31994162.53 -31994162.36 0.0541 0.0372
 Mars -92305-01-03 04:03 J -31992976.46 -31992976.33 -31992976.18 0.1664 0.1055
 Jupiter -92303-03-20 05:59 J -31992169.47 -31992169.25 -31992169.02 0.0490 0.0169
 Saturn -92297-01-27 17:44 J -31990029.89 -31990029.76 -31990029.62 0.0279 0.0229
 Saturn -92296-02-08 04:32 J -31989652.56 -31989652.31 -31989652.07 0.0279 0.0006
 Saturn -92295-02-20 20:51 J -31989274.76 -31989274.63 -31989274.48 0.0280 0.0229
 Jupiter -92291-03-24 14:37 J -31987782.11 -31987781.89 -31987781.66 0.0489 0.0132
 Neptune -92285-09-10 12:13 J -31985420.16 -31985419.99 -31985419.80 0.0088 0.0063
 Uranus -92285-10-09 14:23 J -31985391.02 -31985390.90 -31985390.76 0.0131 0.0112
 Neptune -92284-09-13 00:13 J -31985052.73 -31985052.49 -31985052.25 0.0088 0.0033
 Uranus -92284-10-13 15:49 J -31985022.02 -31985021.84 -31985021.64 0.0131 0.0084
 Saturn -92283-08-05 08:51 J -31984726.28 -31984726.13 -31984725.97 0.0281 0.0221

Neptune -92283-09-15 11:44 J -31984685.27 -31984685.01 -31984684.75 0.0088 0.0003
 Uranus -92283-10-17 17:01 J -31984653.01 -31984652.79 -31984652.56 0.0131 0.0056
 Saturn -92282-08-19 03:06 J -31984347.62 -31984347.37 -31984347.12 0.0280 0.0024
 Neptune -92282-09-17 22:47 J -31984317.79 -31984317.55 -31984317.30 0.0088 0.0027
 Uranus -92282-10-21 17:44 J -31984284.00 -31984283.76 -31984283.51 0.0132 0.0027
 Saturn -92281-08-31 13:25 J -31983969.02 -31983968.94 -31983968.84 0.0279 0.0259
 Neptune -92281-09-19 09:20 J -31983950.28 -31983950.11 -31983949.89 0.0088 0.0056
 Uranus -92281-10-24 18:27 J -31983914.98 -31983914.73 -31983914.48 0.0132 0.0002
 Neptune -92280-09-21 20:08 J -31983582.70 -31983582.66 -31983582.57 0.0088 0.0086
 Uranus -92280-10-28 18:42 J -31983545.95 -31983545.72 -31983545.47 0.0132 0.0030
 Jupiter -92279-03-28 23:44 J -31983394.61 -31983394.51 -31983394.40 0.0488 0.0432
 Uranus -92279-11-01 18:56 J -31983176.91 -31983176.71 -31983176.47 0.0132 0.0060
 Uranus -92278-11-05 19:25 J -31982807.86 -31982807.69 -31982807.49 0.0133 0.0088
 Uranus -92277-11-08 20:08 J -31982438.76 -31982438.66 -31982438.53 0.0133 0.0116
 Mars -92273-01-10 23:59 J -31981280.63 -31981280.50 -31981280.36 0.1647 0.1054
 Saturn -92267-02-03 03:35 J -31979065.58 -31979065.35 -31979065.13 0.0278 0.0104
 Saturn -92266-02-15 16:32 J -31978688.03 -31978687.81 -31978687.59 0.0279 0.0125
 Saturn -92253-08-12 02:37 J -31973761.62 -31973761.39 -31973761.14 0.0280 0.0092
 Saturn -92252-08-25 17:01 J -31973383.00 -31973382.79 -31973382.58 0.0279 0.0148
 Jupiter -92250-09-23 18:13 J -31972623.83 -31972623.74 -31972623.66 0.0537 0.0498
 Uranus -92243-04-02 01:54 J -31970241.52 -31970241.42 -31970241.30 0.0148 0.0133
 Uranus -92242-04-07 10:32 J -31969871.24 -31969871.06 -31969870.84 0.0148 0.0093
 Uranus -92241-04-11 19:54 J -31969500.90 -31969500.67 -31969500.41 0.0147 0.0051
 Uranus -92240-04-17 05:59 J -31969130.51 -31969130.25 -31969129.99 0.0147 0.0008
 Uranus -92239-04-22 15:35 J -31968760.10 -31968759.85 -31968759.60 0.0147 0.0034
 Saturn -92238-01-28 17:30 J -31968478.92 -31968478.77 -31968478.60 0.0278 0.0205
 Uranus -92238-04-28 01:25 J -31968389.66 -31968389.44 -31968389.21 0.0147 0.0076
 Jupiter -92238-09-28 23:59 J -31968235.73 -31968235.50 -31968235.27 0.0539 0.0089
 Saturn -92237-02-10 03:49 J -31968101.58 -31968101.34 -31968101.10 0.0279 0.0020
 Uranus -92237-05-02 10:47 J -31968019.19 -31968019.05 -31968018.87 0.0146 0.0117

Saturn -92236-02-21 20:08 J -31967723.75 -31967723.66 -31967723.54 0.0280 0.0250
 Mars -92233-07-11 11:30 J -31966488.23 -31966488.02 -31966487.81 0.1874 0.0199
 Mars -92226-01-05 05:15 J -31964119.45 -31964119.28 -31964119.10 0.1661 0.0392
 Jupiter -92226-10-03 23:30 J -31963847.71 -31963847.52 -31963847.33 0.0539 0.0303
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 Saturn -92223-08-20 04:32 J -31962796.55 -31962796.31 -31962796.06 0.0280 0.0047
 Jupiter -92220-03-19 16:47 J -31961854.02 -31961853.80 -31961853.59 0.0491 0.0196
 Saturn -92208-02-04 04:18 J -31957514.55 -31957514.32 -31957514.09 0.0278 0.0080
 Jupiter -92208-03-24 01:25 J -31957466.67 -31957466.44 -31957466.21 0.0489 0.0106
 Saturn -92207-02-16 17:30 J -31957136.98 -31957136.77 -31957136.57 0.0279 0.0148
 Neptune -92203-03-02 03:06 J -31955662.38 -31955662.37 -31955662.31 0.0089 0.0088
 Pluto -92203-05-22 00:13 J -31955581.76 -31955581.49 -31955581.22 0.0067 0.0005
 Neptune -92202-03-04 14:37 J -31955295.07 -31955294.89 -31955294.69 0.0089 0.0058
 Neptune -92201-03-06 01:54 J -31954927.65 -31954927.42 -31954927.16 0.0089 0.0029
 Uranus -92201-10-10 04:03 J -31954709.46 -31954709.33 -31954709.18 0.0131 0.0108
 Neptune -92200-03-08 13:39 J -31954560.18 -31954559.93 -31954559.67 0.0089 0.0002
 Uranus -92200-10-14 05:01 J -31954340.47 -31954340.29 -31954340.07 0.0131 0.0081
 Neptune -92199-03-11 00:56 J -31954192.68 -31954192.46 -31954192.20 0.0089 0.0032
 Uranus -92199-10-18 06:27 J -31953971.46 -31953971.23 -31953971.00 0.0131 0.0052
 Neptune -92198-03-13 13:11 J -31953825.12 -31953824.95 -31953824.75 0.0089 0.0062
 Uranus -92198-10-22 06:56 J -31953602.45 -31953602.21 -31953601.96 0.0132 0.0024
 Uranus -92197-10-25 07:25 J -31953233.43 -31953233.19 -31953232.94 0.0132 0.0005
 Jupiter -92196-03-28 10:03 J -31953079.21 -31953079.08 -31953078.95 0.0488 0.0404
 Uranus -92196-10-29 07:54 J -31952864.41 -31952864.17 -31952863.93 0.0132 0.0033
 Uranus -92195-11-02 08:08 J -31952495.37 -31952495.16 -31952494.93 0.0132 0.0062
 Saturn -92194-08-14 05:44 J -31952210.50 -31952210.26 -31952210.02 0.0280 0.0066
 Uranus -92194-11-06 08:37 J -31952126.31 -31952126.14 -31952125.95 0.0133 0.0090
 Saturn -92193-08-26 19:25 J -31951831.88 -31951831.69 -31951831.49 0.0279 0.0172
 Uranus -92193-11-09 09:20 J -31951757.21 -31951757.11 -31951756.98 0.0133 0.0118
 Saturn -92179-01-29 18:13 J -31946927.91 -31946927.74 -31946927.55 0.0278 0.0181

Saturn -92178-02-11 04:32 J -31946550.55 -31946550.31 -31946550.07 0.0279 0.0043
 Saturn -92177-02-23 21:06 J -31946172.67 -31946172.62 -31946172.56 0.0280 0.0272
 Saturn -92165-08-07 11:30 J -31941624.22 -31941624.02 -31941623.82 0.0281 0.0173
 Saturn -92164-08-21 05:59 J -31941245.49 -31941245.25 -31941245.01 0.0280 0.0070
 Uranus -92159-04-02 15:06 J -31939559.98 -31939559.87 -31939559.72 0.0148 0.0128
 Uranus -92158-04-08 00:13 J -31939189.69 -31939189.49 -31939189.27 0.0148 0.0087
 Uranus -92157-04-12 09:35 J -31938819.34 -31938819.10 -31938818.85 0.0147 0.0046
 Uranus -92156-04-17 18:56 J -31938448.97 -31938448.71 -31938448.45 0.0147 0.0005
 Uranus -92155-04-23 04:47 J -31938078.55 -31938078.30 -31938078.05 0.0147 0.0037
 Jupiter -92155-09-27 22:32 J -31937920.78 -31937920.56 -31937920.34 0.0538 0.0158
 Uranus -92154-04-28 14:08 J -31937708.11 -31937707.91 -31937707.67 0.0147 0.0079
 Uranus -92153-05-02 23:59 J -31937337.65 -31937337.50 -31937337.35 0.0146 0.0119
 Saturn -92150-01-24 23:15 J -31936340.55 -31936340.53 -31936340.48 0.0277 0.0274
 Saturn -92149-02-06 06:42 J -31935963.45 -31935963.22 -31935962.98 0.0278 0.0056
 Saturn -92148-02-17 19:25 J -31935585.87 -31935585.69 -31935585.48 0.0279 0.0172
 Mars -92147-01-07 06:42 J -31935262.40 -31935262.22 -31935262.04 0.1657 0.0264
 Jupiter -92143-10-03 02:51 J -31933532.58 -31933532.38 -31933532.18 0.0540 0.0248
 Jupiter -92137-03-19 03:06 J -31931538.58 -31931538.37 -31931538.16 0.0491 0.0222
 Saturn -92135-08-15 09:06 J -31930659.37 -31930659.12 -31930658.87 0.0280 0.0041
 Saturn -92134-08-28 22:47 J -31930280.72 -31930280.55 -31930280.36 0.0279 0.0196
 Jupiter -92125-03-23 10:18 J -31927151.30 -31927151.07 -31927150.84 0.0489 0.0073
 Neptune -92121-09-09 16:18 J -31925519.91 -31925519.82 -31925519.68 0.0088 0.0079
 Saturn -92120-01-30 20:37 J -31925376.83 -31925376.64 -31925376.44 0.0278 0.0157
 Neptune -92120-09-12 04:32 J -31925152.51 -31925152.31 -31925152.08 0.0088 0.0049
 Saturn -92119-02-12 06:42 J -31924999.45 -31924999.22 -31924998.98 0.0279 0.0067
 Neptune -92119-09-14 16:32 J -31924785.06 -31924784.81 -31924784.56 0.0088 0.0020
 Neptune -92118-09-17 03:49 J -31924417.59 -31924417.34 -31924417.08 0.0088 0.0010
 Uranus -92118-10-07 15:49 J -31924396.85 -31924396.84 -31924396.80 0.0131 0.0130
 Neptune -92117-09-18 15:06 J -31924050.10 -31924049.87 -31924049.63 0.0088 0.0040
 Uranus -92117-10-10 17:15 J -31924027.91 -31924027.78 -31924027.61 0.0131 0.0104

Pluto -92117-11-24 11:30 J -31923983.22 -31923983.02 -31923982.78 0.0077 0.0038
 Neptune -92116-09-21 01:39 J -31923682.56 -31923682.43 -31923682.24 0.0088 0.0070
 Uranus -92116-10-14 18:42 J -31923658.92 -31923658.72 -31923658.51 0.0131 0.0076
 Uranus -92115-10-18 19:39 J -31923289.91 -31923289.68 -31923289.45 0.0131 0.0048
 Uranus -92114-10-22 20:08 J -31922920.91 -31922920.66 -31922920.41 0.0132 0.0020
 Jupiter -92113-03-27 18:27 J -31922763.87 -31922763.73 -31922763.57 0.0488 0.0371
 Uranus -92113-10-25 20:37 J -31922551.89 -31922551.64 -31922551.39 0.0132 0.0008
 Uranus -92112-10-29 20:51 J -31922182.87 -31922182.63 -31922182.39 0.0132 0.0036
 Uranus -92111-11-02 21:06 J -31921813.82 -31921813.62 -31921813.39 0.0132 0.0064
 Uranus -92110-11-06 21:35 J -31921444.77 -31921444.60 -31921444.42 0.0132 0.0092
 Uranus -92109-11-09 22:03 J -31921075.67 -31921075.58 -31921075.46 0.0133 0.0120
 Saturn -92106-08-09 14:08 J -31920073.11 -31920072.91 -31920072.69 0.0281 0.0149
 Saturn -92105-08-22 08:37 J -31919694.37 -31919694.14 -31919693.90 0.0280 0.0094
 Mars -92100-01-01 09:20 J -31918101.23 -31918101.11 -31918100.98 0.1672 0.1238
 Saturn -92091-01-26 03:06 J -31914789.46 -31914789.37 -31914789.26 0.0277 0.0249
 Saturn -92090-02-07 10:32 J -31914412.30 -31914412.06 -31914411.82 0.0278 0.0031
 Saturn -92089-02-19 23:30 J -31914034.68 -31914034.52 -31914034.33 0.0279 0.0195
 Saturn -92077-08-02 16:32 J -31909486.90 -31909486.81 -31909486.70 0.0281 0.0257
 Saturn -92076-08-16 13:39 J -31909108.18 -31909107.93 -31909107.68 0.0280 0.0016
 Uranus -92075-04-03 03:06 J -31908878.49 -31908878.37 -31908878.21 0.0148 0.0123
 Saturn -92075-08-30 03:35 J -31908729.50 -31908729.35 -31908729.20 0.0279 0.0220
 Uranus -92074-04-08 11:59 J -31908508.20 -31908508.00 -31908507.77 0.0148 0.0083
 Uranus -92073-04-12 21:20 J -31908137.85 -31908137.61 -31908137.36 0.0148 0.0041
 Uranus -92072-04-18 07:11 J -31907767.46 -31907767.20 -31907766.94 0.0147 0.0002
 Jupiter -92072-09-27 03:35 J -31907605.57 -31907605.35 -31907605.14 0.0538 0.0206
 Uranus -92071-04-23 16:32 J -31907397.05 -31907396.81 -31907396.55 0.0147 0.0041
 Uranus -92070-04-29 02:23 J -31907026.60 -31907026.40 -31907026.17 0.0147 0.0082
 Uranus -92069-05-03 11:59 J -31906656.12 -31906656.00 -31906655.84 0.0146 0.0121
 Mars -92068-01-09 07:25 J -31906405.34 -31906405.19 -31906405.03 0.1654 0.0895
 Saturn -92061-02-02 01:39 J -31903825.64 -31903825.43 -31903825.22 0.0278 0.0131

Saturn -92060-02-13 11:44 J -31903448.23 -31903448.01 -31903447.78 0.0279 0.0092
 Jupiter -92060-10-02 09:49 J -31903217.30 -31903217.09 -31903216.87 0.0539 0.0202
 Jupiter -92054-03-19 10:32 J -31901223.25 -31901223.06 -31901222.86 0.0491 0.0259
 Saturn -92047-08-10 18:13 J -31898521.95 -31898521.74 -31898521.50 0.0281 0.0124
 Saturn -92046-08-24 12:27 J -31898143.20 -31898142.98 -31898142.75 0.0280 0.0117
 Jupiter -92042-03-23 17:30 J -31896836.00 -31896835.77 -31896835.53 0.0490 0.0037
 Neptune -92038-03-03 20:51 J -31895394.76 -31895394.63 -31895394.48 0.0089 0.0074
 Neptune -92037-03-05 07:54 J -31895027.37 -31895027.17 -31895026.93 0.0089 0.0045
 Neptune -92036-03-07 19:25 J -31894659.94 -31894659.69 -31894659.43 0.0089 0.0015
 Neptune -92035-03-10 07:11 J -31894292.45 -31894292.20 -31894291.95 0.0089 0.0015
 Neptune -92034-03-12 18:27 J -31893924.94 -31893924.73 -31893924.49 0.0089 0.0045
 Uranus -92034-10-08 05:59 J -31893715.31 -31893715.25 -31893715.16 0.0131 0.0125
 Neptune -92033-03-14 06:27 J -31893557.36 -31893557.23 -31893557.09 0.0089 0.0075
 Uranus -92033-10-11 07:25 J -31893346.34 -31893346.19 -31893346.01 0.0131 0.0098
 Saturn -92032-01-27 08:51 J -31893238.27 -31893238.13 -31893237.99 0.0277 0.0222
 Uranus -92032-10-15 08:23 J -31892977.34 -31892977.15 -31892976.92 0.0131 0.0072
 Saturn -92031-02-08 16:18 J -31892861.06 -31892860.82 -31892860.58 0.0278 0.0005
 Uranus -92031-10-19 09:35 J -31892608.33 -31892608.10 -31892607.86 0.0131 0.0043
 Saturn -92030-02-21 05:44 J -31892483.40 -31892483.26 -31892483.10 0.0279 0.0220
 Jupiter -92030-03-28 01:39 J -31892448.60 -31892448.43 -31892448.26 0.0489 0.0336
 Uranus -92030-10-23 10:03 J -31892239.33 -31892239.08 -31892238.83 0.0131 0.0016
 Uranus -92029-10-26 10:32 J -31891870.31 -31891870.06 -31891869.81 0.0132 0.0012
 Mars -92028-07-06 15:49 J -31891616.95 -31891616.84 -31891616.73 0.1859 0.1576
 Uranus -92028-10-30 10:32 J -31891501.28 -31891501.06 -31891500.81 0.0132 0.0040
 Uranus -92027-11-03 10:47 J -31891132.25 -31891132.05 -31891131.82 0.0132 0.0067
 Uranus -92026-11-07 11:15 J -31890763.19 -31890763.03 -31890762.84 0.0132 0.0095
 Uranus -92025-11-10 11:59 J -31890394.08 -31890394.00 -31890393.89 0.0133 0.0122
 Mars -92021-01-04 10:47 J -31889244.22 -31889244.05 -31889243.88 0.1669 0.0581
 Saturn -92018-08-04 23:59 J -31887935.64 -31887935.50 -31887935.35 0.0281 0.0229
 Saturn -92017-08-17 20:37 J -31887556.89 -31887556.64 -31887556.39 0.0280 0.0013

Saturn -92016-08-31 10:18 J -31887178.19 -31887178.07 -31887177.95 0.0279 0.0245

Saturn -92002-02-03 08:08 J -31882274.37 -31882274.16 -31882273.93 0.0278 0.0104

Saturn -92001-02-15 18:42 J -31881896.94 -31881896.72 -31881896.50 0.0279 0.0118

92ND MILLENNIUM BCE

This is a list of transits of Earth in the 92nd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
	TRANSIT							
	TIME							
Uranus	-91991-04-03 16:18 J		-31878196.96	-31878196.82	-31878196.65	0.0148	0.0117	
Uranus	-91990-04-09 01:11 J		-31877826.66	-31877826.45	-31877826.22	0.0148	0.0077	
Mars	-91989-01-12 08:08 J		-31877548.22	-31877548.16	-31877548.09	0.1651	0.1525	
Uranus	-91989-04-13 10:32 J		-31877456.31	-31877456.06	-31877455.81	0.0148	0.0037	
Jupiter	-91989-09-26 05:15 J		-31877290.48	-31877290.28	-31877290.08	0.0536	0.0262	
Uranus	-91988-04-18 20:08 J		-31877085.92	-31877085.66	-31877085.40	0.0147	0.0004	
Saturn	-91988-08-12 00:13 J		-31876970.72	-31876970.49	-31876970.25	0.0281	0.0097	
Uranus	-91987-04-24 05:59 J		-31876715.50	-31876715.25	-31876715.00	0.0147	0.0044	
Saturn	-91987-08-25 17:59 J		-31876591.96	-31876591.75	-31876591.53	0.0280	0.0142	
Uranus	-91986-04-29 15:35 J		-31876345.05	-31876344.85	-31876344.62	0.0147	0.0085	
Uranus	-91985-05-04 01:11 J		-31875974.57	-31875974.45	-31875974.30	0.0146	0.0125	
Jupiter	-91977-10-01 07:11 J		-31872902.42	-31872902.20	-31872901.97	0.0538	0.0131	
Saturn	-91973-01-29 16:03 J		-31871686.99	-31871686.83	-31871686.65	0.0277	0.0195	
Saturn	-91972-02-10 00:13 J		-31871309.73	-31871309.49	-31871309.25	0.0278	0.0023	
Saturn	-91971-02-22 14:08 J		-31870932.01	-31870931.91	-31870931.79	0.0279	0.0246	
Jupiter	-91971-03-18 15:35 J		-31870908.03	-31870907.85	-31870907.66	0.0492	0.0298	

Jupiter -91965-10-06 08:51 J -31868514.17 -31868514.13 -31868514.08 0.0540 0.0526
 Jupiter -91959-03-23 00:42 J -31866520.70 -31866520.47 -31866520.23 0.0490 0.0005
 Saturn -91959-08-06 08:37 J -31866384.30 -31866384.14 -31866383.95 0.0281 0.0199
 Saturn -91958-08-20 04:47 J -31866005.54 -31866005.30 -31866005.05 0.0280 0.0040
 Saturn -91957-09-01 17:44 J -31865626.80 -31865626.76 -31865626.68 0.0279 0.0271
 Neptune -91956-09-11 07:54 J -31865252.32 -31865252.17 -31865251.98 0.0088 0.0066
 Pluto -91955-05-23 02:37 J -31864998.63 -31864998.39 -31864998.13 0.0067 0.0023
 Neptune -91955-09-13 19:54 J -31864884.90 -31864884.67 -31864884.42 0.0088 0.0036
 Neptune -91954-09-16 07:39 J -31864517.43 -31864517.18 -31864516.92 0.0088 0.0007
 Neptune -91953-09-17 19:25 J -31864149.94 -31864149.69 -31864149.44 0.0088 0.0023
 Neptune -91952-09-20 06:13 J -31863782.42 -31863782.24 -31863782.01 0.0088 0.0053
 Neptune -91951-09-22 17:30 J -31863414.85 -31863414.77 -31863414.65 0.0088 0.0082
 Uranus -91950-10-08 20:08 J -31863033.75 -31863033.66 -31863033.55 0.0131 0.0119
 Mars -91949-07-10 10:47 J -31862758.26 -31862758.05 -31862757.84 0.1866 0.0150
 Uranus -91949-10-11 21:35 J -31862664.76 -31862664.60 -31862664.41 0.0131 0.0093
 Uranus -91948-10-15 22:32 J -31862295.76 -31862295.56 -31862295.33 0.0131 0.0066
 Jupiter -91947-03-27 07:54 J -31862133.35 -31862133.17 -31862132.97 0.0489 0.0296
 Uranus -91947-10-19 23:15 J -31861926.76 -31861926.53 -31861926.28 0.0131 0.0039
 Uranus -91946-10-23 23:44 J -31861557.75 -31861557.51 -31861557.25 0.0131 0.0012
 Uranus -91945-10-27 00:13 J -31861188.73 -31861188.49 -31861188.24 0.0132 0.0016
 Uranus -91944-10-31 00:27 J -31860819.71 -31860819.48 -31860819.24 0.0132 0.0043
 Saturn -91943-02-04 16:47 J -31860723.03 -31860722.80 -31860722.57 0.0278 0.0075
 Uranus -91943-11-04 00:56 J -31860450.67 -31860450.46 -31860450.25 0.0132 0.0070
 Mars -91942-01-06 12:42 J -31860387.16 -31860386.97 -31860386.79 0.1665 0.0097
 Saturn -91942-02-17 03:35 J -31860345.56 -31860345.35 -31860345.14 0.0279 0.0146
 Uranus -91942-11-08 01:11 J -31860081.60 -31860081.45 -31860081.27 0.0132 0.0098
 Uranus -91941-11-11 01:39 J -31859712.49 -31859712.43 -31859712.32 0.0133 0.0125
 Saturn -91929-08-13 08:51 J -31855419.37 -31855419.13 -31855418.89 0.0281 0.0068
 Saturn -91928-08-27 02:08 J -31855040.60 -31855040.41 -31855040.20 0.0280 0.0169
 Saturn -91914-01-31 00:27 J -31850135.66 -31850135.48 -31850135.28 0.0277 0.0167

Saturn -91913-02-12 09:20 J -31849758.35 -31849758.11 -31849757.87 0.0278 0.0052
 Saturn -91912-02-23 23:44 J -31849380.55 -31849380.51 -31849380.45 0.0279 0.0273
 Uranus -91907-04-04 03:35 J -31847515.51 -31847515.35 -31847515.18 0.0148 0.0112
 Uranus -91906-04-09 12:13 J -31847145.20 -31847144.99 -31847144.75 0.0148 0.0073
 Jupiter -91906-09-26 00:56 J -31846975.64 -31846975.46 -31846975.28 0.0536 0.0339
 Uranus -91905-04-13 21:35 J -31846774.85 -31846774.60 -31846774.34 0.0148 0.0033
 Uranus -91904-04-19 07:25 J -31846404.45 -31846404.19 -31846403.93 0.0147 0.0007
 Uranus -91903-04-24 17:01 J -31846034.02 -31846033.79 -31846033.53 0.0147 0.0048
 Uranus -91902-04-30 02:51 J -31845663.57 -31845663.38 -31845663.15 0.0147 0.0088
 Uranus -91901-05-04 13:11 J -31845293.07 -31845292.95 -31845292.82 0.0146 0.0127
 Saturn -91900-08-07 20:08 J -31844832.86 -31844832.66 -31844832.46 0.0281 0.0167
 Saturn -91899-08-21 15:20 J -31844454.10 -31844453.86 -31844453.62 0.0280 0.0070
 Mars -91896-12-31 12:27 J -31843226.07 -31843225.98 -31843225.89 0.1681 0.1464
 Jupiter -91894-10-01 06:13 J -31842587.47 -31842587.24 -31842587.01 0.0538 0.0063
 Jupiter -91888-03-17 21:49 J -31840592.76 -31840592.59 -31840592.42 0.0492 0.0338
 Saturn -91885-01-25 20:51 J -31839548.71 -31839548.63 -31839548.54 0.0277 0.0258
 Saturn -91884-02-06 02:37 J -31839171.62 -31839171.39 -31839171.14 0.0278 0.0046
 Saturn -91883-02-18 14:08 J -31838794.09 -31838793.91 -31838793.72 0.0279 0.0175
 Jupiter -91882-10-06 12:13 J -31838199.09 -31838198.99 -31838198.87 0.0540 0.0471
 Jupiter -91876-03-22 05:30 J -31836205.50 -31836205.27 -31836205.03 0.0491 0.0043
 Neptune -91873-03-04 13:39 J -31835127.09 -31835126.93 -31835126.72 0.0089 0.0061
 Neptune -91872-03-07 01:25 J -31834759.68 -31834759.44 -31834759.20 0.0089 0.0031
 Neptune -91871-03-09 12:42 J -31834392.22 -31834391.97 -31834391.71 0.0089 0.0002
 Saturn -91871-08-01 19:54 J -31834246.71 -31834246.67 -31834246.62 0.0282 0.0277
 Neptune -91870-03-12 00:13 J -31834024.73 -31834024.49 -31834024.24 0.0089 0.0028
 Saturn -91870-08-15 18:56 J -31833867.96 -31833867.71 -31833867.46 0.0281 0.0038
 Neptune -91869-03-13 11:44 J -31833657.20 -31833657.01 -31833656.81 0.0089 0.0058
 Saturn -91869-08-28 11:30 J -31833489.18 -31833489.02 -31833488.83 0.0280 0.0196
 Pluto -91869-11-25 14:51 J -31833400.13 -31833399.88 -31833399.63 0.0077 0.0001
 Neptune -91868-03-15 23:15 J -31833289.54 -31833289.53 -31833289.48 0.0089 0.0088

Uranus	-91866-10-09 11:01 J	-31832352.16	-31832352.04	-31832351.92	0.0131	0.0114
Uranus	-91865-10-12 12:13 J	-31831983.16	-31831982.99	-31831982.79	0.0131	0.0088
Jupiter	-91864-03-26 11:01 J	-31831818.24	-31831818.04	-31831817.84	0.0490	0.0250
Uranus	-91864-10-16 13:11 J	-31831614.17	-31831613.95	-31831613.72	0.0131	0.0062
Mars	-91863-01-08 13:54 J	-31831530.08	-31831529.92	-31831529.75	0.1661	0.0742
Uranus	-91863-10-20 14:08 J	-31831245.15	-31831244.91	-31831244.67	0.0131	0.0035
Uranus	-91862-10-24 14:37 J	-31830876.14	-31830875.89	-31830875.64	0.0131	0.0008
Uranus	-91861-10-27 15:06 J	-31830507.12	-31830506.87	-31830506.62	0.0132	0.0019
Uranus	-91860-10-31 15:06 J	-31830138.09	-31830137.87	-31830137.62	0.0132	0.0047
Uranus	-91859-11-04 15:49 J	-31829769.04	-31829768.84	-31829768.63	0.0132	0.0073
Uranus	-91858-11-08 16:03 J	-31829399.97	-31829399.83	-31829399.65	0.0132	0.0101
Uranus	-91857-11-11 17:01 J	-31829030.85	-31829030.79	-31829030.71	0.0133	0.0127
Saturn	-91855-02-01 09:49 J	-31828584.30	-31828584.09	-31828583.88	0.0278	0.0137
Saturn	-91854-02-13 19:11 J	-31828206.92	-31828206.70	-31828206.46	0.0278	0.0081
Saturn	-91841-08-09 09:06 J	-31823281.34	-31823281.12	-31823280.90	0.0281	0.0134
Saturn	-91840-08-23 03:35 J	-31822902.58	-31822902.35	-31822902.11	0.0280	0.0101
Saturn	-91826-01-27 06:42 J	-31817997.35	-31817997.22	-31817997.08	0.0277	0.0229
Saturn	-91825-02-08 13:11 J	-31817620.19	-31817619.95	-31817619.71	0.0278	0.0016
Saturn	-91824-02-20 00:56 J	-31817242.61	-31817242.46	-31817242.28	0.0279	0.0204
Uranus	-91824-03-30 08:51 J	-31817204.16	-31817204.13	-31817204.07	0.0148	0.0145
Uranus	-91823-04-04 17:15 J	-31816833.95	-31816833.78	-31816833.59	0.0148	0.0107
Jupiter	-91823-09-25 03:20 J	-31816660.51	-31816660.36	-31816660.20	0.0536	0.0395
Uranus	-91822-04-10 01:54 J	-31816463.64	-31816463.42	-31816463.19	0.0148	0.0068
Uranus	-91821-04-14 11:01 J	-31816093.28	-31816093.04	-31816092.77	0.0148	0.0029
Uranus	-91820-04-19 20:51 J	-31815722.88	-31815722.63	-31815722.37	0.0147	0.0012
Uranus	-91819-04-25 06:27 J	-31815352.46	-31815352.23	-31815351.97	0.0147	0.0052
Uranus	-91818-04-30 16:47 J	-31814981.99	-31814981.80	-31814981.59	0.0147	0.0091
Uranus	-91817-05-05 02:51 J	-31814611.49	-31814611.38	-31814611.25	0.0146	0.0130
Mars	-91816-01-02 15:35 J	-31814369.02	-31814368.85	-31814368.69	0.1677	0.0767
Saturn	-91812-08-03 08:51 J	-31812695.25	-31812695.13	-31812695.00	0.0281	0.0244

Saturn -91811-08-17 06:56 J -31812316.46 -31812316.21 -31812315.96 0.0281 0.0007
 Jupiter -91811-09-30 07:54 J -31812272.40 -31812272.17 -31812271.94 0.0537 0.0009
 Saturn -91810-08-30 22:32 J -31811937.70 -31811937.56 -31811937.40 0.0280 0.0224
 Jupiter -91805-03-16 23:30 J -31810277.66 -31810277.52 -31810277.37 0.0493 0.0388
 Jupiter -91799-10-05 09:49 J -31807884.24 -31807884.09 -31807883.93 0.0539 0.0399
 Saturn -91796-02-02 18:42 J -31807032.94 -31807032.72 -31807032.49 0.0278 0.0107
 Saturn -91795-02-15 05:01 J -31806655.50 -31806655.29 -31806655.06 0.0279 0.0111
 Jupiter -91793-03-21 07:39 J -31805890.42 -31805890.18 -31805889.95 0.0491 0.0091
 Neptune -91792-09-10 10:32 J -31805352.11 -31805352.06 -31805351.94 0.0088 0.0084
 Neptune -91791-09-12 22:47 J -31804984.75 -31804984.55 -31804984.33 0.0088 0.0054
 Neptune -91790-09-15 10:32 J -31804617.30 -31804617.06 -31804616.80 0.0088 0.0024
 Neptune -91789-09-16 22:18 J -31804249.83 -31804249.57 -31804249.31 0.0088 0.0006
 Neptune -91788-09-19 09:49 J -31803882.32 -31803882.09 -31803881.85 0.0088 0.0035
 Neptune -91787-09-21 20:37 J -31803514.79 -31803514.64 -31803514.44 0.0088 0.0064
 Mars -91784-01-10 14:51 J -31802672.98 -31802672.88 -31802672.78 0.1658 0.1366
 Saturn -91782-08-11 22:18 J -31801729.80 -31801729.57 -31801729.33 0.0281 0.0101
 Uranus -91782-10-10 01:25 J -31801670.57 -31801670.44 -31801670.29 0.0131 0.0109
 Jupiter -91781-03-25 17:01 J -31801503.01 -31801502.79 -31801502.58 0.0490 0.0209
 Saturn -91781-08-24 16:32 J -31801351.03 -31801350.81 -31801350.59 0.0280 0.0132
 Uranus -91781-10-13 02:51 J -31801301.56 -31801301.38 -31801301.18 0.0131 0.0083
 Uranus -91780-10-17 03:49 J -31800932.56 -31800932.34 -31800932.11 0.0131 0.0057
 Uranus -91779-10-21 04:47 J -31800563.54 -31800563.30 -31800563.06 0.0131 0.0030
 Uranus -91778-10-25 05:15 J -31800194.53 -31800194.28 -31800194.03 0.0131 0.0004
 Uranus -91777-10-28 05:44 J -31799825.50 -31799825.26 -31799825.01 0.0132 0.0023
 Uranus -91776-11-01 05:59 J -31799456.47 -31799456.25 -31799456.01 0.0132 0.0050
 Uranus -91775-11-05 06:13 J -31799087.42 -31799087.24 -31799087.02 0.0132 0.0077
 Uranus -91774-11-09 06:56 J -31798718.35 -31798718.21 -31798718.04 0.0132 0.0103
 Uranus -91773-11-12 07:25 J -31798349.21 -31798349.19 -31798349.11 0.0133 0.0130
 Saturn -91767-01-28 15:49 J -31796445.99 -31796445.84 -31796445.66 0.0277 0.0200
 Saturn -91766-02-09 23:15 J -31796068.77 -31796068.53 -31796068.29 0.0278 0.0015

Saturn -91765-02-22 11:44 J -31795691.13 -31795691.01 -31795690.86 0.0279 0.0233
 Saturn -91753-08-04 22:03 J -31791143.74 -31791143.58 -31791143.40 0.0281 0.0210
 Saturn -91752-08-18 19:39 J -31790764.93 -31790764.68 -31790764.43 0.0280 0.0026
 Saturn -91751-09-01 10:03 J -31790386.17 -31790386.08 -31790385.96 0.0280 0.0253
 Mars -91744-07-05 17:59 J -31787886.87 -31787886.75 -31787886.63 0.1850 0.1521
 Uranus -91740-03-30 20:51 J -31786522.70 -31786522.63 -31786522.54 0.0148 0.0140
 Jupiter -91740-09-24 02:08 J -31786345.52 -31786345.41 -31786345.29 0.0535 0.0458
 Uranus -91739-04-05 05:15 J -31786152.46 -31786152.28 -31786152.09 0.0148 0.0102
 Uranus -91738-04-10 13:54 J -31785782.15 -31785781.92 -31785781.68 0.0148 0.0064
 Mars -91737-01-05 17:01 J -31785511.97 -31785511.79 -31785511.61 0.1673 0.0105
 Saturn -91737-02-05 02:51 J -31785481.61 -31785481.38 -31785481.15 0.0278 0.0078
 Uranus -91737-04-14 23:01 J -31785411.78 -31785411.54 -31785411.27 0.0148 0.0025
 Saturn -91736-02-16 13:39 J -31785104.13 -31785103.93 -31785103.71 0.0279 0.0139
 Uranus -91736-04-20 09:06 J -31785041.38 -31785041.12 -31785040.86 0.0147 0.0015
 Uranus -91735-04-25 18:56 J -31784670.94 -31784670.71 -31784670.46 0.0147 0.0055
 Uranus -91734-05-01 05:01 J -31784300.48 -31784300.29 -31784300.08 0.0147 0.0094
 Uranus -91733-05-05 15:06 J -31783929.96 -31783929.87 -31783929.74 0.0146 0.0132
 Jupiter -91728-09-29 00:42 J -31781957.70 -31781957.47 -31781957.24 0.0537 0.0082
 Saturn -91723-08-13 11:59 J -31780178.24 -31780178.00 -31780177.75 0.0281 0.0067
 Jupiter -91722-03-17 05:44 J -31779962.36 -31779962.26 -31779962.13 0.0493 0.0428
 Saturn -91722-08-27 05:15 J -31779799.47 -31779799.28 -31779799.07 0.0280 0.0164
 Jupiter -91716-10-04 05:01 J -31777569.47 -31777569.29 -31777569.10 0.0539 0.0317
 Jupiter -91710-03-21 13:54 J -31775575.14 -31775574.92 -31775574.69 0.0491 0.0130
 Neptune -91709-03-03 19:25 J -31775226.81 -31775226.69 -31775226.56 0.0089 0.0077
 Saturn -91708-01-30 00:27 J -31774894.66 -31774894.48 -31774894.29 0.0277 0.0170
 Neptune -91708-03-06 06:13 J -31774859.44 -31774859.24 -31774859.01 0.0089 0.0048
 Saturn -91707-02-11 08:23 J -31774517.39 -31774517.15 -31774516.91 0.0278 0.0044
 Neptune -91707-03-08 17:44 J -31774492.00 -31774491.76 -31774491.50 0.0089 0.0018
 Pluto -91707-05-24 08:51 J -31774415.34 -31774415.13 -31774414.91 0.0066 0.0040
 Saturn -91706-02-23 21:35 J -31774139.67 -31774139.60 -31774139.50 0.0279 0.0261

Neptune -91706-03-11 05:01 J -31774124.53 -31774124.29 -31774124.02 0.0089 0.0012
 Pluto -91706-05-26 01:39 J -31774048.58 -31774048.43 -31774048.26 0.0067 0.0053
 Neptune -91705-03-12 16:47 J -31773757.02 -31773756.80 -31773756.57 0.0089 0.0041
 Neptune -91704-03-15 04:18 J -31773389.46 -31773389.32 -31773389.16 0.0089 0.0071
 Uranus -91699-10-06 14:23 J -31771357.91 -31771357.90 -31771357.86 0.0131 0.0130
 Jupiter -91698-03-25 21:49 J -31771187.81 -31771187.59 -31771187.37 0.0490 0.0166
 Uranus -91698-10-10 15:49 J -31770988.96 -31770988.84 -31770988.67 0.0131 0.0105
 Uranus -91697-10-13 17:30 J -31770619.96 -31770619.77 -31770619.55 0.0131 0.0079
 Uranus -91696-10-17 18:13 J -31770250.95 -31770250.74 -31770250.49 0.0131 0.0054
 Uranus -91695-10-21 19:25 J -31769881.93 -31769881.69 -31769881.44 0.0131 0.0026
 Saturn -91694-08-07 11:30 J -31769592.22 -31769592.02 -31769591.83 0.0281 0.0176
 Uranus -91694-10-25 20:08 J -31769512.91 -31769512.66 -31769512.41 0.0131 0.0000
 Saturn -91693-08-20 07:54 J -31769213.42 -31769213.17 -31769212.92 0.0280 0.0057
 Uranus -91693-10-28 20:37 J -31769143.88 -31769143.64 -31769143.40 0.0132 0.0027
 Uranus -91692-11-01 20:51 J -31768774.85 -31768774.63 -31768774.39 0.0132 0.0054
 Uranus -91691-11-05 21:20 J -31768405.79 -31768405.61 -31768405.39 0.0132 0.0080
 Mars -91691-12-30 14:37 J -31768350.89 -31768350.89 -31768350.89 0.1690 0.1690
 Uranus -91690-11-09 21:49 J -31768036.72 -31768036.59 -31768036.42 0.0132 0.0106
 Uranus -91689-11-12 22:32 J -31767667.57 -31767667.56 -31767667.51 0.0133 0.0132
 Jupiter -91686-03-30 03:06 J -31766800.46 -31766800.37 -31766800.29 0.0489 0.0453
 Saturn -91679-01-25 03:20 J -31764307.44 -31764307.36 -31764307.27 0.0277 0.0258
 Saturn -91678-02-06 09:20 J -31763930.34 -31763930.11 -31763929.87 0.0278 0.0050
 Saturn -91677-02-18 20:51 J -31763552.81 -31763552.63 -31763552.43 0.0279 0.0167
 Mars -91665-07-09 11:30 J -31759028.23 -31759028.02 -31759027.81 0.1858 0.0139
 Saturn -91665-08-01 01:39 J -31759005.50 -31759005.43 -31759005.35 0.0282 0.0268
 Saturn -91664-08-15 00:42 J -31758626.72 -31758626.47 -31758626.22 0.0281 0.0035
 Saturn -91663-08-28 17:15 J -31758247.95 -31758247.78 -31758247.60 0.0280 0.0194
 Mars -91658-01-07 18:56 J -31756654.88 -31756654.71 -31756654.54 0.1669 0.0557
 Uranus -91656-03-31 11:30 J -31755841.10 -31755841.02 -31755840.89 0.0148 0.0135
 Uranus -91655-04-05 19:54 J -31755470.85 -31755470.67 -31755470.47 0.0148 0.0097

Uranus	-91654-04-11 04:18 J	-31755100.54	-31755100.32	-31755100.07	0.0148	0.0059
Uranus	-91653-04-15 13:54 J	-31754730.17	-31754729.92	-31754729.66	0.0148	0.0020
Uranus	-91652-04-20 23:44 J	-31754359.76	-31754359.51	-31754359.25	0.0147	0.0020
Uranus	-91651-04-26 09:35 J	-31753989.33	-31753989.10	-31753988.85	0.0147	0.0059
Uranus	-91650-05-01 20:08 J	-31753618.85	-31753618.66	-31753618.47	0.0147	0.0097
Saturn	-91649-02-01 07:39 J	-31753343.38	-31753343.18	-31753342.97	0.0277	0.0142
Uranus	-91649-05-06 05:44 J	-31753248.33	-31753248.26	-31753248.13	0.0146	0.0136
Saturn	-91648-02-12 15:49 J	-31752966.07	-31752965.84	-31752965.60	0.0278	0.0071
Jupiter	-91645-09-28 02:37 J	-31751642.61	-31751642.39	-31751642.16	0.0537	0.0140
Jupiter	-91639-03-16 12:13 J	-31749647.06	-31749646.99	-31749646.91	0.0493	0.0466
Saturn	-91635-08-08 23:30 J	-31748040.73	-31748040.52	-31748040.30	0.0281	0.0144
Saturn	-91634-08-22 19:25 J	-31747661.93	-31747661.69	-31747661.45	0.0280	0.0088
Jupiter	-91633-10-03 09:20 J	-31747254.31	-31747254.11	-31747253.91	0.0538	0.0267
Jupiter	-91627-03-20 17:30 J	-31745259.99	-31745259.77	-31745259.55	0.0492	0.0176
Neptune	-91627-09-12 01:39 J	-31745084.58	-31745084.43	-31745084.27	0.0088	0.0071
Neptune	-91626-09-14 13:25 J	-31744717.15	-31744716.94	-31744716.70	0.0088	0.0041
Neptune	-91625-09-16 01:11 J	-31744349.69	-31744349.45	-31744349.18	0.0088	0.0013
Neptune	-91624-09-18 12:56 J	-31743982.21	-31743981.96	-31743981.70	0.0088	0.0018
Neptune	-91623-09-21 00:13 J	-31743614.70	-31743614.49	-31743614.26	0.0088	0.0047
Neptune	-91622-09-23 11:01 J	-31743247.13	-31743247.04	-31743246.87	0.0088	0.0077
Pluto	-91621-11-26 21:06 J	-31742816.84	-31742816.62	-31742816.36	0.0078	0.0025
Saturn	-91620-01-26 07:25 J	-31742756.31	-31742756.19	-31742756.05	0.0278	0.0231
Saturn	-91619-02-07 14:08 J	-31742379.15	-31742378.91	-31742378.67	0.0278	0.0023
Saturn	-91618-02-20 02:08 J	-31742001.57	-31742001.41	-31742001.23	0.0279	0.0193
Jupiter	-91615-03-25 01:39 J	-31740872.66	-31740872.43	-31740872.20	0.0491	0.0120
Uranus	-91615-10-07 05:01 J	-31740676.34	-31740676.29	-31740676.20	0.0131	0.0126
Uranus	-91614-10-11 06:42 J	-31740307.36	-31740307.22	-31740307.04	0.0131	0.0100
Uranus	-91613-10-14 08:23 J	-31739938.35	-31739938.15	-31739937.94	0.0131	0.0074
Uranus	-91612-10-18 09:20 J	-31739569.34	-31739569.11	-31739568.87	0.0131	0.0048
Mars	-91611-01-01 17:44 J	-31739493.91	-31739493.76	-31739493.62	0.1686	0.0994

Uranus	-91611-10-22 10:18 J	-31739200.31	-31739200.07	-31739199.82	0.0131	0.0022
Uranus	-91610-10-26 11:01 J	-31738831.29	-31738831.04	-31738830.79	0.0131	0.0004
Uranus	-91609-10-29 11:30 J	-31738462.25	-31738462.02	-31738461.77	0.0132	0.0031
Uranus	-91608-11-02 11:44 J	-31738093.22	-31738093.01	-31738092.77	0.0132	0.0057
Uranus	-91607-11-06 12:13 J	-31737724.16	-31737723.99	-31737723.78	0.0132	0.0083
Saturn	-91606-08-03 12:56 J	-31737454.08	-31737453.96	-31737453.81	0.0282	0.0237
Uranus	-91606-11-10 12:42 J	-31737355.09	-31737354.97	-31737354.81	0.0132	0.0109
Saturn	-91605-08-16 11:59 J	-31737075.25	-31737075.00	-31737074.75	0.0281	0.0004
Saturn	-91604-08-30 03:49 J	-31736696.48	-31736696.34	-31736696.18	0.0280	0.0223
Jupiter	-91603-03-29 11:01 J	-31736485.15	-31736485.04	-31736484.91	0.0489	0.0418
Saturn	-91590-02-02 12:42 J	-31731792.18	-31731791.97	-31731791.74	0.0277	0.0116
Saturn	-91589-02-14 21:20 J	-31731414.83	-31731414.61	-31731414.38	0.0278	0.0098
Mars	-91586-07-14 06:27 J	-31730169.26	-31730169.23	-31730169.21	0.1865	0.1848
Mars	-91579-01-09 20:51 J	-31727797.75	-31727797.63	-31727797.50	0.1665	0.1217
Saturn	-91576-08-10 09:35 J	-31726489.33	-31726489.10	-31726488.87	0.0281	0.0113
Saturn	-91575-08-24 05:01 J	-31726110.51	-31726110.29	-31726110.06	0.0280	0.0117
Uranus	-91572-04-01 00:13 J	-31725159.60	-31725159.49	-31725159.36	0.0148	0.0129
Uranus	-91571-04-06 08:08 J	-31724789.35	-31724789.16	-31724788.95	0.0148	0.0092
Uranus	-91570-04-11 17:01 J	-31724419.03	-31724418.79	-31724418.55	0.0148	0.0054
Uranus	-91569-04-16 02:23 J	-31724048.65	-31724048.40	-31724048.14	0.0148	0.0015
Uranus	-91568-04-21 12:13 J	-31723678.24	-31723677.99	-31723677.73	0.0147	0.0023
Uranus	-91567-04-26 22:18 J	-31723307.80	-31723307.57	-31723307.33	0.0147	0.0062
Uranus	-91566-05-02 08:23 J	-31722937.33	-31722937.15	-31722936.95	0.0147	0.0100
Uranus	-91565-05-06 18:27 J	-31722566.80	-31722566.73	-31722566.62	0.0147	0.0138
Jupiter	-91562-09-28 05:44 J	-31721327.47	-31721327.26	-31721327.04	0.0536	0.0193
Saturn	-91561-01-28 10:32 J	-31721205.21	-31721205.06	-31721204.90	0.0277	0.0206
Saturn	-91560-02-08 17:30 J	-31720828.01	-31720827.77	-31720827.53	0.0278	0.0006
Saturn	-91559-02-21 05:30 J	-31720450.41	-31720450.27	-31720450.11	0.0279	0.0217
Jupiter	-91550-10-03 04:03 J	-31716939.54	-31716939.33	-31716939.10	0.0538	0.0185
Saturn	-91547-08-04 21:35 J	-31715902.76	-31715902.60	-31715902.42	0.0282	0.0207

Saturn -91546-08-18 20:37 J -31715523.89 -31715523.64 -31715523.39 0.0281 0.0026
 Saturn -91545-08-31 11:59 J -31715145.09 -31715145.00 -31715144.87 0.0280 0.0250
 Neptune -91544-03-05 11:44 J -31714959.18 -31714959.01 -31714958.83 0.0089 0.0064
 Jupiter -91544-03-20 02:23 J -31714944.61 -31714944.40 -31714944.18 0.0493 0.0209
 Neptune -91543-03-07 22:47 J -31714591.77 -31714591.55 -31714591.30 0.0089 0.0035
 Neptune -91542-03-10 10:18 J -31714224.33 -31714224.07 -31714223.81 0.0089 0.0005
 Neptune -91541-03-11 21:35 J -31713856.84 -31713856.60 -31713856.35 0.0089 0.0024
 Neptune -91540-03-14 09:06 J -31713489.32 -31713489.12 -31713488.91 0.0089 0.0054
 Neptune -91539-03-16 20:08 J -31713121.71 -31713121.66 -31713121.55 0.0089 0.0084
 Mars -91532-01-03 20:23 J -31710636.83 -31710636.65 -31710636.47 0.1682 0.0302
 Jupiter -91532-03-24 11:01 J -31710557.26 -31710557.04 -31710556.80 0.0491 0.0090
 Saturn -91531-02-03 16:03 J -31710241.05 -31710240.83 -31710240.60 0.0277 0.0090
 Uranus -91531-10-07 19:54 J -31709994.75 -31709994.67 -31709994.55 0.0131 0.0120
 Saturn -91530-02-16 00:42 J -31709863.68 -31709863.47 -31709863.25 0.0278 0.0122
 Uranus -91530-10-11 21:35 J -31709625.75 -31709625.60 -31709625.41 0.0131 0.0095
 Uranus -91529-10-14 23:15 J -31709256.73 -31709256.53 -31709256.31 0.0131 0.0069
 Uranus -91528-10-19 00:27 J -31708887.72 -31708887.48 -31708887.24 0.0131 0.0044
 Uranus -91527-10-23 01:25 J -31708518.69 -31708518.44 -31708518.19 0.0131 0.0018
 Uranus -91526-10-27 02:08 J -31708149.66 -31708149.41 -31708149.16 0.0131 0.0008
 Uranus -91525-10-30 02:23 J -31707780.63 -31707780.40 -31707780.15 0.0132 0.0035
 Uranus -91524-11-03 02:51 J -31707411.59 -31707411.38 -31707411.15 0.0132 0.0060
 Uranus -91523-11-07 03:35 J -31707042.54 -31707042.35 -31707042.16 0.0132 0.0085
 Uranus -91522-11-11 03:20 J -31706673.47 -31706673.36 -31706673.21 0.0132 0.0111
 Jupiter -91520-03-28 19:25 J -31706169.84 -31706169.69 -31706169.55 0.0489 0.0384
 Saturn -91517-08-11 17:59 J -31704937.99 -31704937.75 -31704937.51 0.0281 0.0084
 Saturn -91516-08-25 12:56 J -31704559.17 -31704558.96 -31704558.74 0.0280 0.0145
 Saturn -91502-01-29 11:44 J -31699654.18 -31699654.01 -31699653.82 0.0277 0.0182
 Saturn -91501-02-10 18:42 J -31699276.96 -31699276.72 -31699276.48 0.0278 0.0026
 Saturn -91500-02-22 06:56 J -31698899.32 -31698899.21 -31698899.08 0.0279 0.0239
 Uranus -91488-04-01 14:23 J -31694478.04 -31694477.90 -31694477.76 0.0148 0.0123

Saturn -91488-08-06 03:35 J -31694351.53 -31694351.35 -31694351.15 0.0282 0.0180
 Uranus -91487-04-06 22:18 J -31694107.76 -31694107.57 -31694107.35 0.0148 0.0087
 Saturn -91487-08-20 02:23 J -31693972.64 -31693972.40 -31693972.15 0.0281 0.0052
 Uranus -91486-04-12 07:11 J -31693737.43 -31693737.20 -31693736.95 0.0148 0.0049
 Saturn -91486-09-02 17:59 J -31693593.79 -31693593.75 -31693593.70 0.0280 0.0274
 Uranus -91485-04-16 17:01 J -31693367.05 -31693366.79 -31693366.53 0.0148 0.0011
 Uranus -91484-04-22 02:37 J -31692996.63 -31692996.39 -31692996.13 0.0147 0.0029
 Uranus -91483-04-27 12:42 J -31692626.19 -31692625.97 -31692625.73 0.0147 0.0066
 Uranus -91482-05-02 22:47 J -31692255.71 -31692255.55 -31692255.35 0.0147 0.0104
 Uranus -91481-05-07 08:51 J -31691885.18 -31691885.13 -31691885.03 0.0147 0.0141
 Jupiter -91479-09-27 02:23 J -31691012.60 -31691012.40 -31691012.20 0.0535 0.0268
 Saturn -91473-01-24 14:37 J -31689066.93 -31689066.89 -31689066.83 0.0276 0.0268
 Saturn -91472-02-04 18:13 J -31688689.97 -31688689.74 -31688689.50 0.0277 0.0066
 Saturn -91471-02-17 02:51 J -31688312.57 -31688312.38 -31688312.16 0.0278 0.0146
 Jupiter -91467-10-02 08:08 J -31686624.39 -31686624.16 -31686623.94 0.0538 0.0133
 Neptune -91463-09-11 03:49 J -31685184.35 -31685184.34 -31685184.29 0.0088 0.0088
 Neptune -91462-09-13 15:49 J -31684817.02 -31684816.84 -31684816.63 0.0088 0.0058
 Jupiter -91461-03-19 12:13 J -31684629.19 -31684628.99 -31684628.78 0.0493 0.0238
 Neptune -91461-09-15 03:35 J -31684449.58 -31684449.35 -31684449.09 0.0088 0.0030
 Mars -91460-07-04 20:37 J -31684156.76 -31684156.64 -31684156.51 0.1841 0.1455
 Neptune -91460-09-17 15:35 J -31684082.11 -31684081.85 -31684081.59 0.0088 0.0000
 Pluto -91459-05-25 14:51 J -31683831.98 -31683831.88 -31683831.70 0.0066 0.0057
 Neptune -91459-09-20 03:06 J -31683714.61 -31683714.37 -31683714.12 0.0088 0.0030
 Pluto -91458-05-27 08:08 J -31683465.37 -31683465.16 -31683464.92 0.0067 0.0037
 Saturn -91458-08-13 23:44 J -31683386.75 -31683386.51 -31683386.26 0.0281 0.0057
 Neptune -91458-09-22 14:23 J -31683347.08 -31683346.90 -31683346.70 0.0088 0.0059
 Saturn -91457-08-26 18:27 J -31683007.92 -31683007.73 -31683007.52 0.0280 0.0171
 Neptune -91457-09-24 01:25 J -31682979.45 -31682979.44 -31682979.39 0.0088 0.0088
 Mars -91453-01-06 22:18 J -31681779.75 -31681779.57 -31681779.39 0.1678 0.0364
 Jupiter -91449-03-23 18:27 J -31680241.96 -31680241.73 -31680241.49 0.0491 0.0054

Uranus	-91447-10-08 11:01 J	-31679313.16	-31679313.04	-31679312.92	0.0131	0.0114
Uranus	-91446-10-12 12:42 J	-31678944.15	-31678943.97	-31678943.78	0.0131	0.0089
Uranus	-91445-10-15 14:08 J	-31678575.12	-31678574.91	-31678574.69	0.0131	0.0064
Uranus	-91444-10-19 15:06 J	-31678206.10	-31678205.87	-31678205.62	0.0131	0.0039
Saturn	-91443-01-30 11:59 J	-31678103.19	-31678103.00	-31678102.80	0.0277	0.0159
Uranus	-91443-10-23 16:18 J	-31677837.06	-31677836.82	-31677836.56	0.0131	0.0014
Saturn	-91442-02-11 18:27 J	-31677725.96	-31677725.73	-31677725.49	0.0278	0.0049
Uranus	-91442-10-27 17:01 J	-31677468.04	-31677467.79	-31677467.54	0.0131	0.0013
Saturn	-91441-02-24 06:42 J	-31677348.29	-31677348.22	-31677348.12	0.0279	0.0260
Uranus	-91441-10-30 17:30 J	-31677099.00	-31677098.77	-31677098.52	0.0131	0.0038
Uranus	-91440-11-03 17:44 J	-31676729.97	-31676729.76	-31676729.53	0.0132	0.0064
Uranus	-91439-11-07 17:59 J	-31676360.91	-31676360.75	-31676360.55	0.0132	0.0089
Uranus	-91438-11-11 18:13 J	-31675991.85	-31675991.74	-31675991.60	0.0132	0.0114
Jupiter	-91437-03-28 03:06 J	-31675854.53	-31675854.37	-31675854.20	0.0490	0.0347
Saturn	-91429-08-07 08:08 J	-31672800.37	-31672800.16	-31672799.95	0.0282	0.0155
Saturn	-91428-08-21 06:42 J	-31672421.46	-31672421.22	-31672420.97	0.0281	0.0077
Saturn	-91414-01-25 15:35 J	-31667515.95	-31667515.85	-31667515.73	0.0276	0.0246
Saturn	-91413-02-06 19:11 J	-31667138.93	-31667138.70	-31667138.46	0.0277	0.0044
Saturn	-91412-02-18 04:03 J	-31666761.52	-31666761.33	-31666761.13	0.0278	0.0166
Mars	-91407-12-31 18:13 J	-31664618.87	-31664618.74	-31664618.62	0.1695	0.1233
Uranus	-91404-04-02 01:54 J	-31663796.57	-31663796.42	-31663796.27	0.0148	0.0118
Uranus	-91403-04-07 09:49 J	-31663426.29	-31663426.09	-31663425.87	0.0148	0.0082
Uranus	-91402-04-12 18:42 J	-31663055.96	-31663055.72	-31663055.47	0.0148	0.0045
Uranus	-91401-04-17 04:32 J	-31662685.57	-31662685.31	-31662685.05	0.0148	0.0006
Uranus	-91400-04-22 14:08 J	-31662315.16	-31662314.91	-31662314.65	0.0147	0.0031
Saturn	-91400-08-01 01:54 J	-31662214.50	-31662214.42	-31662214.32	0.0282	0.0263
Uranus	-91399-04-28 00:13 J	-31661944.71	-31661944.49	-31661944.25	0.0147	0.0069
Saturn	-91399-08-15 03:49 J	-31661835.59	-31661835.34	-31661835.09	0.0281	0.0032
Uranus	-91398-05-03 10:32 J	-31661574.23	-31661574.06	-31661573.87	0.0147	0.0106
Saturn	-91398-08-28 22:18 J	-31661456.73	-31661456.57	-31661456.37	0.0280	0.0195

Uranus -91397-05-07 20:51 J -31661203.69 -31661203.63 -31661203.57 0.0147 0.0142
 Jupiter -91396-09-26 09:49 J -31660697.27 -31660697.09 -31660696.89 0.0535 0.0306
 Saturn -91384-01-31 11:59 J -31656552.21 -31656552.00 -31656551.79 0.0277 0.0136
 Jupiter -91384-10-01 15:35 J -31656309.08 -31656308.85 -31656308.62 0.0537 0.0092
 Saturn -91383-02-12 18:13 J -31656174.97 -31656174.74 -31656174.50 0.0278 0.0071
 Mars -91381-07-08 13:39 J -31655298.14 -31655297.93 -31655297.72 0.1849 0.0164
 Neptune -91380-03-04 16:18 J -31655058.90 -31655058.82 -31655058.69 0.0089 0.0081
 Neptune -91379-03-07 03:49 J -31654691.54 -31654691.34 -31654691.12 0.0089 0.0051
 Neptune -91378-03-09 15:06 J -31654324.11 -31654323.87 -31654323.61 0.0089 0.0022
 Jupiter -91378-03-19 20:23 J -31654313.84 -31654313.65 -31654313.45 0.0493 0.0273
 Neptune -91377-03-11 02:37 J -31653956.64 -31653956.39 -31653956.13 0.0089 0.0008
 Neptune -91376-03-13 14:08 J -31653589.14 -31653588.91 -31653588.67 0.0089 0.0037
 Neptune -91375-03-16 01:11 J -31653221.59 -31653221.45 -31653221.26 0.0089 0.0067
 Mars -91374-01-08 23:59 J -31652922.64 -31652922.50 -31652922.35 0.1674 0.1022
 Pluto -91373-11-28 05:15 J -31652233.47 -31652233.28 -31652233.06 0.0078 0.0044
 Jupiter -91372-10-06 14:37 J -31651920.99 -31651920.89 -31651920.77 0.0538 0.0471
 Saturn -91370-08-09 09:49 J -31651249.31 -31651249.09 -31651248.86 0.0282 0.0132
 Saturn -91369-08-22 08:51 J -31650870.36 -31650870.13 -31650869.89 0.0281 0.0100
 Jupiter -91366-03-24 05:15 J -31649926.51 -31649926.28 -31649926.04 0.0492 0.0027
 Uranus -91363-10-09 01:25 J -31648631.57 -31648631.44 -31648631.29 0.0131 0.0109
 Uranus -91362-10-13 02:51 J -31648262.55 -31648262.38 -31648262.17 0.0131 0.0085
 Uranus -91361-10-16 05:01 J -31647893.51 -31647893.29 -31647893.07 0.0131 0.0059
 Uranus -91360-10-20 06:13 J -31647524.48 -31647524.24 -31647524.00 0.0131 0.0034
 Uranus -91359-10-24 07:25 J -31647155.44 -31647155.19 -31647154.94 0.0131 0.0009
 Uranus -91358-10-28 08:08 J -31646786.41 -31646786.16 -31646785.91 0.0131 0.0016
 Uranus -91357-10-31 08:23 J -31646417.38 -31646417.15 -31646416.90 0.0131 0.0042
 Uranus -91356-11-04 08:37 J -31646048.34 -31646048.14 -31646047.91 0.0132 0.0067
 Saturn -91355-01-26 16:18 J -31645964.95 -31645964.82 -31645964.67 0.0276 0.0224
 Uranus -91355-11-08 09:06 J -31645679.29 -31645679.12 -31645678.93 0.0132 0.0091
 Saturn -91354-02-07 19:54 J -31645587.91 -31645587.67 -31645587.43 0.0277 0.0022

Jupiter -91354-03-28 14:08 J -31645539.08 -31645538.91 -31645538.73 0.0490 0.0323
 Uranus -91354-11-12 08:51 J -31645310.23 -31645310.13 -31645309.99 0.0132 0.0116
 Saturn -91353-02-20 04:18 J -31645210.49 -31645210.32 -31645210.13 0.0278 0.0187
 Saturn -91341-08-02 04:47 J -31640663.42 -31640663.30 -31640663.15 0.0282 0.0239
 Saturn -91340-08-16 06:42 J -31640284.47 -31640284.22 -31640283.96 0.0281 0.0010
 Saturn -91339-08-30 01:25 J -31639905.58 -31639905.44 -31639905.27 0.0280 0.0217
 Mars -91327-01-02 21:06 J -31635761.79 -31635761.62 -31635761.44 0.1691 0.0539
 Saturn -91325-02-02 11:30 J -31635001.23 -31635001.02 -31635000.79 0.0277 0.0115
 Saturn -91324-02-13 17:44 J -31634623.98 -31634623.76 -31634623.53 0.0278 0.0091
 Uranus -91321-03-28 08:08 J -31633485.16 -31633485.16 -31633485.15 0.0148 0.0148
 Uranus -91320-04-02 14:51 J -31633115.02 -31633114.88 -31633114.70 0.0148 0.0113
 Uranus -91319-04-07 23:15 J -31632744.73 -31632744.53 -31632744.30 0.0148 0.0077
 Uranus -91318-04-13 08:08 J -31632374.40 -31632374.16 -31632373.90 0.0148 0.0040
 Uranus -91317-04-17 17:59 J -31632004.01 -31632003.75 -31632003.49 0.0148 0.0002
 Uranus -91316-04-23 03:35 J -31631633.60 -31631633.35 -31631633.09 0.0147 0.0036
 Uranus -91315-04-28 13:39 J -31631263.15 -31631262.93 -31631262.70 0.0147 0.0073
 Uranus -91314-05-03 23:44 J -31630892.67 -31630892.51 -31630892.33 0.0147 0.0109
 Uranus -91313-05-08 09:49 J -31630522.11 -31630522.09 -31630522.03 0.0147 0.0145
 Jupiter -91313-09-25 11:15 J -31630382.20 -31630382.03 -31630381.86 0.0534 0.0362
 Saturn -91311-08-10 11:01 J -31629698.26 -31629698.04 -31629697.80 0.0282 0.0109
 Saturn -91310-08-24 10:18 J -31629319.29 -31629319.07 -31629318.84 0.0282 0.0121
 Mars -91302-07-13 05:15 J -31626439.34 -31626439.28 -31626439.22 0.1856 0.1778
 Jupiter -91301-09-30 14:23 J -31625994.13 -31625993.90 -31625993.67 0.0536 0.0026
 Neptune -91298-09-12 19:25 J -31624916.82 -31624916.69 -31624916.55 0.0088 0.0075
 Neptune -91297-09-14 06:56 J -31624549.42 -31624549.21 -31624548.97 0.0088 0.0046
 Saturn -91296-01-27 17:01 J -31624413.94 -31624413.79 -31624413.61 0.0276 0.0202
 Neptune -91296-09-16 18:56 J -31624181.95 -31624181.71 -31624181.44 0.0088 0.0017
 Saturn -91295-02-08 20:37 J -31624036.88 -31624036.64 -31624036.40 0.0277 0.0001
 Jupiter -91295-03-19 06:56 J -31623998.39 -31623998.21 -31623998.02 0.0494 0.0297
 Neptune -91295-09-19 06:27 J -31623814.47 -31623814.23 -31623813.96 0.0088 0.0014

Saturn -91294-02-21 05:01 J -31623659.44 -31623659.29 -31623659.12 0.0278 0.0207
 Neptune -91294-09-21 18:13 J -31623446.96 -31623446.74 -31623446.51 0.0088 0.0042
 Neptune -91293-09-23 05:30 J -31623079.42 -31623079.27 -31623079.12 0.0088 0.0071
 Jupiter -91289-10-05 18:56 J -31621605.85 -31621605.71 -31621605.56 0.0538 0.0421
 Jupiter -91283-03-23 16:18 J -31619611.05 -31619610.82 -31619610.59 0.0492 0.0002
 Saturn -91282-08-04 07:11 J -31619112.35 -31619112.20 -31619112.03 0.0283 0.0216
 Saturn -91281-08-17 09:06 J -31618733.37 -31618733.12 -31618732.87 0.0282 0.0015
 Saturn -91280-08-31 03:49 J -31618354.46 -31618354.34 -31618354.20 0.0280 0.0238
 Uranus -91280-10-05 13:25 J -31618318.97 -31618318.94 -31618318.88 0.0131 0.0128
 Uranus -91279-10-09 16:03 J -31617949.97 -31617949.83 -31617949.67 0.0131 0.0104
 Uranus -91278-10-13 17:59 J -31617580.94 -31617580.75 -31617580.54 0.0131 0.0079
 Uranus -91277-10-16 19:39 J -31617211.90 -31617211.68 -31617211.44 0.0131 0.0055
 Uranus -91276-10-20 21:20 J -31616842.86 -31616842.61 -31616842.37 0.0131 0.0029
 Uranus -91275-10-24 22:18 J -31616473.81 -31616473.57 -31616473.31 0.0131 0.0006
 Uranus -91274-10-28 22:47 J -31616104.79 -31616104.55 -31616104.30 0.0131 0.0021
 Uranus -91273-10-31 23:15 J -31615735.75 -31615735.53 -31615735.29 0.0131 0.0045
 Uranus -91272-11-04 23:30 J -31615366.72 -31615366.52 -31615366.30 0.0132 0.0070
 Jupiter -91271-03-27 23:30 J -31615223.71 -31615223.52 -31615223.33 0.0491 0.0292
 Uranus -91271-11-08 23:59 J -31614997.67 -31614997.50 -31614997.32 0.0132 0.0094
 Uranus -91270-11-12 23:59 J -31614628.60 -31614628.50 -31614628.38 0.0132 0.0118
 Saturn -91266-02-03 11:59 J -31613450.22 -31613450.00 -31613449.77 0.0277 0.0094
 Saturn -91265-02-15 18:13 J -31613072.96 -31613072.74 -31613072.52 0.0278 0.0112
 Saturn -91252-08-11 12:13 J -31608147.23 -31608146.99 -31608146.75 0.0283 0.0088
 Saturn -91251-08-25 11:15 J -31607768.23 -31607768.03 -31607767.80 0.0282 0.0142
 Mars -91248-01-05 00:27 J -31606904.66 -31606904.48 -31606904.29 0.1687 0.0163
 Saturn -91237-01-29 18:42 J -31602862.89 -31602862.72 -31602862.53 0.0276 0.0180
 Uranus -91237-03-28 19:39 J -31602803.73 -31602803.68 -31602803.60 0.0148 0.0143
 Saturn -91236-02-09 22:03 J -31602485.82 -31602485.58 -31602485.34 0.0277 0.0021
 Uranus -91236-04-03 03:06 J -31602433.54 -31602433.37 -31602433.19 0.0148 0.0108
 Saturn -91235-02-22 06:27 J -31602108.36 -31602108.23 -31602108.08 0.0278 0.0227

Uranus	-91235-04-08 11:15 J	-31602063.25	-31602063.03	-31602062.80	0.0148	0.0072
Uranus	-91234-04-13 19:54 J	-31601692.91	-31601692.67	-31601692.41	0.0148	0.0036
Uranus	-91233-04-18 05:30 J	-31601322.53	-31601322.27	-31601322.01	0.0148	0.0002
Uranus	-91232-04-23 14:51 J	-31600952.12	-31600951.88	-31600951.63	0.0147	0.0039
Uranus	-91231-04-29 00:42 J	-31600581.68	-31600581.47	-31600581.23	0.0147	0.0076
Uranus	-91230-05-04 10:47 J	-31600211.21	-31600211.05	-31600210.87	0.0147	0.0111
Jupiter	-91230-09-25 14:08 J	-31600067.05	-31600066.91	-31600066.76	0.0534	0.0412
Uranus	-91229-05-08 20:51 J	-31599840.64	-31599840.63	-31599840.60	0.0147	0.0146
Saturn	-91223-08-05 10:18 J	-31597561.24	-31597561.07	-31597560.87	0.0283	0.0192
Saturn	-91222-08-19 12:13 J	-31597182.24	-31597181.99	-31597181.74	0.0282	0.0038
Saturn	-91221-09-01 06:42 J	-31596803.30	-31596803.22	-31596803.12	0.0281	0.0259
Jupiter	-91218-09-30 20:51 J	-31595678.86	-31595678.63	-31595678.40	0.0536	0.0016
Neptune	-91215-03-06 08:23 J	-31594791.28	-31594791.15	-31594790.95	0.0089	0.0068
Neptune	-91214-03-08 20:08 J	-31594423.89	-31594423.66	-31594423.43	0.0089	0.0038
Neptune	-91213-03-10 07:25 J	-31594056.44	-31594056.19	-31594055.93	0.0089	0.0009
Neptune	-91212-03-12 18:27 J	-31593688.96	-31593688.73	-31593688.46	0.0089	0.0021
Jupiter	-91212-03-18 16:18 J	-31593682.99	-31593682.82	-31593682.64	0.0494	0.0327
Neptune	-91211-03-15 06:13 J	-31593321.44	-31593321.24	-31593321.02	0.0089	0.0050
Pluto	-91211-05-27 01:54 J	-31593248.50	-31593248.42	-31593248.28	0.0066	0.0061
Neptune	-91210-03-17 17:30 J	-31592953.86	-31592953.77	-31592953.63	0.0089	0.0080
Pluto	-91210-05-28 18:56 J	-31592881.92	-31592881.71	-31592881.46	0.0067	0.0033
Saturn	-91208-01-23 12:42 J	-31592276.02	-31592275.97	-31592275.90	0.0276	0.0267
Saturn	-91207-02-04 13:54 J	-31591899.15	-31591898.92	-31591898.69	0.0277	0.0071
Saturn	-91206-02-16 19:54 J	-31591521.88	-31591521.67	-31591521.46	0.0278	0.0133
Jupiter	-91206-10-06 03:06 J	-31591290.53	-31591290.37	-31591290.21	0.0538	0.0382
Mars	-91202-12-30 16:47 J	-31589743.88	-31589743.80	-31589743.71	0.1705	0.1511
Jupiter	-91200-03-23 00:56 J	-31589295.70	-31589295.46	-31589295.23	0.0492	0.0032
Uranus	-91196-10-06 03:20 J	-31587637.42	-31587637.36	-31587637.26	0.0131	0.0124
Uranus	-91195-10-10 06:27 J	-31587268.39	-31587268.23	-31587268.06	0.0131	0.0099
Uranus	-91194-10-14 08:23 J	-31586899.35	-31586899.15	-31586898.94	0.0131	0.0075

Saturn	-91193-08-12 13:54 J	-31586596.16	-31586595.92	-31586595.67	0.0283	0.0066
Uranus	-91193-10-17 10:18 J	-31586530.30	-31586530.07	-31586529.83	0.0131	0.0050
Saturn	-91192-08-26 13:11 J	-31586217.15	-31586216.95	-31586216.74	0.0282	0.0162
Uranus	-91192-10-21 11:30 J	-31586161.25	-31586161.02	-31586160.76	0.0131	0.0027
Uranus	-91191-10-25 12:42 J	-31585792.22	-31585791.97	-31585791.72	0.0131	0.0002
Uranus	-91190-10-29 13:25 J	-31585423.19	-31585422.94	-31585422.70	0.0131	0.0024
Uranus	-91189-11-01 13:39 J	-31585054.15	-31585053.93	-31585053.69	0.0132	0.0048
Jupiter	-91188-03-27 08:08 J	-31584908.35	-31584908.16	-31584907.96	0.0492	0.0262
Uranus	-91188-11-05 13:54 J	-31584685.12	-31584684.92	-31584684.70	0.0132	0.0073
Uranus	-91187-11-09 14:37 J	-31584316.06	-31584315.89	-31584315.73	0.0132	0.0096
Uranus	-91186-11-13 14:23 J	-31583946.99	-31583946.90	-31583946.79	0.0132	0.0121
Saturn	-91178-01-30 21:35 J	-31581311.79	-31581311.60	-31581311.40	0.0276	0.0157
Saturn	-91177-02-12 00:56 J	-31580934.69	-31580934.46	-31580934.22	0.0277	0.0044
Saturn	-91176-02-23 09:35 J	-31580557.19	-31580557.10	-31580556.98	0.0278	0.0248
Mars	-91176-07-04 00:27 J	-31580426.62	-31580426.48	-31580426.34	0.1832	0.1359
Mars	-91169-01-08 02:37 J	-31578047.55	-31578047.39	-31578047.24	0.1683	0.0827
Saturn	-91164-08-06 14:37 J	-31576010.08	-31576009.89	-31576009.68	0.0283	0.0167
Saturn	-91163-08-20 16:18 J	-31575631.06	-31575630.82	-31575630.57	0.0282	0.0062
Saturn	-91162-09-03 10:47 J	-31575252.06	-31575252.05	-31575252.02	0.0281	0.0280
Uranus	-91153-03-29 10:03 J	-31572122.16	-31572122.08	-31572121.97	0.0148	0.0137
Uranus	-91152-04-03 17:01 J	-31571751.96	-31571751.79	-31571751.59	0.0148	0.0103
Uranus	-91151-04-09 01:25 J	-31571381.66	-31571381.44	-31571381.21	0.0148	0.0067
Uranus	-91150-04-14 10:03 J	-31571011.33	-31571011.08	-31571010.82	0.0148	0.0031
Saturn	-91149-01-25 16:18 J	-31570724.92	-31570724.82	-31570724.70	0.0276	0.0244
Uranus	-91149-04-18 19:11 J	-31570640.95	-31570640.70	-31570640.44	0.0148	0.0007
Saturn	-91148-02-05 17:30 J	-31570348.00	-31570347.77	-31570347.53	0.0276	0.0048
Uranus	-91148-04-24 04:32 J	-31570270.55	-31570270.31	-31570270.05	0.0147	0.0043
Saturn	-91147-02-17 23:15 J	-31569970.72	-31569970.53	-31569970.32	0.0277	0.0155
Uranus	-91147-04-29 14:37 J	-31569900.10	-31569899.89	-31569899.66	0.0147	0.0078
Jupiter	-91147-09-24 21:35 J	-31569751.72	-31569751.60	-31569751.47	0.0534	0.0450

Uranus -91146-05-05 00:13 J -31569529.63 -31569529.49 -31569529.31 0.0147 0.0114
 Saturn -91135-07-31 12:13 J -31565424.05 -31565423.99 -31565423.92 0.0283 0.0272
 Jupiter -91135-09-29 23:44 J -31565363.74 -31565363.51 -31565363.28 0.0535 0.0065
 Saturn -91134-08-14 17:30 J -31565045.01 -31565044.77 -31565044.52 0.0283 0.0043
 Saturn -91133-08-27 16:32 J -31564665.99 -31564665.81 -31564665.62 0.0282 0.0184
 Neptune -91133-09-13 10:47 J -31564649.22 -31564649.05 -31564648.85 0.0088 0.0062
 Neptune -91132-09-15 22:47 J -31564281.78 -31564281.55 -31564281.30 0.0088 0.0033
 Neptune -91131-09-18 11:01 J -31563914.30 -31563914.04 -31563913.78 0.0088 0.0003
 Neptune -91130-09-20 22:18 J -31563546.81 -31563546.57 -31563546.32 0.0088 0.0026
 Jupiter -91129-03-17 22:47 J -31563367.70 -31563367.55 -31563367.39 0.0495 0.0362
 Neptune -91129-09-22 09:35 J -31563179.29 -31563179.10 -31563178.88 0.0088 0.0055
 Neptune -91128-09-24 20:51 J -31562811.69 -31562811.63 -31562811.52 0.0088 0.0083
 Pluto -91125-11-29 17:01 J -31561649.96 -31561649.79 -31561649.59 0.0078 0.0052
 Jupiter -91123-10-05 02:08 J -31560975.59 -31560975.41 -31560975.22 0.0536 0.0317
 Mars -91122-01-01 20:51 J -31560886.80 -31560886.63 -31560886.47 0.1701 0.0784
 Saturn -91119-02-01 01:39 J -31559760.63 -31559760.43 -31559760.21 0.0276 0.0134
 Saturn -91118-02-13 05:30 J -31559383.50 -31559383.27 -31559383.03 0.0277 0.0067
 Saturn -91117-02-25 14:51 J -31559005.94 -31559005.88 -31559005.83 0.0277 0.0269
 Jupiter -91117-03-22 07:39 J -31558980.41 -31558980.18 -31558979.95 0.0493 0.0064
 Uranus -91112-10-06 17:59 J -31556955.85 -31556955.75 -31556955.64 0.0131 0.0119
 Uranus -91111-10-10 20:08 J -31556586.81 -31556586.66 -31556586.46 0.0131 0.0095
 Uranus -91110-10-14 22:47 J -31556217.76 -31556217.55 -31556217.33 0.0131 0.0070
 Uranus -91109-10-18 00:27 J -31555848.70 -31555848.48 -31555848.23 0.0131 0.0047
 Uranus -91108-10-22 01:54 J -31555479.66 -31555479.42 -31555479.17 0.0131 0.0022
 Uranus -91107-10-26 03:06 J -31555110.63 -31555110.37 -31555110.12 0.0131 0.0004
 Uranus -91106-10-30 03:20 J -31554741.60 -31554741.36 -31554741.11 0.0131 0.0027
 Jupiter -91105-03-26 17:15 J -31554592.99 -31554592.78 -31554592.57 0.0492 0.0232
 Saturn -91105-08-07 21:06 J -31554458.83 -31554458.62 -31554458.40 0.0283 0.0141
 Uranus -91105-11-02 03:49 J -31554372.56 -31554372.34 -31554372.10 0.0132 0.0051
 Saturn -91104-08-21 22:18 J -31554079.80 -31554079.57 -31554079.33 0.0282 0.0086

Uranus	-91104-11-06 04:18 J	-31554003.52	-31554003.32	-31554003.11	0.0132	0.0075
Uranus	-91103-11-10 04:18 J	-31553634.47	-31553634.32	-31553634.14	0.0132	0.0099
Uranus	-91102-11-14 04:32 J	-31553265.38	-31553265.31	-31553265.20	0.0132	0.0123
Mars	-91097-07-07 16:18 J	-31551568.03	-31551567.82	-31551567.61	0.1839	0.0196
Mars	-91090-01-10 04:32 J	-31549190.39	-31549190.31	-31549190.22	0.1679	0.1485
Saturn	-91090-01-26 21:35 J	-31549173.73	-31549173.60	-31549173.45	0.0276	0.0220
Saturn	-91089-02-07 23:01 J	-31548796.78	-31548796.54	-31548796.30	0.0276	0.0024
Saturn	-91088-02-19 05:01 J	-31548419.47	-31548419.29	-31548419.10	0.0277	0.0178
Saturn	-91076-08-01 17:44 J	-31543872.87	-31543872.76	-31543872.63	0.0283	0.0246
Saturn	-91075-08-15 23:01 J	-31543493.79	-31543493.54	-31543493.29	0.0283	0.0018
Saturn	-91074-08-29 21:49 J	-31543114.76	-31543114.59	-31543114.42	0.0282	0.0206
Uranus	-91069-03-29 22:32 J	-31541440.65	-31541440.56	-31541440.43	0.0148	0.0133
Uranus	-91068-04-04 05:44 J	-31541070.44	-31541070.26	-31541070.06	0.0148	0.0098
Uranus	-91067-04-09 13:39 J	-31540700.15	-31540699.93	-31540699.69	0.0148	0.0063
Uranus	-91066-04-14 22:03 J	-31540329.83	-31540329.58	-31540329.32	0.0148	0.0027
Uranus	-91065-04-19 07:11 J	-31539959.45	-31539959.20	-31539958.94	0.0148	0.0009
Uranus	-91064-04-24 16:32 J	-31539589.06	-31539588.81	-31539588.57	0.0147	0.0045
Jupiter	-91064-09-23 21:06 J	-31539436.68	-31539436.62	-31539436.55	0.0532	0.0506
Uranus	-91063-04-30 02:08 J	-31539218.62	-31539218.41	-31539218.19	0.0147	0.0080
Uranus	-91062-05-05 11:59 J	-31538848.16	-31538848.00	-31538847.84	0.0147	0.0115
Saturn	-91060-02-02 07:54 J	-31538209.39	-31538209.17	-31538208.95	0.0276	0.0108
Saturn	-91059-02-14 11:59 J	-31537832.22	-31537832.00	-31537831.77	0.0277	0.0091
Jupiter	-91052-09-28 21:49 J	-31535048.81	-31535048.59	-31535048.36	0.0535	0.0132
Neptune	-91051-03-05 15:06 J	-31534890.95	-31534890.87	-31534890.77	0.0089	0.0083
Neptune	-91050-03-08 02:08 J	-31534523.60	-31534523.41	-31534523.20	0.0089	0.0054
Neptune	-91049-03-09 13:11 J	-31534156.19	-31534155.95	-31534155.70	0.0089	0.0025
Neptune	-91048-03-12 00:27 J	-31533788.73	-31533788.48	-31533788.22	0.0089	0.0004
Neptune	-91047-03-14 11:30 J	-31533421.24	-31533421.02	-31533420.76	0.0089	0.0034
Neptune	-91046-03-16 23:15 J	-31533053.69	-31533053.53	-31533053.33	0.0089	0.0063
Jupiter	-91046-03-18 07:11 J	-31533052.34	-31533052.20	-31533052.06	0.0495	0.0394

Saturn -91046-08-10 05:44 J -31532907.49 -31532907.26 -31532907.03 0.0283 0.0113
 Saturn -91045-08-23 06:13 J -31532528.46 -31532528.24 -31532528.00 0.0282 0.0112
 Mars -91043-01-03 23:30 J -31532029.70 -31532029.52 -31532029.33 0.1697 0.0093
 Jupiter -91040-10-04 03:20 J -31530660.56 -31530660.36 -31530660.16 0.0537 0.0259
 Jupiter -91034-03-22 15:06 J -31528665.10 -31528664.87 -31528664.64 0.0493 0.0100
 Saturn -91031-01-28 04:18 J -31527622.47 -31527622.32 -31527622.14 0.0276 0.0195
 Saturn -91030-02-09 06:13 J -31527245.48 -31527245.24 -31527245.00 0.0276 0.0002
 Saturn -91029-02-21 12:42 J -31526868.13 -31526867.97 -31526867.80 0.0277 0.0202
 Uranus -91028-10-07 06:56 J -31526274.31 -31526274.21 -31526274.07 0.0131 0.0115
 Uranus -91027-10-11 10:03 J -31525905.25 -31525905.08 -31525904.89 0.0131 0.0090
 Uranus -91026-10-15 12:13 J -31525536.20 -31525535.99 -31525535.76 0.0131 0.0067
 Uranus -91025-10-18 14:08 J -31525167.14 -31525166.91 -31525166.67 0.0131 0.0042
 Uranus -91024-10-22 15:20 J -31524798.10 -31524797.86 -31524797.61 0.0131 0.0019
 Uranus -91023-10-26 16:18 J -31524429.07 -31524428.82 -31524428.57 0.0131 0.0006
 Jupiter -91022-03-26 23:15 J -31524277.74 -31524277.53 -31524277.31 0.0492 0.0192
 Uranus -91022-10-30 16:47 J -31524060.04 -31524059.80 -31524059.55 0.0131 0.0030
 Uranus -91021-11-02 17:15 J -31523691.00 -31523690.78 -31523690.54 0.0132 0.0054
 Uranus -91020-11-06 17:15 J -31523321.96 -31523321.78 -31523321.56 0.0132 0.0078
 Uranus -91019-11-10 17:44 J -31522952.90 -31522952.76 -31522952.58 0.0132 0.0101
 Mars -91018-07-12 05:59 J -31522709.31 -31522709.25 -31522709.19 0.1847 0.1755
 Uranus -91018-11-14 18:13 J -31522583.80 -31522583.74 -31522583.64 0.0132 0.0125
 Saturn -91017-08-03 02:37 J -31522321.55 -31522321.39 -31522321.23 0.0283 0.0218
 Saturn -91016-08-17 07:11 J -31521942.45 -31521942.20 -31521941.95 0.0282 0.0009
 Saturn -91015-08-31 05:15 J -31521563.42 -31521563.28 -31521563.13 0.0282 0.0230
 Jupiter -91010-03-31 04:47 J -31519890.35 -31519890.30 -31519890.25 0.0491 0.0478
 Saturn -91002-01-23 14:23 J -31517034.91 -31517034.90 -31517034.85 0.0276 0.0274
 Saturn -91001-02-04 15:20 J -31516658.09 -31516657.86 -31516657.63 0.0276 0.0082

91ST MILLENNIUM BCE

This is a list of transits of Earth in the 91st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-91000-02-15 19:54 J		-31516280.88	-31516280.67	-31516280.45	0.0277	0.0117	
Saturn	-90987-08-11 16:18 J		-31511356.06	-31511355.82	-31511355.58	0.0283	0.0084	
Saturn	-90986-08-25 16:18 J		-31510977.03	-31510976.82	-31510976.60	0.0282	0.0139	
Uranus	-90985-03-30 11:59 J		-31510759.11	-31510759.00	-31510758.85	0.0148	0.0127	
Uranus	-90984-04-04 18:56 J		-31510388.89	-31510388.71	-31510388.49	0.0148	0.0093	
Uranus	-90983-04-10 03:06 J		-31510018.60	-31510018.37	-31510018.13	0.0148	0.0058	
Uranus	-90982-04-15 11:30 J		-31509648.27	-31509648.02	-31509647.77	0.0148	0.0023	
Uranus	-90981-04-19 20:23 J		-31509277.91	-31509277.65	-31509277.40	0.0148	0.0013	
Uranus	-90980-04-25 05:15 J		-31508907.51	-31508907.28	-31508907.02	0.0147	0.0049	
Uranus	-90979-04-30 14:51 J		-31508537.08	-31508536.88	-31508536.65	0.0147	0.0084	
Uranus	-90978-05-06 00:27 J		-31508166.62	-31508166.48	-31508166.31	0.0147	0.0118	
Saturn	-90972-01-29 12:56 J		-31506071.14	-31506070.96	-31506070.76	0.0276	0.0168	
Saturn	-90971-02-10 15:20 J		-31505694.10	-31505693.86	-31505693.62	0.0277	0.0029	
Saturn	-90970-02-22 22:18 J		-31505316.70	-31505316.57	-31505316.43	0.0277	0.0228	
Neptune	-90969-09-12 14:51 J		-31504748.98	-31504748.88	-31504748.73	0.0088	0.0078	
Jupiter	-90969-09-28 01:11 J		-31504733.66	-31504733.45	-31504733.22	0.0534	0.0182	
Neptune	-90968-09-15 03:06 J		-31504381.56	-31504381.37	-31504381.13	0.0088	0.0049	
Neptune	-90967-09-17 15:20 J		-31504014.11	-31504013.86	-31504013.60	0.0088	0.0019	
Neptune	-90966-09-20 03:06 J		-31503646.62	-31503646.37	-31503646.10	0.0088	0.0010	
Neptune	-90965-09-21 14:37 J		-31503279.11	-31503278.89	-31503278.64	0.0088	0.0039	
Mars	-90964-01-06 03:20 J		-31503172.53	-31503172.36	-31503172.19	0.1692	0.0608	
Neptune	-90964-09-24 02:08 J		-31502911.57	-31502911.41	-31502911.24	0.0088	0.0068	

Jupiter -90963-03-17 11:59 J -31502737.10 -31502737.00 -31502736.88 0.0496 0.0435
 Pluto -90963-05-28 14:08 J -31502664.98 -31502664.91 -31502664.77 0.0066 0.0062
 Pluto -90962-05-30 07:11 J -31502298.42 -31502298.20 -31502297.95 0.0067 0.0032
 Saturn -90958-08-05 13:25 J -31500770.12 -31500769.94 -31500769.75 0.0283 0.0189
 Saturn -90957-08-18 17:15 J -31500391.03 -31500390.78 -31500390.53 0.0282 0.0037
 Jupiter -90957-10-03 05:30 J -31500345.48 -31500345.27 -31500345.06 0.0536 0.0207
 Saturn -90956-09-01 14:51 J -31500011.98 -31500011.88 -31500011.78 0.0282 0.0255
 Jupiter -90951-03-21 17:30 J -31498349.99 -31498349.77 -31498349.55 0.0494 0.0146
 Uranus -90944-10-07 20:37 J -31495592.76 -31495592.64 -31495592.48 0.0131 0.0109
 Saturn -90943-01-24 22:18 J -31495483.66 -31495483.57 -31495483.45 0.0276 0.0247
 Uranus -90943-10-11 23:44 J -31495223.70 -31495223.51 -31495223.32 0.0131 0.0086
 Saturn -90942-02-05 23:30 J -31495106.75 -31495106.52 -31495106.29 0.0276 0.0055
 Uranus -90942-10-16 01:39 J -31494854.64 -31494854.43 -31494854.20 0.0131 0.0062
 Saturn -90941-02-18 04:47 J -31494729.50 -31494729.30 -31494729.09 0.0277 0.0143
 Uranus -90941-10-19 03:35 J -31494485.59 -31494485.35 -31494485.11 0.0131 0.0038
 Uranus -90940-10-23 04:47 J -31494116.55 -31494116.30 -31494116.05 0.0131 0.0014
 Jupiter -90939-03-26 01:39 J -31493962.66 -31493962.43 -31493962.21 0.0493 0.0147
 Uranus -90939-10-27 05:44 J -31493747.51 -31493747.26 -31493747.01 0.0131 0.0009
 Uranus -90938-10-31 05:59 J -31493378.48 -31493378.25 -31493377.99 0.0131 0.0034
 Uranus -90937-11-03 06:42 J -31493009.44 -31493009.22 -31493008.99 0.0132 0.0057
 Uranus -90936-11-07 06:56 J -31492640.39 -31492640.21 -31492640.00 0.0132 0.0080
 Uranus -90935-11-11 07:25 J -31492271.33 -31492271.19 -31492271.03 0.0132 0.0103
 Uranus -90934-11-15 07:39 J -31491902.23 -31491902.18 -31491902.09 0.0132 0.0126
 Saturn -90929-07-29 23:44 J -31490183.55 -31490183.51 -31490183.45 0.0283 0.0277
 Saturn -90928-08-13 05:15 J -31489804.52 -31489804.28 -31489804.03 0.0283 0.0053
 Jupiter -90927-03-30 11:01 J -31489575.13 -31489575.04 -31489574.93 0.0491 0.0440
 Saturn -90927-08-27 04:47 J -31489425.50 -31489425.30 -31489425.10 0.0282 0.0168
 Mars -90918-12-31 17:59 J -31486011.89 -31486011.75 -31486011.61 0.1711 0.1071
 Saturn -90913-01-31 22:32 J -31484519.76 -31484519.56 -31484519.35 0.0276 0.0140
 Saturn -90912-02-12 01:11 J -31484142.68 -31484142.45 -31484142.21 0.0277 0.0056

Saturn -90911-02-24 08:51 J -31483765.22 -31483765.13 -31483765.03 0.0277 0.0254
 Uranus -90901-03-30 23:30 J -31480077.65 -31480077.52 -31480077.36 0.0148 0.0122
 Uranus -90900-04-05 06:42 J -31479707.43 -31479707.22 -31479707.02 0.0148 0.0088
 Uranus -90899-04-10 14:08 J -31479337.14 -31479336.91 -31479336.67 0.0148 0.0054
 Saturn -90899-08-07 02:08 J -31479218.61 -31479218.41 -31479218.19 0.0283 0.0158
 Uranus -90898-04-15 22:03 J -31478966.83 -31478966.58 -31478966.32 0.0148 0.0020
 Saturn -90898-08-21 05:01 J -31478839.53 -31478839.29 -31478839.05 0.0282 0.0066
 Uranus -90897-04-20 07:11 J -31478596.46 -31478596.20 -31478595.95 0.0148 0.0016
 Saturn -90897-09-03 01:54 J -31478460.44 -31478460.42 -31478460.41 0.0281 0.0281
 Uranus -90896-04-25 16:03 J -31478226.07 -31478225.83 -31478225.58 0.0147 0.0051
 Uranus -90895-05-01 01:39 J -31477855.64 -31477855.43 -31477855.21 0.0147 0.0085
 Uranus -90894-05-06 11:15 J -31477485.17 -31477485.03 -31477484.87 0.0147 0.0119
 Mars -90892-07-03 07:39 J -31476696.33 -31476696.18 -31476696.02 0.1822 0.1212
 Neptune -90886-03-07 08:08 J -31474623.29 -31474623.16 -31474622.97 0.0089 0.0070
 Jupiter -90886-09-27 23:59 J -31474418.70 -31474418.50 -31474418.28 0.0533 0.0243
 Mars -90885-01-09 06:13 J -31474315.35 -31474315.24 -31474315.12 0.1688 0.1287
 Neptune -90885-03-08 19:11 J -31474255.90 -31474255.70 -31474255.45 0.0089 0.0041
 Saturn -90884-01-26 06:56 J -31473932.36 -31473932.21 -31473932.07 0.0276 0.0219
 Neptune -90884-03-11 06:42 J -31473888.47 -31473888.22 -31473887.96 0.0089 0.0012
 Saturn -90883-02-07 08:08 J -31473555.39 -31473555.16 -31473554.92 0.0276 0.0028
 Neptune -90883-03-13 17:44 J -31473521.00 -31473520.76 -31473520.50 0.0089 0.0018
 Saturn -90882-02-19 14:08 J -31473178.09 -31473177.91 -31473177.71 0.0277 0.0170
 Neptune -90882-03-16 05:15 J -31473153.49 -31473153.28 -31473153.06 0.0089 0.0047
 Neptune -90881-03-17 17:01 J -31472785.92 -31472785.79 -31472785.66 0.0089 0.0076
 Jupiter -90880-03-16 13:11 J -31472421.98 -31472421.95 -31472421.89 0.0496 0.0485
 Pluto -90877-12-01 07:54 J -31471066.35 -31471066.17 -31471065.96 0.0078 0.0049
 Jupiter -90874-10-02 23:01 J -31470030.77 -31470030.54 -31470030.32 0.0535 0.0125
 Saturn -90870-08-01 13:54 J -31468632.04 -31468631.92 -31468631.79 0.0283 0.0245
 Saturn -90869-08-14 18:56 J -31468252.96 -31468252.71 -31468252.46 0.0283 0.0022
 Jupiter -90868-03-20 23:30 J -31468034.74 -31468034.52 -31468034.31 0.0495 0.0186

Saturn -90868-08-28 17:44 J -31467873.93 -31467873.76 -31467873.58 0.0282 0.0197
 Jupiter -90862-10-08 02:51 J -31465642.44 -31465642.38 -31465642.30 0.0537 0.0509
 Uranus -90861-10-04 05:59 J -31465280.30 -31465280.25 -31465280.19 0.0131 0.0128
 Uranus -90860-10-08 09:20 J -31464911.26 -31464911.11 -31464910.96 0.0131 0.0105
 Uranus -90859-10-12 11:59 J -31464542.19 -31464542.00 -31464541.79 0.0131 0.0081
 Uranus -90858-10-16 14:08 J -31464173.13 -31464172.91 -31464172.68 0.0131 0.0058
 Uranus -90857-10-19 16:03 J -31463804.07 -31463803.83 -31463803.59 0.0131 0.0034
 Jupiter -90856-03-25 07:39 J -31463647.41 -31463647.18 -31463646.95 0.0493 0.0107
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 Uranus -90855-10-27 18:13 J -31463065.99 -31463065.74 -31463065.49 0.0131 0.0012
 Saturn -90854-02-02 08:08 J -31462968.38 -31462968.16 -31462967.94 0.0276 0.0112
 Uranus -90854-10-31 18:56 J -31462696.95 -31462696.71 -31462696.47 0.0131 0.0036
 Saturn -90853-02-14 11:01 J -31462591.26 -31462591.04 -31462590.80 0.0277 0.0083
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 Uranus -90851-11-11 20:23 J -31461589.79 -31461589.65 -31461589.49 0.0132 0.0105
 Uranus -90850-11-15 21:06 J -31461220.67 -31461220.62 -31461220.55 0.0132 0.0128
 Jupiter -90844-03-29 15:35 J -31459259.98 -31459259.85 -31459259.71 0.0491 0.0395
 Saturn -90840-08-08 16:18 J -31457667.04 -31457666.82 -31457666.59 0.0283 0.0125
 Saturn -90839-08-22 17:59 J -31457287.97 -31457287.75 -31457287.50 0.0282 0.0097
 Mars -90838-01-02 22:18 J -31457154.74 -31457154.57 -31457154.39 0.1707 0.0342
 Saturn -90825-01-28 14:08 J -31452381.07 -31452380.91 -31452380.73 0.0276 0.0192
 Saturn -90824-02-08 16:18 J -31452004.06 -31452003.82 -31452003.58 0.0277 0.0000
 Saturn -90823-02-20 23:01 J -31451626.70 -31451626.54 -31451626.36 0.0277 0.0196
 Uranus -90817-03-31 10:32 J -31449396.19 -31449396.06 -31449395.88 0.0148 0.0117
 Uranus -90816-04-05 17:30 J -31449025.97 -31449025.77 -31449025.55 0.0148 0.0084
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 Mars -90813-07-06 20:51 J -31447837.84 -31447837.63 -31447837.43 0.1830 0.0268

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 Saturn -90811-08-03 04:32 J -31447080.47 -31447080.31 -31447080.14 0.0283 0.0212
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 Saturn -90810-08-17 08:51 J -31446701.38 -31446701.13 -31446700.88 0.0283 0.0011
 Saturn -90809-08-30 06:56 J -31446322.35 -31446322.21 -31446322.05 0.0282 0.0226
 Neptune -90804-09-14 08:37 J -31444481.30 -31444481.14 -31444480.94 0.0088 0.0063
 Neptune -90803-09-16 20:51 J -31444113.85 -31444113.63 -31444113.37 0.0088 0.0035
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 Neptune -90799-09-25 19:39 J -31442643.75 -31442643.68 -31442643.55 0.0088 0.0082
 Saturn -90796-01-22 17:15 J -31441793.80 -31441793.78 -31441793.73 0.0275 0.0272
 Saturn -90795-02-03 17:01 J -31441417.02 -31441416.79 -31441416.56 0.0276 0.0084
 Saturn -90794-02-15 20:23 J -31441039.86 -31441039.65 -31441039.42 0.0277 0.0111
 Jupiter -90791-10-01 23:59 J -31439715.73 -31439715.50 -31439715.27 0.0535 0.0066
 Jupiter -90785-03-20 04:32 J -31437719.51 -31437719.31 -31437719.10 0.0495 0.0227
 Saturn -90781-08-10 05:59 J -31436115.48 -31436115.25 -31436115.01 0.0283 0.0094
 Saturn -90780-08-24 06:56 J -31435736.42 -31435736.21 -31435735.97 0.0282 0.0127
 Jupiter -90779-10-07 05:59 J -31435327.37 -31435327.25 -31435327.13 0.0537 0.0458
 Uranus -90777-10-04 18:13 J -31434598.81 -31434598.74 -31434598.64 0.0131 0.0123
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 Jupiter -90773-03-24 09:35 J -31433332.33 -31433332.10 -31433331.87 0.0493 0.0057
 Uranus -90773-10-20 04:18 J -31433122.55 -31433122.32 -31433122.06 0.0131 0.0032
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 Saturn -90766-01-29 20:51 J -31430829.81 -31430829.63 -31430829.43 0.0276 0.0165
 Uranus -90766-11-16 10:03 J -31430539.11 -31430539.08 -31430539.01 0.0132 0.0130
 Saturn -90765-02-10 23:15 J -31430452.76 -31430452.53 -31430452.29 0.0277 0.0027
 Saturn -90764-02-22 06:27 J -31430075.36 -31430075.23 -31430075.07 0.0277 0.0222
 Jupiter -90761-03-28 17:30 J -31428944.93 -31428944.77 -31428944.60 0.0492 0.0347
 Mars -90759-01-05 02:23 J -31428297.58 -31428297.40 -31428297.22 0.1702 0.0374
 Saturn -90752-08-04 18:42 J -31425528.91 -31425528.72 -31425528.52 0.0283 0.0180
 Saturn -90751-08-18 22:32 J -31425149.81 -31425149.56 -31425149.31 0.0283 0.0041
 Saturn -90750-09-01 20:08 J -31424770.76 -31424770.66 -31424770.55 0.0282 0.0254
 Saturn -90737-01-25 00:27 J -31420242.57 -31420242.48 -31420242.36 0.0275 0.0245
 Saturn -90736-02-05 00:13 J -31419865.72 -31419865.49 -31419865.25 0.0276 0.0058
 Saturn -90735-02-17 04:32 J -31419488.52 -31419488.31 -31419488.10 0.0277 0.0136
 Uranus -90734-03-27 15:35 J -31419084.88 -31419084.85 -31419084.77 0.0147 0.0144
 Mars -90734-07-11 09:35 J -31418979.14 -31418979.10 -31418979.05 0.1837 0.1779
 Uranus -90733-03-31 21:06 J -31418714.77 -31418714.62 -31418714.44 0.0147 0.0113
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 Uranus -90728-04-26 12:13 J -31416863.21 -31416862.99 -31416862.73 0.0147 0.0057
 Uranus -90727-05-01 21:35 J -31416492.78 -31416492.60 -31416492.38 0.0147 0.0090
 Uranus -90726-05-07 07:25 J -31416122.32 -31416122.19 -31416122.04 0.0147 0.0123
 Saturn -90723-07-29 12:27 J -31414942.99 -31414942.98 -31414942.95 0.0283 0.0282
 Neptune -90722-03-06 16:18 J -31414722.89 -31414722.82 -31414722.73 0.0089 0.0084
 Saturn -90722-08-12 18:56 J -31414563.95 -31414563.71 -31414563.46 0.0282 0.0063
 Neptune -90721-03-08 02:37 J -31414355.56 -31414355.39 -31414355.16 0.0089 0.0056
 Saturn -90721-08-25 19:39 J -31414184.88 -31414184.68 -31414184.47 0.0282 0.0156

Neptune -90720-03-10 13:54 J -31413988.15 -31413987.92 -31413987.66 0.0089 0.0027
 Jupiter -90720-09-25 22:03 J -31413788.75 -31413788.58 -31413788.41 0.0532 0.0368
 Neptune -90719-03-13 01:11 J -31413620.70 -31413620.45 -31413620.19 0.0089 0.0003
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 Neptune -90717-03-16 23:15 J -31412885.69 -31412885.53 -31412885.32 0.0089 0.0061
 Pluto -90715-05-30 07:11 J -31412081.35 -31412081.20 -31412080.99 0.0066 0.0050
 Pluto -90714-05-31 23:59 J -31411714.67 -31411714.50 -31411714.28 0.0067 0.0045
 Mars -90713-12-29 13:11 J -31411137.06 -31411136.95 -31411136.84 0.1723 0.1369
 Jupiter -90708-10-01 01:25 J -31409400.67 -31409400.44 -31409400.20 0.0534 0.0012
 Saturn -90707-01-31 01:54 J -31409278.61 -31409278.42 -31409278.20 0.0276 0.0141
 Saturn -90706-02-12 05:01 J -31408901.53 -31408901.29 -31408901.06 0.0277 0.0052
 Saturn -90705-02-24 12:27 J -31408524.08 -31408523.98 -31408523.86 0.0278 0.0246
 Jupiter -90702-03-20 07:11 J -31407404.39 -31407404.20 -31407404.01 0.0496 0.0275
 Jupiter -90696-10-05 23:15 J -31405012.69 -31405012.53 -31405012.36 0.0536 0.0374
 Saturn -90693-08-06 06:56 J -31403977.43 -31403977.21 -31403977.00 0.0283 0.0150
 Uranus -90693-10-05 05:44 J -31403917.35 -31403917.26 -31403917.14 0.0131 0.0119
 Saturn -90692-08-20 10:03 J -31403598.32 -31403598.08 -31403597.83 0.0283 0.0071
 Uranus -90692-10-09 08:51 J -31403548.28 -31403548.13 -31403547.94 0.0131 0.0097
 Saturn -90691-09-03 06:56 J -31403219.21 -31403219.21 -31403219.18 0.0282 0.0281
 Uranus -90691-10-13 11:59 J -31403179.20 -31403179.00 -31403178.78 0.0131 0.0073
 Jupiter -90690-03-24 17:01 J -31403017.03 -31403016.79 -31403016.56 0.0494 0.0021
 Uranus -90690-10-17 14:37 J -31402810.13 -31402809.89 -31402809.66 0.0131 0.0051
 Uranus -90689-10-20 16:18 J -31402441.07 -31402440.82 -31402440.57 0.0131 0.0028
 Uranus -90688-10-24 17:44 J -31402072.01 -31402071.76 -31402071.51 0.0131 0.0005
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 Uranus -90682-11-16 23:01 J -31399857.57 -31399857.54 -31399857.50 0.0132 0.0131

Mars -90680-01-07 05:44 J -31399440.40 -31399440.26 -31399440.12 0.1697 0.1062
 Saturn -90678-01-26 05:59 J -31398691.38 -31398691.25 -31398691.09 0.0275 0.0220
 Jupiter -90678-03-29 01:39 J -31398629.61 -31398629.43 -31398629.25 0.0492 0.0313
 Saturn -90677-02-07 06:13 J -31398314.48 -31398314.24 -31398314.00 0.0276 0.0033
 Saturn -90676-02-18 10:32 J -31397937.25 -31397937.06 -31397936.86 0.0277 0.0161
 Saturn -90664-07-31 00:13 J -31393391.59 -31393391.49 -31393391.37 0.0283 0.0252
 Saturn -90663-08-14 06:27 J -31393012.48 -31393012.23 -31393011.98 0.0282 0.0033
 Saturn -90662-08-28 06:42 J -31392633.40 -31392633.22 -31392633.02 0.0282 0.0183
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 Uranus -90649-04-01 08:08 J -31388033.31 -31388033.16 -31388032.97 0.0148 0.0108
 Saturn -90648-02-01 05:44 J -31387727.48 -31387727.26 -31387727.04 0.0276 0.0115
 Uranus -90648-04-06 14:51 J -31387663.09 -31387662.88 -31387662.65 0.0148 0.0076
 Saturn -90647-02-13 08:23 J -31387350.37 -31387350.15 -31387349.91 0.0277 0.0076
 Uranus -90647-04-11 21:49 J -31387292.83 -31387292.59 -31387292.34 0.0148 0.0043
 Saturn -90646-02-25 16:18 J -31386972.87 -31386972.82 -31386972.75 0.0278 0.0268
 Uranus -90646-04-17 05:44 J -31386922.51 -31386922.26 -31386922.00 0.0148 0.0010
 Uranus -90645-04-21 14:23 J -31386552.15 -31386551.90 -31386551.64 0.0147 0.0025
 Uranus -90644-04-26 23:30 J -31386181.76 -31386181.52 -31386181.29 0.0147 0.0059
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 Uranus -90642-05-07 17:59 J -31385440.86 -31385440.75 -31385440.59 0.0147 0.0125
 Neptune -90640-09-13 15:06 J -31384580.97 -31384580.87 -31384580.73 0.0088 0.0078
 Neptune -90639-09-16 03:35 J -31384213.56 -31384213.35 -31384213.12 0.0088 0.0048
 Neptune -90638-09-18 15:49 J -31383846.09 -31383845.84 -31383845.58 0.0088 0.0020
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 Saturn -90634-08-08 16:47 J -31382426.02 -31382425.80 -31382425.57 0.0283 0.0121
 Mars -90633-01-01 18:42 J -31382279.89 -31382279.72 -31382279.55 0.1717 0.0630
 Saturn -90633-08-21 20:08 J -31382046.89 -31382046.66 -31382046.42 0.0283 0.0098

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 Jupiter -90625-09-29 20:37 J -31379085.87 -31379085.64 -31379085.41 0.0534 0.0067
 Saturn -90619-01-27 10:03 J -31377140.24 -31377140.08 -31377139.91 0.0275 0.0196
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 Mars -90608-07-02 17:59 J -31372965.92 -31372965.75 -31372965.58 0.1813 0.1028
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 Jupiter -90607-03-24 01:11 J -31372701.68 -31372701.45 -31372701.21 0.0494 0.0016
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 Uranus -90599-11-13 10:18 J -31369545.18 -31369545.07 -31369544.91 0.0132 0.0111
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 Saturn -90589-02-03 07:25 J -31366176.41 -31366176.19 -31366175.96 0.0276 0.0093
 Saturn -90588-02-14 10:03 J -31365799.29 -31365799.08 -31365798.85 0.0277 0.0098
 Saturn -90575-08-09 23:44 J -31360874.74 -31360874.51 -31360874.26 0.0284 0.0096
 Saturn -90574-08-24 03:06 J -31360495.58 -31360495.37 -31360495.13 0.0283 0.0124

Uranus	-90566-03-28 13:54 J	-31357722.00	-31357721.92	-31357721.79	0.0147	0.0135
Uranus	-90565-04-01 19:25 J	-31357351.86	-31357351.69	-31357351.50	0.0147	0.0104
Uranus	-90564-04-07 01:39 J	-31356981.65	-31356981.43	-31356981.20	0.0148	0.0072
Uranus	-90563-04-12 08:23 J	-31356611.38	-31356611.15	-31356610.89	0.0148	0.0040
Uranus	-90562-04-17 16:18 J	-31356241.07	-31356240.82	-31356240.56	0.0147	0.0006
Uranus	-90561-04-22 00:42 J	-31355870.72	-31355870.47	-31355870.21	0.0147	0.0028
Saturn	-90560-01-28 12:13 J	-31355589.16	-31355588.99	-31355588.80	0.0275	0.0174
Uranus	-90560-04-27 09:49 J	-31355500.33	-31355500.09	-31355499.86	0.0147	0.0061
Saturn	-90559-02-09 12:27 J	-31355212.22	-31355211.98	-31355211.74	0.0276	0.0013
Uranus	-90559-05-02 18:42 J	-31355129.90	-31355129.72	-31355129.51	0.0147	0.0094
Saturn	-90558-02-21 17:01 J	-31354834.94	-31354834.79	-31354834.62	0.0277	0.0204
Uranus	-90558-05-08 04:03 J	-31354759.44	-31354759.33	-31354759.17	0.0147	0.0126
Neptune	-90557-03-07 11:15 J	-31354455.17	-31354455.03	-31354454.86	0.0089	0.0070
Neptune	-90556-03-09 22:18 J	-31354087.78	-31354087.57	-31354087.33	0.0089	0.0041
Neptune	-90555-03-12 09:35 J	-31353720.35	-31353720.10	-31353719.84	0.0089	0.0012
Mars	-90554-01-03 23:59 J	-31353422.68	-31353422.50	-31353422.32	0.1713	0.0114
Neptune	-90554-03-14 20:37 J	-31353352.88	-31353352.64	-31353352.38	0.0089	0.0017
Jupiter	-90554-09-24 20:08 J	-31353158.75	-31353158.66	-31353158.57	0.0531	0.0492
Neptune	-90553-03-16 07:39 J	-31352985.38	-31352985.18	-31352984.94	0.0089	0.0046
Neptune	-90552-03-18 19:11 J	-31352617.82	-31352617.70	-31352617.55	0.0089	0.0075
Saturn	-90546-08-03 16:47 J	-31350288.97	-31350288.80	-31350288.61	0.0283	0.0198
Saturn	-90545-08-16 22:47 J	-31349909.80	-31349909.55	-31349909.30	0.0283	0.0021
Saturn	-90544-08-30 22:18 J	-31349530.70	-31349530.57	-31349530.42	0.0282	0.0233
Jupiter	-90542-09-30 03:06 J	-31348770.60	-31348770.37	-31348770.14	0.0533	0.0106
Jupiter	-90536-03-18 23:30 J	-31346773.68	-31346773.52	-31346773.35	0.0496	0.0342
Saturn	-90531-01-23 09:35 J	-31345002.19	-31345002.10	-31345002.01	0.0275	0.0254
Saturn	-90530-02-04 07:39 J	-31344625.40	-31344625.18	-31344624.94	0.0276	0.0072
Jupiter	-90530-10-05 08:08 J	-31344382.36	-31344382.16	-31344381.96	0.0535	0.0276
Saturn	-90529-02-16 10:32 J	-31344248.27	-31344248.06	-31344247.84	0.0277	0.0118
Mars	-90529-07-06 05:30 J	-31344107.47	-31344107.27	-31344107.06	0.1820	0.0404

Uranus -90525-10-06 03:20 J -31342554.48 -31342554.36 -31342554.20 0.0132 0.0111
 Jupiter -90524-03-23 07:54 J -31342386.40 -31342386.17 -31342385.93 0.0495 0.0051
 Uranus -90524-10-10 06:56 J -31342185.38 -31342185.21 -31342185.01 0.0131 0.0089
 Uranus -90523-10-14 10:03 J -31341816.29 -31341816.08 -31341815.85 0.0131 0.0066
 Uranus -90522-10-18 12:27 J -31341447.20 -31341446.98 -31341446.73 0.0131 0.0045
 Uranus -90521-10-21 14:37 J -31341078.13 -31341077.89 -31341077.64 0.0131 0.0021
 Uranus -90520-10-25 16:32 J -31340709.06 -31340708.81 -31340708.56 0.0131 0.0002
 Uranus -90519-10-29 17:59 J -31340340.00 -31340339.75 -31340339.50 0.0131 0.0024
 Uranus -90518-11-02 18:56 J -31339970.94 -31339970.71 -31339970.47 0.0131 0.0046
 Uranus -90517-11-05 19:54 J -31339601.87 -31339601.67 -31339601.44 0.0132 0.0069
 Saturn -90516-08-11 04:47 J -31339323.54 -31339323.30 -31339323.05 0.0284 0.0072
 Uranus -90516-11-09 21:06 J -31339232.79 -31339232.62 -31339232.43 0.0132 0.0090
 Saturn -90515-08-25 08:23 J -31338944.36 -31338944.15 -31338943.93 0.0283 0.0146
 Uranus -90515-11-13 22:03 J -31338863.71 -31338863.58 -31338863.45 0.0132 0.0112
 Jupiter -90512-03-27 17:15 J -31337998.98 -31337998.78 -31337998.57 0.0493 0.0244
 Mars -90508-12-28 06:56 J -31336262.23 -31336262.21 -31336262.18 0.1734 0.1717
 Saturn -90501-01-30 13:25 J -31334038.13 -31334037.94 -31334037.73 0.0275 0.0153
 Saturn -90500-02-10 13:25 J -31333661.17 -31333660.94 -31333660.70 0.0276 0.0034
 Saturn -90499-02-22 17:59 J -31333283.88 -31333283.75 -31333283.60 0.0277 0.0223
 Saturn -90487-08-04 21:35 J -31328737.80 -31328737.60 -31328737.40 0.0284 0.0174
 Saturn -90486-08-19 03:35 J -31328358.59 -31328358.35 -31328358.10 0.0283 0.0045
 Saturn -90485-09-01 03:06 J -31327979.46 -31327979.37 -31327979.25 0.0282 0.0255
 Uranus -90482-03-29 01:11 J -31327040.55 -31327040.45 -31327040.31 0.0147 0.0129
 Uranus -90481-04-02 06:27 J -31326670.41 -31326670.23 -31326670.03 0.0147 0.0099
 Uranus -90480-04-07 12:27 J -31326300.19 -31326299.98 -31326299.74 0.0147 0.0068
 Uranus -90479-04-12 19:11 J -31325929.94 -31325929.70 -31325929.44 0.0147 0.0036
 Uranus -90478-04-18 03:20 J -31325559.62 -31325559.36 -31325559.11 0.0147 0.0003
 Uranus -90477-04-22 11:30 J -31325189.26 -31325189.02 -31325188.76 0.0147 0.0031
 Uranus -90476-04-27 20:23 J -31324818.88 -31324818.65 -31324818.41 0.0147 0.0063
 Mars -90475-01-06 05:01 J -31324565.45 -31324565.29 -31324565.13 0.1708 0.0836

Uranus -90475-05-03 05:44 J -31324448.45 -31324448.26 -31324448.06 0.0147 0.0095
 Neptune -90475-09-15 11:15 J -31324313.19 -31324313.03 -31324312.83 0.0088 0.0062
 Uranus -90474-05-08 15:06 J -31324077.99 -31324077.87 -31324077.73 0.0147 0.0127
 Neptune -90474-09-17 23:44 J -31323945.74 -31323945.51 -31323945.26 0.0088 0.0034
 Neptune -90473-09-19 11:59 J -31323578.26 -31323578.00 -31323577.74 0.0088 0.0005
 Saturn -90472-01-24 09:35 J -31323451.22 -31323451.10 -31323450.97 0.0275 0.0233
 Neptune -90472-09-21 23:30 J -31323210.75 -31323210.52 -31323210.25 0.0088 0.0025
 Saturn -90471-02-05 07:39 J -31323074.41 -31323074.18 -31323073.94 0.0276 0.0052
 Jupiter -90471-09-24 03:35 J -31322843.37 -31322843.35 -31322843.32 0.0531 0.0527
 Neptune -90471-09-24 11:15 J -31322843.21 -31322843.03 -31322842.80 0.0088 0.0053
 Saturn -90470-02-17 10:18 J -31322697.28 -31322697.07 -31322696.86 0.0276 0.0137
 Neptune -90470-09-26 22:47 J -31322475.62 -31322475.55 -31322475.42 0.0088 0.0082
 Pluto -90467-06-01 03:06 J -31321497.60 -31321497.37 -31321497.12 0.0067 0.0030
 Pluto -90466-06-02 19:11 J -31321130.73 -31321130.70 -31321130.60 0.0067 0.0065
 Jupiter -90459-09-29 03:20 J -31318455.58 -31318455.36 -31318455.13 0.0532 0.0164
 Saturn -90458-07-29 22:03 J -31318151.65 -31318151.58 -31318151.49 0.0284 0.0269
 Saturn -90457-08-12 07:39 J -31317772.43 -31317772.18 -31317771.93 0.0284 0.0050
 Saturn -90456-08-26 11:01 J -31317393.23 -31317393.04 -31317392.82 0.0283 0.0167
 Jupiter -90453-03-18 08:51 J -31316458.28 -31316458.13 -31316457.98 0.0497 0.0370
 Jupiter -90447-10-04 06:27 J -31314067.44 -31314067.23 -31314067.02 0.0534 0.0211
 Saturn -90442-01-31 13:54 J -31312487.12 -31312486.92 -31312486.70 0.0275 0.0133
 Uranus -90442-10-03 10:03 J -31312242.12 -31312242.08 -31312242.00 0.0132 0.0128
 Saturn -90441-02-12 13:54 J -31312110.16 -31312109.92 -31312109.69 0.0275 0.0053
 Jupiter -90441-03-22 18:42 J -31312070.95 -31312070.72 -31312070.49 0.0495 0.0074
 Uranus -90441-10-06 14:08 J -31311873.04 -31311872.91 -31311872.74 0.0132 0.0107
 Saturn -90440-02-23 18:13 J -31311732.84 -31311732.74 -31311732.61 0.0276 0.0241
 Uranus -90440-10-10 17:59 J -31311503.93 -31311503.75 -31311503.55 0.0131 0.0085
 Uranus -90439-10-14 21:06 J -31311134.84 -31311134.62 -31311134.39 0.0131 0.0063
 Uranus -90438-10-18 23:30 J -31310765.75 -31310765.52 -31310765.27 0.0131 0.0041
 Uranus -90437-10-22 01:39 J -31310396.67 -31310396.43 -31310396.17 0.0131 0.0018

Uranus	-90436-10-26 03:35 J	-31310027.60	-31310027.35	-31310027.10	0.0131	0.0005
Uranus	-90435-10-30 05:01 J	-31309658.53	-31309658.29	-31309658.04	0.0131	0.0027
Uranus	-90434-11-03 06:27 J	-31309289.46	-31309289.23	-31309288.99	0.0132	0.0049
Uranus	-90433-11-06 07:11 J	-31308920.39	-31308920.20	-31308919.97	0.0132	0.0071
Uranus	-90432-11-10 08:08 J	-31308551.32	-31308551.16	-31308550.96	0.0132	0.0092
Uranus	-90431-11-14 08:51 J	-31308182.24	-31308182.13	-31308181.98	0.0132	0.0113
Jupiter	-90429-03-27 04:18 J	-31307683.53	-31307683.32	-31307683.11	0.0494	0.0220
Mars	-90429-12-30 14:08 J	-31307405.06	-31307404.91	-31307404.75	0.1729	0.0920
Saturn	-90428-08-06 00:56 J	-31307186.66	-31307186.46	-31307186.24	0.0284	0.0151
Saturn	-90427-08-20 07:25 J	-31306807.43	-31306807.19	-31306806.95	0.0283	0.0067
Saturn	-90426-09-03 06:56 J	-31306428.25	-31306428.21	-31306428.15	0.0282	0.0275
Saturn	-90413-01-26 09:20 J	-31301900.24	-31301900.11	-31301899.95	0.0275	0.0214
Saturn	-90412-02-06 07:39 J	-31301523.42	-31301523.18	-31301522.94	0.0275	0.0032
Saturn	-90411-02-18 09:49 J	-31301146.28	-31301146.09	-31301145.89	0.0276	0.0155
Saturn	-90399-07-30 23:01 J	-31296600.65	-31296600.54	-31296600.41	0.0285	0.0248
Uranus	-90398-03-29 11:44 J	-31296359.13	-31296359.01	-31296358.86	0.0147	0.0124
Saturn	-90398-08-14 08:51 J	-31296221.38	-31296221.13	-31296220.88	0.0284	0.0029
Uranus	-90397-04-02 16:47 J	-31295988.99	-31295988.80	-31295988.60	0.0147	0.0095
Saturn	-90397-08-27 12:27 J	-31295842.16	-31295841.98	-31295841.78	0.0283	0.0186
Mars	-90396-01-08 09:06 J	-31295708.19	-31295708.12	-31295708.04	0.1703	0.1533
Uranus	-90396-04-07 22:32 J	-31295618.77	-31295618.56	-31295618.31	0.0147	0.0064
Uranus	-90395-04-13 05:44 J	-31295248.51	-31295248.26	-31295248.01	0.0147	0.0031
Uranus	-90394-04-18 13:25 J	-31294878.19	-31294877.94	-31294877.68	0.0147	0.0002
Neptune	-90393-03-06 20:37 J	-31294554.70	-31294554.64	-31294554.53	0.0089	0.0084
Uranus	-90393-04-22 21:35 J	-31294507.84	-31294507.60	-31294507.34	0.0147	0.0034
Neptune	-90392-03-09 07:39 J	-31294187.36	-31294187.18	-31294186.97	0.0089	0.0055
Uranus	-90392-04-28 06:27 J	-31294137.45	-31294137.23	-31294136.99	0.0147	0.0065
Neptune	-90391-03-11 18:42 J	-31293819.96	-31293819.72	-31293819.47	0.0089	0.0026
Uranus	-90391-05-03 15:20 J	-31293767.04	-31293766.86	-31293766.65	0.0147	0.0097
Neptune	-90390-03-14 05:44 J	-31293452.51	-31293452.26	-31293452.00	0.0089	0.0003

Uranus -90390-05-09 00:42 J -31293396.58 -31293396.47 -31293396.33 0.0147 0.0128
 Neptune -90389-03-15 16:47 J -31293085.03 -31293084.80 -31293084.55 0.0089 0.0032
 Neptune -90388-03-18 03:35 J -31292717.51 -31292717.35 -31292717.14 0.0089 0.0061
 Saturn -90383-02-01 14:51 J -31290936.09 -31290935.88 -31290935.66 0.0274 0.0113
 Saturn -90382-02-13 14:23 J -31290559.13 -31290558.90 -31290558.66 0.0275 0.0072
 Saturn -90381-02-25 19:11 J -31290181.78 -31290181.70 -31290181.62 0.0276 0.0258
 Pluto -90381-12-05 02:37 J -31289898.64 -31289898.39 -31289898.14 0.0078 0.0001
 Jupiter -90376-09-28 06:56 J -31288140.42 -31288140.21 -31288140.00 0.0532 0.0211
 Jupiter -90370-03-18 20:08 J -31286142.79 -31286142.66 -31286142.51 0.0498 0.0393
 Saturn -90369-08-07 03:20 J -31285635.57 -31285635.36 -31285635.12 0.0284 0.0129
 Saturn -90368-08-21 09:49 J -31285256.33 -31285256.09 -31285255.85 0.0283 0.0088
 Jupiter -90364-10-03 13:39 J -31283752.15 -31283751.93 -31283751.71 0.0534 0.0174
 Jupiter -90358-03-23 04:32 J -31281755.54 -31281755.31 -31281755.09 0.0496 0.0103
 Uranus -90358-10-03 19:25 J -31281560.76 -31281560.69 -31281560.59 0.0132 0.0124
 Uranus -90357-10-06 23:30 J -31281191.66 -31281191.52 -31281191.34 0.0132 0.0103
 Uranus -90356-10-11 03:49 J -31280822.54 -31280822.34 -31280822.14 0.0131 0.0081
 Uranus -90355-10-15 06:27 J -31280453.44 -31280453.23 -31280452.98 0.0131 0.0060
 Saturn -90354-01-27 10:03 J -31280349.24 -31280349.08 -31280348.91 0.0275 0.0193
 Uranus -90354-10-19 09:20 J -31280084.34 -31280084.11 -31280083.85 0.0131 0.0038
 Saturn -90353-02-08 07:54 J -31279972.41 -31279972.17 -31279971.93 0.0275 0.0012
 Uranus -90353-10-22 11:44 J -31279715.26 -31279715.01 -31279714.76 0.0131 0.0015
 Saturn -90352-02-19 09:49 J -31279595.27 -31279595.09 -31279594.90 0.0276 0.0173
 Uranus -90352-10-26 13:39 J -31279346.17 -31279345.93 -31279345.67 0.0131 0.0008
 Uranus -90351-10-30 15:20 J -31278977.10 -31278976.86 -31278976.61 0.0131 0.0029
 Uranus -90350-11-03 16:32 J -31278608.03 -31278607.81 -31278607.57 0.0132 0.0051
 Mars -90349-01-02 19:39 J -31278547.87 -31278547.68 -31278547.50 0.1724 0.0181
 Uranus -90349-11-06 17:44 J -31278238.96 -31278238.76 -31278238.55 0.0132 0.0072
 Uranus -90348-11-10 18:42 J -31277869.89 -31277869.72 -31277869.54 0.0132 0.0093
 Uranus -90347-11-14 18:56 J -31277500.81 -31277500.71 -31277500.56 0.0132 0.0114
 Jupiter -90346-03-27 13:11 J -31277368.16 -31277367.95 -31277367.73 0.0494 0.0188

Saturn -90340-07-31 23:59 J -31275049.64 -31275049.50 -31275049.34 0.0285 0.0228
 Saturn -90339-08-15 10:03 J -31274670.33 -31274670.08 -31274669.82 0.0284 0.0010
 Saturn -90338-08-29 13:54 J -31274291.08 -31274290.92 -31274290.73 0.0283 0.0205
 Jupiter -90334-03-31 20:51 J -31272980.68 -31272980.63 -31272980.56 0.0493 0.0477
 Saturn -90325-01-22 19:54 J -31269761.70 -31269761.67 -31269761.61 0.0274 0.0269
 Saturn -90324-02-02 15:49 J -31269385.06 -31269384.84 -31269384.61 0.0274 0.0093
 Mars -90324-07-02 07:54 J -31269235.36 -31269235.17 -31269234.99 0.1804 0.0790
 Saturn -90323-02-14 15:35 J -31269008.07 -31269007.85 -31269007.62 0.0275 0.0091
 Saturn -90322-02-26 19:54 J -31268630.67 -31268630.67 -31268630.64 0.0276 0.0275
 Uranus -90314-03-29 20:51 J -31265677.77 -31265677.63 -31265677.48 0.0147 0.0119
 Uranus -90313-04-03 01:54 J -31265307.62 -31265307.42 -31265307.22 0.0147 0.0090
 Uranus -90312-04-08 07:39 J -31264937.40 -31264937.18 -31264936.93 0.0147 0.0060
 Uranus -90311-04-13 14:51 J -31264567.13 -31264566.88 -31264566.63 0.0147 0.0028
 Neptune -90311-09-14 19:54 J -31264412.78 -31264412.67 -31264412.51 0.0088 0.0076
 Uranus -90310-04-18 22:32 J -31264196.81 -31264196.56 -31264196.30 0.0147 0.0005
 Saturn -90310-08-09 06:13 J -31264084.47 -31264084.24 -31264084.00 0.0284 0.0107
 Neptune -90310-09-17 08:23 J -31264045.36 -31264045.15 -31264044.92 0.0088 0.0047
 Uranus -90309-04-23 06:42 J -31263826.46 -31263826.22 -31263825.96 0.0147 0.0036
 Saturn -90309-08-22 12:27 J -31263705.21 -31263704.98 -31263704.75 0.0283 0.0109
 Neptune -90309-09-18 20:23 J -31263677.89 -31263677.65 -31263677.38 0.0088 0.0019
 Uranus -90308-04-28 15:06 J -31263456.08 -31263455.87 -31263455.62 0.0147 0.0069
 Neptune -90308-09-21 08:37 J -31263310.39 -31263310.14 -31263309.87 0.0088 0.0011
 Uranus -90307-05-04 00:13 J -31263085.66 -31263085.49 -31263085.28 0.0147 0.0099
 Neptune -90307-09-23 20:23 J -31262942.87 -31262942.65 -31262942.41 0.0088 0.0040
 Uranus -90306-05-09 09:20 J -31262715.21 -31262715.11 -31262714.97 0.0147 0.0130
 Neptune -90306-09-26 07:54 J -31262575.31 -31262575.17 -31262574.98 0.0088 0.0068
 Saturn -90295-01-28 11:44 J -31258798.19 -31258798.01 -31258797.82 0.0274 0.0173
 Saturn -90294-02-09 09:20 J -31258421.34 -31258421.11 -31258420.87 0.0275 0.0009
 Saturn -90293-02-21 11:15 J -31258044.20 -31258044.03 -31258043.85 0.0276 0.0192
 Jupiter -90293-09-27 15:20 J -31257825.07 -31257824.86 -31257824.65 0.0532 0.0244

Jupiter -90287-03-18 04:47 J -31255827.41 -31255827.30 -31255827.17 0.0498 0.0424
 Saturn -90281-08-02 01:11 J -31253498.62 -31253498.45 -31253498.27 0.0285 0.0207
 Jupiter -90281-10-02 17:01 J -31253437.02 -31253436.79 -31253436.56 0.0533 0.0128
 Saturn -90280-08-16 11:15 J -31253119.28 -31253119.03 -31253118.78 0.0284 0.0011
 Saturn -90279-08-30 15:20 J -31252740.00 -31252739.86 -31252739.70 0.0283 0.0223
 Jupiter -90275-03-22 12:13 J -31251440.22 -31251439.99 -31251439.77 0.0497 0.0133
 Uranus -90274-10-04 05:01 J -31250879.37 -31250879.29 -31250879.16 0.0132 0.0120
 Uranus -90273-10-07 09:49 J -31250510.26 -31250510.09 -31250509.92 0.0131 0.0098
 Uranus -90272-10-11 13:39 J -31250141.13 -31250140.93 -31250140.72 0.0131 0.0077
 Uranus -90271-10-15 16:47 J -31249772.02 -31249771.80 -31249771.56 0.0131 0.0055
 Mars -90270-01-05 01:39 J -31249690.61 -31249690.43 -31249690.26 0.1719 0.0570
 Uranus -90270-10-19 19:39 J -31249402.92 -31249402.68 -31249402.43 0.0131 0.0033
 Jupiter -90269-10-07 19:25 J -31249048.76 -31249048.69 -31249048.60 0.0535 0.0499
 Uranus -90269-10-22 22:03 J -31249033.83 -31249033.58 -31249033.33 0.0131 0.0012
 Uranus -90268-10-27 00:13 J -31248664.74 -31248664.49 -31248664.24 0.0131 0.0010
 Uranus -90267-10-31 01:39 J -31248295.67 -31248295.43 -31248295.18 0.0131 0.0032
 Saturn -90266-01-23 22:03 J -31248210.67 -31248210.58 -31248210.47 0.0274 0.0248
 Uranus -90266-11-04 03:20 J -31247926.59 -31247926.36 -31247926.13 0.0132 0.0053
 Saturn -90265-02-04 18:27 J -31247833.96 -31247833.73 -31247833.50 0.0274 0.0072
 Uranus -90265-11-07 04:03 J -31247557.53 -31247557.33 -31247557.11 0.0132 0.0074
 Saturn -90264-02-15 17:59 J -31247456.96 -31247456.75 -31247456.52 0.0275 0.0111
 Uranus -90264-11-11 04:47 J -31247188.45 -31247188.30 -31247188.11 0.0132 0.0095
 Jupiter -90263-03-26 21:35 J -31247052.82 -31247052.60 -31247052.38 0.0495 0.0161
 Uranus -90263-11-15 05:30 J -31246819.37 -31246819.27 -31246819.13 0.0132 0.0115
 Jupiter -90251-03-31 07:11 J -31242665.28 -31242665.20 -31242665.10 0.0493 0.0452
 Saturn -90251-08-10 10:18 J -31242533.31 -31242533.07 -31242532.83 0.0284 0.0084
 Saturn -90250-08-24 16:18 J -31242154.04 -31242153.82 -31242153.59 0.0283 0.0130
 Mars -90245-07-05 17:30 J -31240376.97 -31240376.77 -31240376.58 0.1811 0.0573
 Saturn -90236-01-29 14:51 J -31237247.08 -31237246.88 -31237246.68 0.0274 0.0152
 Saturn -90235-02-10 12:27 J -31236870.22 -31236869.98 -31236869.75 0.0275 0.0028

Saturn -90234-02-22 14:08 J -31236493.05 -31236492.91 -31236492.75 0.0276 0.0211
 Uranus -90231-03-25 01:25 J -31235366.48 -31235366.44 -31235366.37 0.0147 0.0143
 Uranus -90230-03-30 05:15 J -31234996.42 -31234996.28 -31234996.10 0.0147 0.0116
 Uranus -90229-04-03 10:47 J -31234626.26 -31234626.05 -31234625.85 0.0147 0.0086
 Neptune -90228-03-08 17:44 J -31234286.90 -31234286.76 -31234286.57 0.0089 0.0069
 Uranus -90228-04-08 16:18 J -31234256.04 -31234255.82 -31234255.57 0.0147 0.0056
 Neptune -90227-03-11 04:47 J -31233919.51 -31233919.30 -31233919.06 0.0089 0.0040
 Uranus -90227-04-13 23:15 J -31233885.78 -31233885.53 -31233885.27 0.0147 0.0025
 Neptune -90226-03-13 16:03 J -31233552.08 -31233551.83 -31233551.57 0.0089 0.0011
 Uranus -90226-04-19 06:56 J -31233515.46 -31233515.21 -31233514.95 0.0147 0.0008
 Neptune -90225-03-15 03:06 J -31233184.61 -31233184.37 -31233184.11 0.0089 0.0018
 Uranus -90225-04-23 15:06 J -31233145.12 -31233144.87 -31233144.62 0.0147 0.0039
 Neptune -90224-03-17 14:08 J -31232817.11 -31232816.91 -31232816.68 0.0089 0.0047
 Uranus -90224-04-28 23:15 J -31232774.74 -31232774.53 -31232774.28 0.0147 0.0070
 Mars -90224-12-29 05:59 J -31232530.37 -31232530.25 -31232530.12 0.1741 0.1286
 Neptune -90223-03-20 01:11 J -31232449.56 -31232449.45 -31232449.29 0.0089 0.0076
 Uranus -90223-05-04 08:37 J -31232404.33 -31232404.14 -31232403.95 0.0147 0.0100
 Uranus -90222-05-09 17:30 J -31232033.88 -31232033.77 -31232033.64 0.0147 0.0130
 Saturn -90222-08-04 04:03 J -31231947.51 -31231947.33 -31231947.13 0.0285 0.0185
 Saturn -90221-08-17 14:08 J -31231568.16 -31231567.91 -31231567.66 0.0284 0.0032
 Saturn -90220-08-31 17:44 J -31231188.87 -31231188.76 -31231188.62 0.0283 0.0242
 Pluto -90219-06-03 04:03 J -31230913.59 -31230913.33 -31230913.05 0.0067 0.0004
 Jupiter -90210-09-27 16:18 J -31227510.01 -31227509.82 -31227509.63 0.0530 0.0294
 Saturn -90207-01-25 01:39 J -31226659.55 -31226659.43 -31226659.29 0.0274 0.0226
 Saturn -90206-02-05 22:18 J -31226282.80 -31226282.57 -31226282.33 0.0274 0.0050
 Saturn -90205-02-17 22:18 J -31225905.78 -31225905.57 -31225905.36 0.0275 0.0131
 Jupiter -90204-03-17 11:15 J -31225512.12 -31225512.03 -31225511.94 0.0499 0.0457
 Jupiter -90198-10-02 17:30 J -31223122.00 -31223121.77 -31223121.54 0.0533 0.0071
 Saturn -90193-07-28 04:18 J -31221361.37 -31221361.32 -31221361.24 0.0285 0.0274
 Jupiter -90192-03-21 21:49 J -31221124.81 -31221124.59 -31221124.37 0.0497 0.0160

Saturn -90192-08-11 15:35 J -31220982.10 -31220981.85 -31220981.60 0.0284 0.0060
 Mars -90191-01-07 07:25 J -31220833.31 -31220833.19 -31220833.07 0.1714 0.1303
 Saturn -90191-08-25 21:20 J -31220602.81 -31220602.61 -31220602.39 0.0284 0.0152
 Uranus -90190-10-04 14:23 J -31220198.02 -31220197.90 -31220197.78 0.0132 0.0115
 Uranus -90189-10-07 18:27 J -31219828.89 -31219828.73 -31219828.54 0.0132 0.0095
 Uranus -90188-10-11 22:32 J -31219459.75 -31219459.56 -31219459.33 0.0131 0.0073
 Uranus -90187-10-16 02:08 J -31219090.64 -31219090.41 -31219090.18 0.0131 0.0052
 Jupiter -90186-10-07 22:47 J -31218733.67 -31218733.55 -31218733.42 0.0535 0.0450
 Uranus -90186-10-20 05:01 J -31218721.53 -31218721.29 -31218721.04 0.0131 0.0031
 Uranus -90185-10-23 07:39 J -31218352.43 -31218352.18 -31218351.93 0.0131 0.0009
 Uranus -90184-10-27 10:03 J -31217983.33 -31217983.08 -31217982.83 0.0131 0.0013
 Uranus -90183-10-31 11:15 J -31217614.26 -31217614.03 -31217613.77 0.0131 0.0035
 Uranus -90182-11-04 12:42 J -31217245.19 -31217244.97 -31217244.73 0.0132 0.0055
 Uranus -90181-11-07 13:39 J -31216876.12 -31216875.93 -31216875.71 0.0132 0.0076
 Jupiter -90180-03-26 06:13 J -31216737.46 -31216737.24 -31216737.01 0.0495 0.0130
 Uranus -90180-11-11 14:37 J -31216507.04 -31216506.89 -31216506.70 0.0132 0.0096
 Uranus -90179-11-15 15:06 J -31216137.97 -31216137.87 -31216137.73 0.0132 0.0116
 Saturn -90177-01-31 19:25 J -31215695.89 -31215695.69 -31215695.47 0.0274 0.0129
 Saturn -90176-02-11 17:15 J -31215319.01 -31215318.78 -31215318.54 0.0275 0.0050
 Saturn -90175-02-23 19:25 J -31214941.81 -31214941.69 -31214941.56 0.0276 0.0231
 Jupiter -90168-03-30 14:51 J -31212350.00 -31212349.88 -31212349.75 0.0493 0.0416
 Saturn -90163-08-05 09:35 J -31210396.30 -31210396.10 -31210395.88 0.0285 0.0161
 Saturn -90162-08-19 19:11 J -31210016.95 -31210016.70 -31210016.45 0.0284 0.0055
 Saturn -90161-09-01 22:32 J -31209637.64 -31209637.56 -31209637.46 0.0283 0.0262
 Saturn -90148-01-26 06:27 J -31205108.38 -31205108.23 -31205108.06 0.0274 0.0204
 Saturn -90147-02-07 03:20 J -31204731.60 -31204731.36 -31204731.12 0.0275 0.0027
 Uranus -90147-03-25 09:49 J -31204685.15 -31204685.09 -31204684.99 0.0147 0.0139
 Neptune -90147-09-14 05:30 J -31204512.27 -31204512.27 -31204512.23 0.0088 0.0088
 Saturn -90146-02-19 03:35 J -31204354.54 -31204354.35 -31204354.14 0.0275 0.0153
 Uranus -90146-03-30 14:23 J -31204315.06 -31204314.90 -31204314.73 0.0147 0.0111

Neptune -90146-09-16 17:44 J -31204144.93 -31204144.76 -31204144.54 0.0088 0.0060
 Uranus -90145-04-03 18:56 J -31203944.91 -31203944.71 -31203944.49 0.0147 0.0082
 Neptune -90145-09-18 06:27 J -31203777.47 -31203777.23 -31203776.98 0.0088 0.0031
 Mars -90145-12-31 14:23 J -31203673.07 -31203672.90 -31203672.72 0.1735 0.0475
 Uranus -90144-04-09 01:11 J -31203574.69 -31203574.45 -31203574.21 0.0147 0.0052
 Neptune -90144-09-20 18:27 J -31203409.98 -31203409.73 -31203409.46 0.0088 0.0003
 Uranus -90143-04-14 07:39 J -31203204.43 -31203204.18 -31203203.92 0.0147 0.0021
 Neptune -90143-09-23 06:27 J -31203042.47 -31203042.23 -31203041.97 0.0088 0.0026
 Uranus -90142-04-19 15:20 J -31202834.12 -31202833.86 -31202833.60 0.0147 0.0010
 Neptune -90142-09-25 17:44 J -31202674.94 -31202674.76 -31202674.54 0.0088 0.0055
 Uranus -90141-04-23 23:01 J -31202463.78 -31202463.54 -31202463.28 0.0147 0.0041
 Neptune -90141-09-27 05:30 J -31202307.33 -31202307.27 -31202307.16 0.0088 0.0083
 Uranus -90140-04-29 07:39 J -31202093.41 -31202093.18 -31202092.96 0.0147 0.0072
 Uranus -90139-05-04 16:18 J -31201723.00 -31201722.82 -31201722.63 0.0147 0.0101
 Uranus -90138-05-10 00:56 J -31201352.56 -31201352.46 -31201352.33 0.0147 0.0131
 Saturn -90134-07-30 12:56 J -31199810.08 -31199809.96 -31199809.83 0.0285 0.0247
 Saturn -90133-08-12 23:30 J -31199430.77 -31199430.52 -31199430.27 0.0284 0.0035
 Pluto -90133-12-07 05:59 J -31199314.44 -31199314.25 -31199314.04 0.0077 0.0048
 Saturn -90132-08-27 05:01 J -31199051.48 -31199051.29 -31199051.09 0.0284 0.0176
 Jupiter -90127-09-26 17:01 J -31197194.96 -31197194.79 -31197194.61 0.0530 0.0348
 Jupiter -90121-03-16 19:25 J -31195196.73 -31195196.69 -31195196.64 0.0499 0.0488
 Mars -90119-06-28 19:54 J -31194362.68 -31194362.67 -31194362.65 0.1787 0.1777
 Saturn -90118-02-02 01:39 J -31194144.64 -31194144.43 -31194144.20 0.0274 0.0106
 Saturn -90117-02-13 23:59 J -31193767.73 -31193767.50 -31193767.27 0.0275 0.0073
 Saturn -90116-02-25 02:08 J -31193390.49 -31193390.41 -31193390.30 0.0276 0.0253
 Jupiter -90115-10-01 22:32 J -31192806.79 -31192806.56 -31192806.32 0.0532 0.0030
 Jupiter -90109-03-21 04:32 J -31190809.52 -31190809.31 -31190809.10 0.0497 0.0197
 Uranus -90107-09-30 17:59 J -31189885.75 -31189885.75 -31189885.72 0.0132 0.0132
 Uranus -90106-10-04 23:44 J -31189516.65 -31189516.51 -31189516.38 0.0132 0.0111
 Uranus -90105-10-08 03:49 J -31189147.50 -31189147.34 -31189147.13 0.0132 0.0091

Saturn -90104-08-06 17:30 J -31188844.98 -31188844.77 -31188844.53 0.0284 0.0135
 Uranus -90104-10-12 08:08 J -31188778.36 -31188778.16 -31188777.93 0.0131 0.0070
 Saturn -90103-08-21 02:23 J -31188465.64 -31188465.40 -31188465.15 0.0284 0.0079
 Jupiter -90103-10-07 02:23 J -31188418.55 -31188418.40 -31188418.25 0.0534 0.0405
 Uranus -90103-10-16 11:44 J -31188409.23 -31188409.01 -31188408.76 0.0131 0.0049
 Uranus -90102-10-20 14:51 J -31188040.12 -31188039.88 -31188039.62 0.0131 0.0027
 Uranus -90101-10-23 17:44 J -31187671.01 -31187670.76 -31187670.51 0.0131 0.0006
 Uranus -90100-10-27 19:54 J -31187301.92 -31187301.67 -31187301.42 0.0131 0.0015
 Uranus -90099-10-31 21:06 J -31186932.85 -31186932.62 -31186932.37 0.0131 0.0036
 Uranus -90098-11-04 22:32 J -31186563.77 -31186563.56 -31186563.32 0.0132 0.0057
 Jupiter -90097-03-25 10:03 J -31186422.31 -31186422.08 -31186421.85 0.0496 0.0088
 Uranus -90097-11-07 23:44 J -31186194.70 -31186194.51 -31186194.30 0.0132 0.0077
 Uranus -90096-11-12 00:42 J -31185825.63 -31185825.47 -31185825.29 0.0132 0.0097
 Uranus -90095-11-16 01:11 J -31185456.54 -31185456.45 -31185456.31 0.0132 0.0117
 Saturn -90089-01-28 12:27 J -31183557.15 -31183556.98 -31183556.79 0.0274 0.0179
 Saturn -90088-02-08 09:49 J -31183180.33 -31183180.09 -31183179.85 0.0275 0.0004
 Saturn -90087-02-20 10:32 J -31182803.24 -31182803.06 -31182802.87 0.0275 0.0176
 Jupiter -90085-03-29 18:27 J -31182034.87 -31182034.73 -31182034.57 0.0494 0.0377
 Saturn -90075-07-31 23:44 J -31178258.67 -31178258.51 -31178258.35 0.0285 0.0219
 Saturn -90074-08-15 09:49 J -31177879.34 -31177879.09 -31177878.83 0.0284 0.0009
 Saturn -90073-08-28 14:51 J -31177500.05 -31177499.88 -31177499.70 0.0284 0.0201
 Mars -90065-01-03 20:37 J -31174815.82 -31174815.64 -31174815.46 0.1730 0.0283
 Neptune -90064-03-08 05:01 J -31174386.38 -31174386.29 -31174386.18 0.0089 0.0082
 Neptune -90063-03-10 15:35 J -31174019.04 -31174018.85 -31174018.63 0.0089 0.0053
 Uranus -90063-03-25 19:25 J -31174003.77 -31174003.69 -31174003.57 0.0147 0.0134
 Neptune -90062-03-13 02:51 J -31173651.62 -31173651.38 -31173651.13 0.0089 0.0024
 Uranus -90062-03-30 23:30 J -31173633.68 -31173633.52 -31173633.33 0.0147 0.0106
 Neptune -90061-03-14 14:08 J -31173284.17 -31173283.91 -31173283.66 0.0089 0.0005
 Uranus -90061-04-04 04:32 J -31173263.52 -31173263.31 -31173263.09 0.0147 0.0077
 Saturn -90060-01-22 13:54 J -31172969.99 -31172969.92 -31172969.82 0.0274 0.0254

Neptune -90060-03-17 00:56 J -31172916.69 -31172916.46 -31172916.21 0.0089 0.0033
 Uranus -90060-04-09 10:03 J -31172893.31 -31172893.08 -31172892.82 0.0147 0.0048
 Saturn -90059-02-03 09:35 J -31172593.33 -31172593.10 -31172592.87 0.0274 0.0082
 Neptune -90059-03-19 11:59 J -31172549.16 -31172549.00 -31172548.80 0.0089 0.0062
 Uranus -90059-04-14 16:47 J -31172523.05 -31172522.80 -31172522.54 0.0147 0.0018
 Saturn -90058-02-15 07:54 J -31172216.39 -31172216.17 -31172215.94 0.0275 0.0097
 Uranus -90058-04-20 00:13 J -31172152.74 -31172152.49 -31172152.23 0.0147 0.0013
 Saturn -90057-02-27 10:47 J -31171839.06 -31171839.05 -31171839.02 0.0276 0.0275
 Uranus -90057-04-24 07:39 J -31171782.42 -31171782.18 -31171781.93 0.0147 0.0043
 Uranus -90056-04-29 15:49 J -31171412.05 -31171411.84 -31171411.60 0.0147 0.0073
 Uranus -90055-05-05 00:27 J -31171041.65 -31171041.48 -31171041.28 0.0147 0.0103
 Uranus -90054-05-10 08:51 J -31170671.22 -31170671.13 -31170670.99 0.0147 0.0132
 Saturn -90045-08-08 04:18 J -31167293.55 -31167293.32 -31167293.08 0.0284 0.0106
 Saturn -90044-08-22 12:27 J -31166914.21 -31166913.98 -31166913.74 0.0284 0.0105
 Jupiter -90044-09-25 20:37 J -31166879.79 -31166879.64 -31166879.47 0.0529 0.0390
 Mars -90040-07-02 01:54 J -31165504.62 -31165504.42 -31165504.23 0.1795 0.0512
 Jupiter -90032-09-30 22:32 J -31162491.79 -31162491.56 -31162491.33 0.0531 0.0027
 Saturn -90030-01-29 19:11 J -31162005.89 -31162005.70 -31162005.50 0.0275 0.0155
 Saturn -90029-02-10 17:01 J -31161629.02 -31161628.79 -31161628.55 0.0275 0.0022
 Saturn -90028-02-21 18:42 J -31161251.88 -31161251.72 -31161251.55 0.0275 0.0199
 Jupiter -90026-03-21 06:13 J -31160494.44 -31160494.24 -31160494.03 0.0498 0.0244
 Uranus -90023-10-01 01:54 J -31159204.46 -31159204.42 -31159204.34 0.0132 0.0128
 Uranus -90022-10-05 07:54 J -31158835.31 -31158835.17 -31158835.02 0.0132 0.0107
 Uranus -90021-10-08 12:27 J -31158466.16 -31158465.98 -31158465.78 0.0132 0.0087
 Jupiter -90020-10-05 21:20 J -31158103.78 -31158103.61 -31158103.42 0.0533 0.0330
 Uranus -90020-10-12 17:01 J -31158097.01 -31158096.79 -31158096.57 0.0131 0.0066
 Uranus -90019-10-16 20:08 J -31157727.88 -31157727.66 -31157727.40 0.0131 0.0046
 Mars -90019-12-27 20:37 J -31157655.70 -31157655.64 -31157655.59 0.1753 0.1662
 Uranus -90018-10-20 23:44 J -31157358.75 -31157358.51 -31157358.26 0.0131 0.0024
 Uranus -90017-10-24 02:23 J -31156989.65 -31156989.40 -31156989.15 0.0131 0.0003

Saturn	-90016-08-02 12:42 J	-31156707.15	-31156706.97	-31156706.77	0.0285	0.0190
Uranus	-90016-10-28 04:32 J	-31156620.56	-31156620.31	-31156620.06	0.0131	0.0017
Saturn	-90015-08-16 22:32 J	-31156327.81	-31156327.56	-31156327.31	0.0284	0.0021
Uranus	-90015-11-01 06:13 J	-31156251.48	-31156251.24	-31156251.00	0.0132	0.0038
Jupiter	-90014-03-25 16:32 J	-31156107.04	-31156106.81	-31156106.58	0.0496	0.0051
Saturn	-90014-08-31 02:23 J	-31155948.54	-31155948.40	-31155948.24	0.0283	0.0227
Uranus	-90014-11-05 07:25 J	-31155882.40	-31155882.19	-31155881.95	0.0132	0.0059
Uranus	-90013-11-08 08:23 J	-31155513.33	-31155513.15	-31155512.93	0.0132	0.0079
Uranus	-90012-11-12 09:49 J	-31155144.24	-31155144.09	-31155143.91	0.0132	0.0098
Uranus	-90011-11-16 10:32 J	-31154775.16	-31154775.06	-31154774.93	0.0132	0.0118
Jupiter	-90002-03-30 01:25 J	-31151719.61	-31151719.44	-31151719.27	0.0494	0.0339
Saturn	-90001-01-24 22:18 J	-31151418.69	-31151418.57	-31151418.44	0.0274	0.0228

90TH MILLENNIUM BCE

This is a list of transits of Earth in the 90th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-90000-02-04 17:59 J	-31151041.98	-31151041.75	-31151041.51	0.0274	0.0057		
Saturn	-89999-02-16 17:01 J	-31150665.00	-31150664.79	-31150664.57	0.0275	0.0121		
Mars	-89986-01-06 02:37 J	-31145958.54	-31145958.39	-31145958.25	0.1725	0.1028		
Saturn	-89986-08-10 17:01 J	-31145742.03	-31145741.79	-31145741.54	0.0284	0.0077		
Saturn	-89985-08-24 00:13 J	-31145362.70	-31145362.49	-31145362.26	0.0284	0.0133		
Neptune	-89982-09-16 04:03 J	-31144244.46	-31144244.33	-31144244.16	0.0088	0.0072		
Neptune	-89981-09-17 16:18 J	-31143877.02	-31143876.82	-31143876.57	0.0088	0.0044		

Neptune -89980-09-20 05:15 J -31143509.54 -31143509.28 -31143509.02 0.0088 0.0014
 Uranus -89979-03-26 05:30 J -31143322.38 -31143322.27 -31143322.14 0.0147 0.0129
 Neptune -89979-09-22 16:47 J -31143142.04 -31143141.80 -31143141.53 0.0088 0.0015
 Uranus -89978-03-31 09:06 J -31142952.28 -31142952.12 -31142951.92 0.0147 0.0102
 Neptune -89978-09-25 04:47 J -31142774.51 -31142774.30 -31142774.06 0.0088 0.0043
 Uranus -89977-04-04 13:54 J -31142582.13 -31142581.92 -31142581.69 0.0147 0.0073
 Neptune -89977-09-26 16:32 J -31142406.95 -31142406.81 -31142406.64 0.0088 0.0071
 Uranus -89976-04-09 19:39 J -31142211.92 -31142211.68 -31142211.43 0.0147 0.0044
 Uranus -89975-04-15 02:08 J -31141841.67 -31141841.41 -31141841.16 0.0147 0.0015
 Uranus -89974-04-20 09:06 J -31141471.38 -31141471.12 -31141470.87 0.0147 0.0015
 Uranus -89973-04-24 16:32 J -31141101.05 -31141100.81 -31141100.56 0.0147 0.0045
 Uranus -89972-04-30 00:27 J -31140730.69 -31140730.48 -31140730.24 0.0147 0.0075
 Pluto -89972-06-03 14:08 J -31140696.05 -31140695.91 -31140695.69 0.0067 0.0050
 Saturn -89971-01-31 02:37 J -31140454.59 -31140454.39 -31140454.17 0.0275 0.0130
 Uranus -89971-05-05 08:51 J -31140360.30 -31140360.13 -31140359.93 0.0147 0.0104
 Pluto -89971-06-05 06:56 J -31140329.38 -31140329.21 -31140328.99 0.0067 0.0046
 Saturn -89970-02-12 01:11 J -31140077.68 -31140077.45 -31140077.21 0.0275 0.0046
 Uranus -89970-05-10 17:44 J -31139989.86 -31139989.76 -31139989.64 0.0147 0.0132
 Saturn -89969-02-24 03:35 J -31139700.49 -31139700.35 -31139700.21 0.0276 0.0223
 Mars -89961-07-05 08:08 J -31136646.35 -31136646.16 -31136645.98 0.1802 0.0785
 Jupiter -89961-09-24 14:51 J -31136564.99 -31136564.88 -31136564.77 0.0529 0.0464
 Saturn -89957-08-04 03:20 J -31135155.56 -31135155.36 -31135155.14 0.0285 0.0159
 Saturn -89956-08-18 12:42 J -31134776.22 -31134775.97 -31134775.72 0.0284 0.0051
 Saturn -89955-09-01 15:49 J -31134396.94 -31134396.84 -31134396.72 0.0283 0.0254
 Jupiter -89949-09-29 17:44 J -31132176.99 -31132176.76 -31132176.53 0.0531 0.0100
 Jupiter -89943-03-20 12:42 J -31130179.16 -31130178.97 -31130178.77 0.0498 0.0280
 Saturn -89942-01-26 06:42 J -31129867.37 -31129867.22 -31129867.05 0.0274 0.0203
 Saturn -89941-02-07 02:51 J -31129490.61 -31129490.38 -31129490.14 0.0275 0.0031
 Saturn -89940-02-18 02:08 J -31129113.60 -31129113.41 -31129113.20 0.0275 0.0147
 Mars -89940-12-30 05:01 J -31128798.45 -31128798.29 -31128798.13 0.1748 0.0851

Uranus	-89939-10-01 11:01 J	-31128523.11	-31128523.04	-31128522.94	0.0132	0.0123
Uranus	-89938-10-05 17:01 J	-31128153.94	-31128153.79	-31128153.63	0.0132	0.0103
Jupiter	-89937-10-04 23:01 J	-31127788.74	-31127788.54	-31127788.34	0.0533	0.0275
Uranus	-89937-10-08 21:49 J	-31127784.78	-31127784.59	-31127784.39	0.0132	0.0083
Uranus	-89936-10-13 01:54 J	-31127415.63	-31127415.42	-31127415.18	0.0132	0.0063
Uranus	-89935-10-17 05:44 J	-31127046.49	-31127046.26	-31127046.01	0.0131	0.0042
Uranus	-89934-10-21 08:51 J	-31126677.37	-31126677.13	-31126676.87	0.0131	0.0022
Uranus	-89933-10-24 11:30 J	-31126308.27	-31126308.02	-31126307.76	0.0131	0.0002
Uranus	-89932-10-28 13:39 J	-31125939.17	-31125938.93	-31125938.68	0.0131	0.0020
Jupiter	-89931-03-24 21:35 J	-31125791.83	-31125791.60	-31125791.36	0.0497	0.0011
Uranus	-89931-11-01 15:06 J	-31125570.10	-31125569.87	-31125569.62	0.0132	0.0040
Uranus	-89930-11-05 16:47 J	-31125201.02	-31125200.80	-31125200.57	0.0132	0.0060
Uranus	-89929-11-08 17:44 J	-31124831.94	-31124831.76	-31124831.55	0.0132	0.0080
Saturn	-89928-07-28 20:37 J	-31124569.75	-31124569.64	-31124569.53	0.0284	0.0255
Uranus	-89928-11-12 18:56 J	-31124462.86	-31124462.71	-31124462.53	0.0132	0.0099
Saturn	-89927-08-12 07:39 J	-31124190.42	-31124190.18	-31124189.93	0.0284	0.0047
Uranus	-89927-11-16 19:54 J	-31124093.76	-31124093.67	-31124093.55	0.0132	0.0118
Saturn	-89926-08-26 14:08 J	-31123811.11	-31123810.91	-31123810.70	0.0283	0.0161
Jupiter	-89919-03-29 02:37 J	-31121404.58	-31121404.39	-31121404.20	0.0495	0.0289
Saturn	-89913-01-21 14:23 J	-31119279.92	-31119279.90	-31119279.86	0.0275	0.0272
Saturn	-89912-02-01 10:18 J	-31118903.29	-31118903.07	-31118902.85	0.0275	0.0104
Saturn	-89911-02-13 08:51 J	-31118526.36	-31118526.13	-31118525.89	0.0275	0.0072
Saturn	-89910-02-25 11:30 J	-31118149.11	-31118149.02	-31118148.90	0.0276	0.0247
Neptune	-89899-03-10 03:35 J	-31114118.50	-31114118.35	-31114118.15	0.0089	0.0066
Neptune	-89898-03-12 14:37 J	-31113751.11	-31113750.89	-31113750.65	0.0089	0.0037
Saturn	-89898-08-06 18:13 J	-31113603.96	-31113603.74	-31113603.51	0.0285	0.0129
Neptune	-89897-03-14 01:39 J	-31113383.68	-31113383.43	-31113383.17	0.0089	0.0009
Saturn	-89897-08-20 03:06 J	-31113224.61	-31113224.37	-31113224.13	0.0284	0.0080
Neptune	-89896-03-16 12:27 J	-31113016.21	-31113015.98	-31113015.72	0.0089	0.0021
Saturn	-89896-09-03 05:59 J	-31112845.28	-31112845.25	-31112845.21	0.0283	0.0280

Neptune -89895-03-18 23:30 J -31112648.71 -31112648.52 -31112648.28 0.0089 0.0050
 Uranus -89895-03-26 15:20 J -31112640.98 -31112640.86 -31112640.71 0.0147 0.0124
 Neptune -89894-03-21 11:01 J -31112281.15 -31112281.04 -31112280.91 0.0089 0.0078
 Uranus -89894-03-31 18:56 J -31112270.89 -31112270.71 -31112270.51 0.0147 0.0097
 Uranus -89893-04-04 23:30 J -31111900.73 -31111900.52 -31111900.28 0.0147 0.0069
 Uranus -89892-04-10 05:15 J -31111530.52 -31111530.28 -31111530.03 0.0147 0.0040
 Uranus -89891-04-15 11:30 J -31111160.28 -31111160.02 -31111159.77 0.0147 0.0011
 Uranus -89890-04-20 18:27 J -31110789.99 -31110789.73 -31110789.48 0.0147 0.0018
 Uranus -89889-04-25 01:39 J -31110419.67 -31110419.43 -31110419.18 0.0147 0.0047
 Uranus -89888-04-30 09:35 J -31110049.31 -31110049.10 -31110048.87 0.0147 0.0076
 Uranus -89887-05-05 17:44 J -31109678.93 -31109678.76 -31109678.57 0.0147 0.0105
 Uranus -89886-05-11 02:08 J -31109308.50 -31109308.41 -31109308.29 0.0147 0.0133
 Pluto -89886-12-08 16:18 J -31109097.05 -31109096.82 -31109096.58 0.0078 0.0025
 Saturn -89883-01-27 15:06 J -31108316.04 -31108315.87 -31108315.68 0.0274 0.0178
 Saturn -89882-02-08 11:44 J -31107939.25 -31107939.01 -31107938.77 0.0275 0.0006
 Saturn -89881-02-20 11:30 J -31107562.20 -31107562.02 -31107561.82 0.0275 0.0170
 Jupiter -89878-09-24 15:06 J -31106249.91 -31106249.87 -31106249.82 0.0528 0.0517
 Saturn -89869-07-30 11:15 J -31103018.17 -31103018.03 -31103017.86 0.0284 0.0225
 Saturn -89868-08-13 22:32 J -31102638.81 -31102638.56 -31102638.31 0.0284 0.0016
 Saturn -89867-08-28 04:03 J -31102259.51 -31102259.33 -31102259.14 0.0283 0.0189
 Jupiter -89866-09-29 20:37 J -31101861.86 -31101861.64 -31101861.41 0.0530 0.0147
 Mars -89860-01-01 13:11 J -31099941.14 -31099940.95 -31099940.77 0.1742 0.0045
 Jupiter -89860-03-19 14:08 J -31099864.08 -31099863.91 -31099863.73 0.0499 0.0330
 Uranus -89855-10-01 18:56 J -31097841.80 -31097841.71 -31097841.58 0.0132 0.0119
 Saturn -89854-01-22 20:37 J -31097728.73 -31097728.64 -31097728.53 0.0275 0.0248
 Jupiter -89854-10-04 23:30 J -31097473.73 -31097473.52 -31097473.31 0.0532 0.0219
 Uranus -89854-10-06 00:56 J -31097472.62 -31097472.46 -31097472.28 0.0132 0.0099
 Saturn -89853-02-03 16:47 J -31097352.02 -31097351.80 -31097351.57 0.0275 0.0079
 Uranus -89853-10-09 05:59 J -31097103.44 -31097103.25 -31097103.04 0.0132 0.0079
 Saturn -89852-02-14 15:49 J -31096975.06 -31096974.84 -31096974.61 0.0275 0.0096

Uranus -89852-10-13 10:32 J -31096734.28 -31096734.06 -31096733.83 0.0132 0.0059
 Saturn -89851-02-26 19:11 J -31096597.74 -31096597.70 -31096597.65 0.0276 0.0270
 Uranus -89851-10-17 13:54 J -31096365.15 -31096364.92 -31096364.67 0.0131 0.0039
 Uranus -89850-10-21 17:15 J -31095996.03 -31095995.78 -31095995.53 0.0131 0.0018
 Uranus -89849-10-24 19:39 J -31095626.93 -31095626.68 -31095626.42 0.0131 0.0003
 Jupiter -89848-03-23 22:32 J -31095476.79 -31095476.56 -31095476.33 0.0497 0.0042
 Uranus -89848-10-28 21:49 J -31095257.84 -31095257.59 -31095257.34 0.0132 0.0022
 Uranus -89847-11-01 23:15 J -31094888.76 -31094888.53 -31094888.28 0.0132 0.0042
 Uranus -89846-11-06 00:42 J -31094519.67 -31094519.47 -31094519.23 0.0132 0.0062
 Uranus -89845-11-09 02:08 J -31094150.60 -31094150.41 -31094150.20 0.0132 0.0081
 Uranus -89844-11-13 03:20 J -31093781.51 -31093781.36 -31093781.18 0.0132 0.0100
 Uranus -89843-11-17 04:18 J -31093412.41 -31093412.32 -31093412.19 0.0132 0.0119
 Saturn -89839-08-08 09:20 J -31092052.35 -31092052.11 -31092051.87 0.0285 0.0098
 Saturn -89838-08-22 17:30 J -31091673.00 -31091672.77 -31091672.53 0.0284 0.0110
 Jupiter -89836-03-28 08:37 J -31091089.34 -31091089.14 -31091088.93 0.0496 0.0250
 Mars -89835-06-28 15:20 J -31090631.97 -31090631.86 -31090631.74 0.1778 0.1458
 Saturn -89824-01-28 22:32 J -31086764.76 -31086764.56 -31086764.36 0.0274 0.0153
 Saturn -89823-02-09 19:11 J -31086387.93 -31086387.70 -31086387.46 0.0275 0.0019
 Saturn -89822-02-21 19:39 J -31086010.85 -31086010.68 -31086010.51 0.0275 0.0194
 Neptune -89818-09-15 14:23 J -31084343.97 -31084343.90 -31084343.81 0.0088 0.0084
 Neptune -89817-09-17 02:51 J -31083976.56 -31083976.38 -31083976.16 0.0088 0.0056
 Neptune -89816-09-19 15:35 J -31083609.10 -31083608.85 -31083608.60 0.0088 0.0027
 Neptune -89815-09-22 03:49 J -31083241.60 -31083241.34 -31083241.08 0.0088 0.0002
 Neptune -89814-09-24 15:35 J -31082874.08 -31082873.85 -31082873.59 0.0088 0.0030
 Neptune -89813-09-26 03:20 J -31082506.53 -31082506.36 -31082506.15 0.0088 0.0059
 Uranus -89812-03-21 21:06 J -31082329.63 -31082329.62 -31082329.55 0.0146 0.0145
 Neptune -89812-09-28 15:06 J -31082138.90 -31082138.87 -31082138.80 0.0088 0.0086
 Uranus -89811-03-26 23:59 J -31081959.63 -31081959.50 -31081959.34 0.0147 0.0119
 Uranus -89810-04-01 03:49 J -31081589.54 -31081589.34 -31081589.14 0.0147 0.0092
 Saturn -89810-08-02 01:25 J -31081466.61 -31081466.44 -31081466.25 0.0284 0.0195

Uranus -89809-04-05 07:54 J -31081219.38 -31081219.17 -31081218.93 0.0147 0.0065
 Saturn -89809-08-15 12:13 J -31081087.24 -31081086.99 -31081086.74 0.0284 0.0013
 Uranus -89808-04-10 13:25 J -31080849.18 -31080848.94 -31080848.68 0.0147 0.0037
 Saturn -89808-08-29 17:30 J -31080707.93 -31080707.77 -31080707.61 0.0283 0.0215
 Uranus -89807-04-15 19:39 J -31080478.93 -31080478.68 -31080478.42 0.0147 0.0008
 Uranus -89806-04-21 02:23 J -31080108.65 -31080108.40 -31080108.14 0.0147 0.0021
 Uranus -89805-04-25 09:49 J -31079738.33 -31079738.09 -31079737.85 0.0147 0.0050
 Uranus -89804-04-30 17:30 J -31079367.98 -31079367.77 -31079367.54 0.0147 0.0078
 Uranus -89803-05-06 01:39 J -31078997.60 -31078997.43 -31078997.25 0.0147 0.0106
 Uranus -89802-05-11 10:03 J -31078627.16 -31078627.08 -31078626.96 0.0147 0.0134
 Saturn -89795-01-24 02:23 J -31076177.52 -31076177.40 -31076177.25 0.0275 0.0224
 Saturn -89794-02-04 22:32 J -31075800.79 -31075800.56 -31075800.32 0.0275 0.0055
 Saturn -89793-02-16 21:49 J -31075423.81 -31075423.59 -31075423.38 0.0275 0.0119
 Jupiter -89783-09-28 14:37 J -31071547.10 -31071546.89 -31071546.68 0.0529 0.0222
 Mars -89781-01-04 20:08 J -31071083.83 -31071083.66 -31071083.50 0.1737 0.0732
 Saturn -89781-07-26 09:35 J -31070880.16 -31070880.10 -31070880.03 0.0285 0.0276
 Saturn -89780-08-09 22:18 J -31070500.81 -31070500.57 -31070500.32 0.0285 0.0069
 Saturn -89779-08-24 06:13 J -31070121.46 -31070121.24 -31070121.02 0.0284 0.0137
 Jupiter -89777-03-18 20:08 J -31069548.80 -31069548.66 -31069548.49 0.0500 0.0369
 Uranus -89771-10-02 03:49 J -31067160.46 -31067160.34 -31067160.21 0.0132 0.0114
 Jupiter -89771-10-03 17:15 J -31067159.01 -31067158.78 -31067158.56 0.0532 0.0141
 Uranus -89770-10-06 09:35 J -31066791.27 -31066791.10 -31066790.91 0.0132 0.0095
 Uranus -89769-10-09 14:37 J -31066422.09 -31066421.89 -31066421.67 0.0132 0.0075
 Uranus -89768-10-13 18:42 J -31066052.94 -31066052.72 -31066052.48 0.0132 0.0056
 Uranus -89767-10-17 22:18 J -31065683.80 -31065683.57 -31065683.31 0.0131 0.0036
 Uranus -89766-10-22 01:39 J -31065314.68 -31065314.43 -31065314.17 0.0131 0.0015
 Saturn -89765-01-31 04:32 J -31065213.51 -31065213.31 -31065213.10 0.0274 0.0130
 Jupiter -89765-03-23 06:27 J -31065161.46 -31065161.23 -31065161.00 0.0498 0.0074
 Uranus -89765-10-25 04:03 J -31064945.58 -31064945.33 -31064945.07 0.0131 0.0005
 Saturn -89764-02-11 01:25 J -31064836.67 -31064836.44 -31064836.20 0.0275 0.0042

Uranus	-89764-10-29 06:13 J	-31064576.48	-31064576.24	-31064575.98	0.0131	0.0025
Saturn	-89763-02-23 02:08 J	-31064459.55	-31064459.41	-31064459.26	0.0275	0.0216
Uranus	-89763-11-02 07:54 J	-31064207.40	-31064207.17	-31064206.92	0.0132	0.0044
Uranus	-89762-11-06 09:35 J	-31063838.31	-31063838.10	-31063837.87	0.0132	0.0064
Uranus	-89761-11-09 11:15 J	-31063469.23	-31063469.03	-31063468.84	0.0132	0.0082
Uranus	-89760-11-13 12:13 J	-31063100.14	-31063099.99	-31063099.82	0.0132	0.0101
Jupiter	-89759-10-08 22:03 J	-31062770.63	-31062770.58	-31062770.51	0.0534	0.0514
Uranus	-89759-11-17 13:39 J	-31062731.03	-31062730.93	-31062730.83	0.0132	0.0120
Mars	-89756-07-01 20:23 J	-31061773.85	-31061773.65	-31061773.44	0.1786	0.0235
Jupiter	-89753-03-27 15:20 J	-31060774.07	-31060773.86	-31060773.65	0.0496	0.0214
Saturn	-89751-08-03 14:23 J	-31059915.10	-31059914.90	-31059914.69	0.0285	0.0166
Saturn	-89750-08-18 00:56 J	-31059535.71	-31059535.46	-31059535.21	0.0284	0.0041
Saturn	-89749-08-31 05:44 J	-31059156.38	-31059156.26	-31059156.12	0.0283	0.0242
Jupiter	-89741-03-31 21:20 J	-31056386.64	-31056386.61	-31056386.58	0.0494	0.0489
Saturn	-89736-01-25 06:27 J	-31054626.38	-31054626.23	-31054626.06	0.0274	0.0202
Saturn	-89735-02-06 02:37 J	-31054249.63	-31054249.39	-31054249.15	0.0275	0.0032
Neptune	-89735-03-09 16:03 J	-31054217.92	-31054217.83	-31054217.68	0.0089	0.0078
Mars	-89735-12-28 17:15 J	-31053923.91	-31053923.78	-31053923.65	0.1760	0.1245
Saturn	-89734-02-18 01:54 J	-31053872.62	-31053872.42	-31053872.21	0.0275	0.0140
Neptune	-89734-03-12 03:06 J	-31053850.58	-31053850.37	-31053850.15	0.0089	0.0050
Neptune	-89733-03-13 13:39 J	-31053483.17	-31053482.93	-31053482.67	0.0089	0.0021
Neptune	-89732-03-16 00:56 J	-31053115.72	-31053115.46	-31053115.21	0.0089	0.0008
Neptune	-89731-03-18 11:30 J	-31052748.24	-31052748.02	-31052747.77	0.0089	0.0036
Neptune	-89730-03-20 22:32 J	-31052380.71	-31052380.56	-31052380.36	0.0089	0.0065
Uranus	-89728-03-22 05:15 J	-31051648.34	-31051648.28	-31051648.19	0.0146	0.0140
Uranus	-89727-03-27 08:08 J	-31051278.32	-31051278.16	-31051278.00	0.0147	0.0114
Uranus	-89726-04-01 11:15 J	-31050908.22	-31050908.03	-31050907.82	0.0147	0.0088
Uranus	-89725-04-05 15:35 J	-31050538.07	-31050537.85	-31050537.61	0.0147	0.0061
Uranus	-89724-04-10 21:06 J	-31050167.86	-31050167.62	-31050167.37	0.0147	0.0033
Pluto	-89724-06-05 23:01 J	-31050111.80	-31050111.54	-31050111.26	0.0067	0.0005

Uranus	-89723-04-16 03:06 J	-31049797.63	-31049797.37	-31049797.11	0.0147	0.0005
Uranus	-89722-04-21 09:49 J	-31049427.34	-31049427.09	-31049426.83	0.0147	0.0024
Saturn	-89722-07-28 20:08 J	-31049328.77	-31049328.66	-31049328.53	0.0285	0.0249
Uranus	-89721-04-25 17:01 J	-31049057.02	-31049056.79	-31049056.54	0.0147	0.0052
Saturn	-89721-08-11 09:06 J	-31048949.37	-31048949.12	-31048948.87	0.0285	0.0043
Uranus	-89720-05-01 00:56 J	-31048686.66	-31048686.46	-31048686.23	0.0147	0.0080
Saturn	-89720-08-25 16:47 J	-31048570.00	-31048569.80	-31048569.59	0.0284	0.0162
Uranus	-89719-05-06 09:06 J	-31048316.28	-31048316.12	-31048315.93	0.0147	0.0108
Uranus	-89718-05-11 17:44 J	-31047945.84	-31047945.76	-31047945.64	0.0147	0.0135
Saturn	-89707-01-20 15:06 J	-31044038.88	-31044038.87	-31044038.83	0.0274	0.0271
Saturn	-89706-02-01 09:35 J	-31043662.32	-31043662.10	-31043661.88	0.0274	0.0107
Saturn	-89705-02-13 06:13 J	-31043285.47	-31043285.24	-31043285.00	0.0274	0.0064
Saturn	-89704-02-24 06:56 J	-31042908.32	-31042908.21	-31042908.07	0.0275	0.0236
Mars	-89702-01-07 02:37 J	-31042226.48	-31042226.39	-31042226.30	0.1731	0.1484
Jupiter	-89700-09-27 15:49 J	-31041232.04	-31041231.84	-31041231.64	0.0529	0.0273
Jupiter	-89694-03-19 04:32 J	-31039233.44	-31039233.31	-31039233.16	0.0500	0.0400
Saturn	-89692-08-05 00:42 J	-31038363.69	-31038363.47	-31038363.24	0.0285	0.0139
Saturn	-89691-08-19 11:01 J	-31037984.29	-31037984.04	-31037983.80	0.0284	0.0067
Saturn	-89690-09-02 15:35 J	-31037604.93	-31037604.85	-31037604.76	0.0283	0.0265
Uranus	-89688-09-28 04:32 J	-31036848.34	-31036848.31	-31036848.24	0.0132	0.0130
Jupiter	-89688-10-02 22:18 J	-31036843.80	-31036843.57	-31036843.34	0.0531	0.0100
Uranus	-89687-10-02 11:30 J	-31036479.15	-31036479.02	-31036478.88	0.0132	0.0110
Uranus	-89686-10-06 17:15 J	-31036109.95	-31036109.78	-31036109.58	0.0132	0.0091
Uranus	-89685-10-09 22:03 J	-31035740.78	-31035740.58	-31035740.35	0.0132	0.0072
Uranus	-89684-10-14 02:37 J	-31035371.62	-31035371.39	-31035371.15	0.0132	0.0052
Uranus	-89683-10-18 05:59 J	-31035002.48	-31035002.25	-31035001.99	0.0131	0.0033
Jupiter	-89682-03-23 11:30 J	-31034846.24	-31034846.02	-31034845.79	0.0498	0.0116
Uranus	-89682-10-22 09:20 J	-31034633.36	-31034633.11	-31034632.85	0.0131	0.0013
Uranus	-89681-10-25 11:59 J	-31034264.25	-31034264.00	-31034263.74	0.0131	0.0007
Uranus	-89680-10-29 14:08 J	-31033895.15	-31033894.91	-31033894.66	0.0131	0.0026

Uranus -89679-11-02 16:03 J -31033526.06 -31033525.83 -31033525.59 0.0132 0.0046
 Uranus -89678-11-06 17:44 J -31033156.97 -31033156.76 -31033156.53 0.0132 0.0065
 Saturn -89677-01-27 09:35 J -31033075.28 -31033075.10 -31033074.92 0.0274 0.0180
 Mars -89677-07-05 01:11 J -31032915.62 -31032915.45 -31032915.28 0.1793 0.1021
 Uranus -89677-11-09 18:56 J -31032787.89 -31032787.71 -31032787.50 0.0132 0.0084
 Saturn -89676-02-07 05:15 J -31032698.52 -31032698.28 -31032698.04 0.0275 0.0011
 Jupiter -89676-10-08 02:23 J -31032455.50 -31032455.40 -31032455.28 0.0533 0.0467
 Uranus -89676-11-13 20:37 J -31032418.79 -31032418.64 -31032418.48 0.0132 0.0102
 Saturn -89675-02-19 04:32 J -31032321.50 -31032321.31 -31032321.11 0.0275 0.0161
 Uranus -89675-11-17 21:49 J -31032049.68 -31032049.59 -31032049.47 0.0132 0.0121
 Jupiter -89670-03-27 20:08 J -31030458.88 -31030458.66 -31030458.44 0.0496 0.0171
 Saturn -89663-07-30 04:18 J -31027777.46 -31027777.32 -31027777.15 0.0285 0.0225
 Saturn -89662-08-13 17:30 J -31027398.02 -31027397.77 -31027397.51 0.0285 0.0019
 Saturn -89661-08-27 01:11 J -31027018.62 -31027018.45 -31027018.25 0.0284 0.0186
 Jupiter -89658-04-01 05:44 J -31026071.34 -31026071.26 -31026071.17 0.0495 0.0458
 Mars -89656-12-31 01:39 J -31025066.60 -31025066.43 -31025066.25 0.1755 0.0431
 Neptune -89653-09-16 13:25 J -31024076.09 -31024075.94 -31024075.75 0.0088 0.0067
 Neptune -89652-09-19 02:37 J -31023708.62 -31023708.39 -31023708.15 0.0088 0.0039
 Neptune -89651-09-21 15:06 J -31023341.13 -31023340.87 -31023340.61 0.0088 0.0010
 Neptune -89650-09-24 03:20 J -31022973.61 -31022973.36 -31022973.10 0.0088 0.0018
 Neptune -89649-09-25 15:20 J -31022606.07 -31022605.86 -31022605.63 0.0088 0.0046
 Saturn -89648-01-21 18:27 J -31022487.82 -31022487.73 -31022487.63 0.0273 0.0250
 Neptune -89648-09-28 02:51 J -31022238.50 -31022238.38 -31022238.22 0.0088 0.0075
 Saturn -89647-02-02 12:27 J -31022111.20 -31022110.98 -31022110.75 0.0274 0.0086
 Saturn -89646-02-14 09:06 J -31021734.35 -31021734.12 -31021733.89 0.0274 0.0084
 Saturn -89645-02-26 09:49 J -31021357.17 -31021357.09 -31021356.99 0.0275 0.0255
 Uranus -89644-03-22 12:56 J -31020967.05 -31020966.96 -31020966.85 0.0146 0.0135
 Uranus -89643-03-27 15:06 J -31020597.02 -31020596.87 -31020596.69 0.0147 0.0110
 Uranus -89642-04-01 18:27 J -31020226.93 -31020226.73 -31020226.51 0.0147 0.0084
 Uranus -89641-04-05 22:47 J -31019856.78 -31019856.55 -31019856.31 0.0147 0.0057

Uranus -89640-04-11 03:49 J -31019486.58 -31019486.34 -31019486.08 0.0147 0.0031
 Uranus -89639-04-16 10:03 J -31019116.34 -31019116.08 -31019115.83 0.0147 0.0003
 Uranus -89638-04-21 16:18 J -31018746.06 -31018745.82 -31018745.56 0.0147 0.0026
 Pluto -89638-12-11 04:47 J -31018512.47 -31018512.30 -31018512.11 0.0077 0.0054
 Uranus -89637-04-25 23:30 J -31018375.74 -31018375.52 -31018375.27 0.0147 0.0054
 Uranus -89636-05-01 07:25 J -31018005.38 -31018005.19 -31018004.96 0.0147 0.0082
 Uranus -89635-05-06 15:35 J -31017635.00 -31017634.85 -31017634.66 0.0147 0.0109
 Uranus -89634-05-12 00:27 J -31017264.56 -31017264.48 -31017264.37 0.0146 0.0136
 Saturn -89633-08-06 08:37 J -31016812.36 -31016812.14 -31016811.90 0.0285 0.0114
 Saturn -89632-08-20 18:42 J -31016432.95 -31016432.72 -31016432.48 0.0284 0.0092
 Saturn -89618-01-28 11:01 J -31011524.23 -31011524.04 -31011523.84 0.0274 0.0160
 Saturn -89617-02-09 06:42 J -31011147.46 -31011147.22 -31011146.99 0.0275 0.0010
 Jupiter -89617-09-26 22:03 J -31010916.77 -31010916.58 -31010916.39 0.0529 0.0311
 Saturn -89616-02-20 05:44 J -31010770.44 -31010770.26 -31010770.07 0.0275 0.0179
 Jupiter -89611-03-18 10:18 J -31008918.17 -31008918.07 -31008917.95 0.0501 0.0439
 Jupiter -89605-10-01 20:51 J -31006528.86 -31006528.63 -31006528.39 0.0530 0.0041
 Saturn -89604-07-31 09:35 J -31006226.27 -31006226.10 -31006225.92 0.0285 0.0203
 Uranus -89604-09-28 12:56 J -31006167.02 -31006166.96 -31006166.86 0.0132 0.0125
 Saturn -89603-08-14 22:47 J -31005846.81 -31005846.55 -31005846.30 0.0285 0.0005
 Uranus -89603-10-02 19:39 J -31005797.81 -31005797.68 -31005797.51 0.0132 0.0106
 Saturn -89602-08-29 06:42 J -31005467.38 -31005467.22 -31005467.04 0.0284 0.0207
 Uranus -89602-10-07 01:39 J -31005428.61 -31005428.43 -31005428.23 0.0132 0.0087
 Uranus -89601-10-10 06:27 J -31005059.43 -31005059.23 -31005059.00 0.0132 0.0068
 Uranus -89600-10-14 10:47 J -31004690.28 -31004690.05 -31004689.80 0.0132 0.0049
 Jupiter -89599-03-22 19:54 J -31004530.88 -31004530.67 -31004530.44 0.0499 0.0146
 Uranus -89599-10-18 14:23 J -31004321.13 -31004320.90 -31004320.64 0.0131 0.0030
 Uranus -89598-10-22 17:59 J -31003952.00 -31003951.75 -31003951.50 0.0131 0.0010
 Uranus -89597-10-25 20:23 J -31003582.90 -31003582.65 -31003582.40 0.0131 0.0010
 Uranus -89596-10-29 22:47 J -31003213.79 -31003213.55 -31003213.30 0.0131 0.0029
 Uranus -89595-11-03 00:42 J -31002844.70 -31002844.47 -31002844.23 0.0132 0.0048

Uranus -89594-11-07 02:23 J -31002475.60 -31002475.40 -31002475.17 0.0132 0.0067
 Jupiter -89593-10-06 23:44 J -31002140.66 -31002140.51 -31002140.36 0.0532 0.0400
 Uranus -89593-11-10 04:18 J -31002106.51 -31002106.32 -31002106.13 0.0132 0.0085
 Uranus -89592-11-14 05:15 J -31001737.41 -31001737.28 -31001737.10 0.0132 0.0104
 Uranus -89591-11-18 06:56 J -31001368.29 -31001368.21 -31001368.10 0.0132 0.0121
 Saturn -89589-01-23 20:23 J -31000936.77 -31000936.65 -31000936.52 0.0273 0.0231
 Saturn -89588-02-03 14:08 J -31000560.14 -31000559.91 -31000559.68 0.0274 0.0066
 Saturn -89587-02-15 10:32 J -31000183.28 -31000183.06 -31000182.83 0.0274 0.0103
 Jupiter -89587-03-27 06:13 J -31000143.46 -31000143.24 -31000143.02 0.0497 0.0146
 Saturn -89586-02-27 11:30 J -30999806.05 -30999806.02 -30999805.98 0.0275 0.0271
 Mars -89576-01-02 10:32 J -30996209.23 -30996209.06 -30996208.88 0.1749 0.0391
 Jupiter -89575-03-31 15:49 J -30995755.94 -30995755.84 -30995755.72 0.0495 0.0433
 Saturn -89574-08-08 14:23 J -30995261.14 -30995260.90 -30995260.66 0.0285 0.0091
 Saturn -89573-08-22 00:27 J -30994881.70 -30994881.48 -30994881.24 0.0284 0.0114
 Neptune -89570-03-11 15:49 J -30993950.01 -30993949.84 -30993949.64 0.0089 0.0062
 Neptune -89569-03-13 02:37 J -30993582.62 -30993582.39 -30993582.15 0.0089 0.0033
 Neptune -89568-03-15 13:11 J -30993215.20 -30993214.95 -30993214.69 0.0089 0.0006
 Neptune -89567-03-18 00:13 J -30992847.73 -30992847.49 -30992847.24 0.0089 0.0023
 Neptune -89566-03-20 10:47 J -30992480.24 -30992480.05 -30992479.83 0.0089 0.0052
 Neptune -89565-03-21 22:03 J -30992112.67 -30992112.58 -30992112.46 0.0089 0.0081
 Uranus -89560-03-22 20:23 J -30990285.74 -30990285.65 -30990285.51 0.0146 0.0131
 Saturn -89559-01-29 11:30 J -30989973.22 -30989973.02 -30989972.81 0.0274 0.0141
 Uranus -89559-03-27 22:47 J -30989915.71 -30989915.55 -30989915.36 0.0147 0.0106
 Saturn -89558-02-10 06:42 J -30989596.45 -30989596.22 -30989595.98 0.0274 0.0027
 Uranus -89558-04-02 02:08 J -30989545.62 -30989545.41 -30989545.20 0.0147 0.0080
 Saturn -89557-02-22 05:30 J -30989219.43 -30989219.27 -30989219.09 0.0275 0.0196
 Uranus -89557-04-06 06:13 J -30989175.47 -30989175.24 -30989174.99 0.0147 0.0054
 Uranus -89556-04-11 11:15 J -30988805.27 -30988805.03 -30988804.77 0.0147 0.0027
 Uranus -89555-04-16 17:15 J -30988435.04 -30988434.78 -30988434.53 0.0147 0.0002
 Uranus -89554-04-21 23:44 J -30988064.76 -30988064.51 -30988064.25 0.0147 0.0028

Uranus	-89553-04-26 06:56 J	-30987694.44	-30987694.21	-30987693.96	0.0147	0.0056
Uranus	-89552-05-01 15:06 J	-30987324.08	-30987323.87	-30987323.66	0.0147	0.0083
Uranus	-89551-05-06 23:15 J	-30986953.70	-30986953.53	-30986953.36	0.0147	0.0110
Mars	-89551-06-28 12:27 J	-30986901.14	-30986900.98	-30986900.83	0.1769	0.1136
Uranus	-89550-05-12 07:54 J	-30986583.26	-30986583.17	-30986583.07	0.0146	0.0136
Saturn	-89545-08-01 12:27 J	-30984675.17	-30984674.98	-30984674.78	0.0286	0.0182
Saturn	-89544-08-16 01:54 J	-30984295.67	-30984295.42	-30984295.17	0.0285	0.0025
Saturn	-89543-08-30 10:03 J	-30983916.23	-30983916.08	-30983915.92	0.0284	0.0225
Jupiter	-89534-09-26 21:20 J	-30980601.77	-30980601.61	-30980601.44	0.0527	0.0365
Saturn	-89530-01-24 21:20 J	-30979385.76	-30979385.61	-30979385.46	0.0273	0.0211
Mars	-89530-12-27 01:39 J	-30979049.47	-30979049.43	-30979049.39	0.1773	0.1725
Saturn	-89529-02-05 14:37 J	-30979009.12	-30979008.89	-30979008.65	0.0273	0.0048
Saturn	-89528-02-16 11:15 J	-30978632.24	-30978632.03	-30978631.81	0.0274	0.0120
Jupiter	-89528-03-17 20:08 J	-30978602.74	-30978602.66	-30978602.57	0.0502	0.0462
Jupiter	-89522-10-02 00:27 J	-30976213.72	-30976213.48	-30976213.25	0.0530	0.0011
Uranus	-89520-09-28 20:51 J	-30975485.73	-30975485.63	-30975485.52	0.0132	0.0121
Uranus	-89519-10-03 03:20 J	-30975116.51	-30975116.36	-30975116.19	0.0132	0.0102
Uranus	-89518-10-07 09:06 J	-30974747.31	-30974747.12	-30974746.91	0.0132	0.0083
Uranus	-89517-10-10 13:39 J	-30974378.13	-30974377.93	-30974377.69	0.0132	0.0065
Jupiter	-89516-03-22 07:11 J	-30974215.41	-30974215.20	-30974214.98	0.0499	0.0169
Saturn	-89516-07-26 03:35 J	-30974089.42	-30974089.35	-30974089.27	0.0285	0.0272
Uranus	-89516-10-14 18:13 J	-30974008.97	-30974008.74	-30974008.49	0.0132	0.0046
Saturn	-89515-08-09 17:59 J	-30973709.99	-30973709.75	-30973709.50	0.0285	0.0069
Uranus	-89515-10-18 22:03 J	-30973639.82	-30973639.58	-30973639.32	0.0132	0.0027
Saturn	-89514-08-24 04:18 J	-30973330.54	-30973330.32	-30973330.10	0.0284	0.0134
Uranus	-89514-10-23 01:25 J	-30973270.69	-30973270.44	-30973270.18	0.0131	0.0007
Uranus	-89513-10-26 04:03 J	-30972901.57	-30972901.33	-30972901.07	0.0131	0.0013
Uranus	-89512-10-30 06:27 J	-30972532.46	-30972532.23	-30972531.97	0.0131	0.0032
Uranus	-89511-11-03 08:51 J	-30972163.36	-30972163.13	-30972162.89	0.0132	0.0050
Jupiter	-89510-10-07 06:42 J	-30971825.39	-30971825.22	-30971825.05	0.0532	0.0364

Uranus -89510-11-07 10:32 J -30971794.26 -30971794.06 -30971793.83 0.0132 0.0069
 Uranus -89509-11-10 12:13 J -30971425.16 -30971424.99 -30971424.79 0.0132 0.0087
 Uranus -89508-11-14 14:08 J -30971056.05 -30971055.91 -30971055.75 0.0132 0.0104
 Uranus -89507-11-18 15:06 J -30970686.93 -30970686.87 -30970686.75 0.0132 0.0123
 Jupiter -89504-03-26 15:20 J -30969828.08 -30969827.86 -30969827.63 0.0497 0.0116
 Saturn -89500-01-30 11:30 J -30968422.22 -30968422.02 -30968421.80 0.0274 0.0123
 Saturn -89499-02-11 06:27 J -30968045.46 -30968045.23 -30968044.99 0.0274 0.0045
 Saturn -89498-02-23 05:01 J -30967668.43 -30967668.29 -30967668.13 0.0275 0.0212
 Mars -89497-01-05 17:44 J -30967351.89 -30967351.76 -30967351.62 0.1743 0.1170
 Jupiter -89492-03-31 00:27 J -30965440.61 -30965440.48 -30965440.34 0.0496 0.0400
 Neptune -89489-09-15 23:44 J -30964175.60 -30964175.51 -30964175.37 0.0088 0.0079
 Neptune -89488-09-18 12:42 J -30963808.17 -30963807.97 -30963807.74 0.0088 0.0051
 Neptune -89487-09-21 01:25 J -30963440.68 -30963440.44 -30963440.17 0.0088 0.0023
 Saturn -89486-08-03 13:54 J -30963124.13 -30963123.92 -30963123.71 0.0286 0.0162
 Neptune -89486-09-23 14:08 J -30963073.16 -30963072.91 -30963072.64 0.0088 0.0007
 Saturn -89485-08-17 03:20 J -30962744.61 -30962744.36 -30962744.11 0.0285 0.0044
 Neptune -89485-09-25 02:08 J -30962705.64 -30962705.41 -30962705.16 0.0088 0.0034
 Saturn -89484-08-31 11:44 J -30962365.13 -30962365.01 -30962364.87 0.0285 0.0243
 Neptune -89484-09-27 14:23 J -30962338.07 -30962337.90 -30962337.70 0.0088 0.0062
 Pluto -89477-06-06 16:18 J -30959894.04 -30959893.82 -30959893.55 0.0067 0.0029
 Uranus -89476-03-23 05:15 J -30959604.39 -30959604.28 -30959604.14 0.0146 0.0126
 Uranus -89475-03-28 07:11 J -30959234.36 -30959234.20 -30959234.00 0.0147 0.0102
 Uranus -89474-04-02 10:32 J -30958864.27 -30958864.06 -30958863.84 0.0147 0.0076
 Uranus -89473-04-06 14:37 J -30958494.13 -30958493.89 -30958493.65 0.0147 0.0050
 Uranus -89472-04-11 19:25 J -30958123.94 -30958123.69 -30958123.44 0.0147 0.0024
 Mars -89472-07-01 15:35 J -30958043.06 -30958042.85 -30958042.65 0.1776 0.0053
 Saturn -89471-01-25 21:35 J -30957834.76 -30957834.60 -30957834.42 0.0273 0.0193
 Uranus -89471-04-17 01:11 J -30957753.70 -30957753.45 -30957753.19 0.0147 0.0004
 Saturn -89470-02-06 15:06 J -30957458.11 -30957457.87 -30957457.63 0.0273 0.0030
 Uranus -89470-04-22 07:39 J -30957383.42 -30957383.18 -30957382.92 0.0147 0.0031

Saturn -89469-02-18 11:30 J -30957081.22 -30957081.02 -30957080.81 0.0274 0.0137
 Uranus -89469-04-26 15:06 J -30957013.10 -30957012.87 -30957012.63 0.0147 0.0058
 Uranus -89468-05-01 23:01 J -30956642.74 -30956642.54 -30956642.32 0.0147 0.0085
 Uranus -89467-05-07 07:11 J -30956272.36 -30956272.20 -30956272.03 0.0147 0.0111
 Uranus -89466-05-12 15:35 J -30955901.92 -30955901.85 -30955901.74 0.0146 0.0137
 Saturn -89457-07-27 06:27 J -30952538.35 -30952538.23 -30952538.11 0.0286 0.0251
 Saturn -89456-08-10 20:51 J -30952158.88 -30952158.63 -30952158.38 0.0285 0.0048
 Saturn -89455-08-25 06:56 J -30951779.41 -30951779.21 -30951778.99 0.0285 0.0154
 Jupiter -89451-09-26 03:35 J -30950286.49 -30950286.35 -30950286.19 0.0527 0.0401
 Mars -89451-12-29 11:59 J -30950192.16 -30950192.00 -30950191.83 0.1768 0.0851
 Jupiter -89445-03-17 06:27 J -30948287.28 -30948287.23 -30948287.18 0.0502 0.0488
 Saturn -89442-01-20 19:11 J -30947247.75 -30947247.70 -30947247.63 0.0273 0.0264
 Saturn -89441-02-01 11:30 J -30946871.24 -30946871.02 -30946870.80 0.0273 0.0104
 Saturn -89440-02-12 06:13 J -30946494.47 -30946494.24 -30946494.00 0.0274 0.0062
 Saturn -89439-02-24 04:47 J -30946117.43 -30946117.30 -30946117.16 0.0275 0.0228
 Jupiter -89439-10-01 09:06 J -30945898.35 -30945898.12 -30945897.88 0.0530 0.0036
 Uranus -89436-09-29 04:47 J -30944804.41 -30944804.30 -30944804.17 0.0132 0.0117
 Uranus -89435-10-03 11:15 J -30944435.18 -30944435.03 -30944434.84 0.0132 0.0098
 Uranus -89434-10-07 17:01 J -30944065.98 -30944065.79 -30944065.57 0.0132 0.0080
 Jupiter -89433-03-21 15:49 J -30943900.04 -30943899.84 -30943899.62 0.0500 0.0199
 Uranus -89433-10-10 22:03 J -30943696.80 -30943696.58 -30943696.35 0.0132 0.0061
 Uranus -89432-10-15 02:23 J -30943327.63 -30943327.40 -30943327.14 0.0132 0.0043
 Uranus -89431-10-19 06:27 J -30942958.48 -30942958.23 -30942957.98 0.0132 0.0023
 Uranus -89430-10-23 09:49 J -30942589.34 -30942589.09 -30942588.83 0.0131 0.0005
 Uranus -89429-10-26 12:42 J -30942220.22 -30942219.97 -30942219.72 0.0131 0.0014
 Uranus -89428-10-30 15:06 J -30941851.10 -30941850.87 -30941850.62 0.0131 0.0034
 Saturn -89427-08-04 14:37 J -30941573.10 -30941572.89 -30941572.67 0.0286 0.0143
 Jupiter -89427-10-06 10:18 J -30941510.26 -30941510.07 -30941509.88 0.0531 0.0320
 Uranus -89427-11-03 17:30 J -30941481.99 -30941481.77 -30941481.53 0.0132 0.0052
 Saturn -89426-08-19 04:18 J -30941193.56 -30941193.32 -30941193.07 0.0285 0.0062

Uranus -89426-11-07 19:25 J -30941112.89 -30941112.69 -30941112.47 0.0132 0.0070
 Saturn -89425-09-01 12:56 J -30940814.06 -30940813.96 -30940813.85 0.0285 0.0259
 Uranus -89425-11-10 21:06 J -30940743.79 -30940743.62 -30940743.42 0.0132 0.0088
 Uranus -89424-11-14 23:01 J -30940374.68 -30940374.54 -30940374.38 0.0132 0.0105
 Uranus -89423-11-19 00:13 J -30940005.57 -30940005.49 -30940005.38 0.0132 0.0122
 Jupiter -89421-03-25 23:59 J -30939512.73 -30939512.50 -30939512.27 0.0498 0.0089
 Saturn -89412-01-26 22:03 J -30936283.75 -30936283.58 -30936283.38 0.0273 0.0175
 Saturn -89411-02-07 15:49 J -30935907.08 -30935906.84 -30935906.60 0.0273 0.0012
 Saturn -89410-02-19 11:59 J -30935530.19 -30935530.00 -30935529.80 0.0274 0.0154
 Jupiter -89409-03-30 09:49 J -30935125.24 -30935125.09 -30935124.94 0.0496 0.0377
 Neptune -89406-03-11 04:47 J -30934049.42 -30934049.30 -30934049.13 0.0089 0.0073
 Neptune -89405-03-12 15:35 J -30933682.06 -30933681.85 -30933681.62 0.0089 0.0045
 Neptune -89404-03-15 02:23 J -30933314.64 -30933314.40 -30933314.14 0.0089 0.0017
 Neptune -89403-03-17 13:11 J -30932947.20 -30932946.95 -30932946.70 0.0089 0.0011
 Neptune -89402-03-19 23:30 J -30932579.72 -30932579.52 -30932579.27 0.0089 0.0041
 Neptune -89401-03-21 10:32 J -30932212.20 -30932212.06 -30932211.87 0.0089 0.0068
 Saturn -89398-07-29 08:37 J -30930987.29 -30930987.14 -30930986.99 0.0286 0.0230
 Saturn -89397-08-11 23:01 J -30930607.79 -30930607.54 -30930607.29 0.0285 0.0028
 Saturn -89396-08-26 09:20 J -30930228.30 -30930228.11 -30930227.90 0.0285 0.0172
 Uranus -89393-03-18 13:39 J -30929292.97 -30929292.93 -30929292.87 0.0146 0.0143
 Mars -89393-07-04 18:13 J -30929184.89 -30929184.74 -30929184.60 0.1783 0.1246
 Uranus -89392-03-23 14:23 J -30928923.03 -30928922.90 -30928922.75 0.0147 0.0121
 Uranus -89391-03-28 16:18 J -30928553.00 -30928552.82 -30928552.62 0.0147 0.0097
 Pluto -89391-12-11 22:47 J -30928294.79 -30928294.55 -30928294.29 0.0078 0.0012
 Uranus -89390-04-02 19:25 J -30928182.91 -30928182.69 -30928182.47 0.0147 0.0072
 Uranus -89389-04-06 23:30 J -30927812.76 -30927812.52 -30927812.28 0.0147 0.0047
 Uranus -89388-04-12 04:18 J -30927442.57 -30927442.32 -30927442.07 0.0147 0.0020
 Uranus -89387-04-17 10:03 J -30927072.33 -30927072.08 -30927071.82 0.0147 0.0007
 Uranus -89386-04-22 16:47 J -30926702.05 -30926701.80 -30926701.55 0.0147 0.0034
 Uranus -89385-04-26 23:59 J -30926331.73 -30926331.50 -30926331.26 0.0147 0.0060

Uranus -89384-05-02 07:25 J -30925961.38 -30925961.19 -30925960.97 0.0147 0.0087
 Saturn -89383-01-21 20:23 J -30925696.75 -30925696.65 -30925696.54 0.0273 0.0245
 Uranus -89383-05-07 15:35 J -30925591.00 -30925590.85 -30925590.67 0.0147 0.0113
 Saturn -89382-02-02 12:27 J -30925320.21 -30925319.98 -30925319.75 0.0273 0.0086
 Uranus -89382-05-12 23:59 J -30925220.56 -30925220.50 -30925220.39 0.0146 0.0138
 Saturn -89381-02-14 07:11 J -30924943.43 -30924943.20 -30924942.97 0.0274 0.0079
 Saturn -89380-02-25 05:15 J -30924566.37 -30924566.28 -30924566.16 0.0275 0.0244
 Mars -89372-12-31 20:51 J -30921334.81 -30921334.63 -30921334.45 0.1762 0.0019
 Saturn -89368-08-05 15:35 J -30920022.07 -30920021.85 -30920021.62 0.0286 0.0123
 Jupiter -89368-09-25 09:06 J -30919971.25 -30919971.12 -30919970.99 0.0526 0.0432
 Saturn -89367-08-20 05:30 J -30919642.51 -30919642.27 -30919642.03 0.0285 0.0080
 Saturn -89366-09-03 13:54 J -30919262.97 -30919262.92 -30919262.85 0.0285 0.0276
 Jupiter -89356-09-30 11:01 J -30915583.27 -30915583.04 -30915582.81 0.0528 0.0082
 Saturn -89353-01-28 23:15 J -30914732.72 -30914732.53 -30914732.33 0.0273 0.0156
 Uranus -89353-09-25 04:47 J -30914492.32 -30914492.30 -30914492.23 0.0132 0.0131
 Saturn -89352-02-08 17:01 J -30914356.03 -30914355.79 -30914355.55 0.0273 0.0008
 Uranus -89352-09-29 12:13 J -30914123.10 -30914122.99 -30914122.84 0.0132 0.0113
 Saturn -89351-02-20 13:11 J -30913979.13 -30913978.95 -30913978.76 0.0274 0.0171
 Uranus -89351-10-03 18:56 J -30913753.88 -30913753.71 -30913753.52 0.0132 0.0094
 Jupiter -89350-03-21 23:30 J -30913584.72 -30913584.52 -30913584.31 0.0501 0.0227
 Uranus -89350-10-08 00:42 J -30913384.67 -30913384.47 -30913384.25 0.0132 0.0076
 Uranus -89349-10-11 05:30 J -30913015.48 -30913015.27 -30913015.03 0.0132 0.0058
 Uranus -89348-10-15 10:18 J -30912646.31 -30912646.07 -30912645.82 0.0132 0.0039
 Uranus -89347-10-19 14:08 J -30912277.15 -30912276.91 -30912276.65 0.0132 0.0021
 Uranus -89346-10-23 17:30 J -30911908.02 -30911907.77 -30911907.51 0.0131 0.0002
 Uranus -89345-10-26 20:37 J -30911538.89 -30911538.64 -30911538.39 0.0131 0.0017
 Jupiter -89344-10-05 12:27 J -30911195.18 -30911194.98 -30911194.78 0.0531 0.0271
 Uranus -89344-10-30 23:01 J -30911169.77 -30911169.54 -30911169.29 0.0131 0.0035
 Uranus -89343-11-04 01:11 J -30910800.67 -30910800.45 -30910800.21 0.0132 0.0054
 Uranus -89342-11-08 03:35 J -30910431.56 -30910431.35 -30910431.14 0.0132 0.0071

Uranus	-89341-11-11 05:01 J	-30910062.46	-30910062.29	-30910062.09	0.0132	0.0089
Uranus	-89340-11-15 06:27 J	-30909693.36	-30909693.23	-30909693.06	0.0132	0.0106
Saturn	-89339-07-30 11:44 J	-30909436.17	-30909436.01	-30909435.83	0.0286	0.0209
Uranus	-89339-11-19 08:08 J	-30909324.24	-30909324.16	-30909324.06	0.0132	0.0123
Jupiter	-89338-03-26 10:47 J	-30909197.28	-30909197.05	-30909196.82	0.0499	0.0065
Saturn	-89338-08-14 02:23 J	-30909056.65	-30909056.40	-30909056.14	0.0286	0.0009
Saturn	-89337-08-27 12:42 J	-30908677.15	-30908676.97	-30908676.78	0.0285	0.0191
Jupiter	-89326-03-30 19:39 J	-30904809.84	-30904809.68	-30904809.51	0.0497	0.0349
Saturn	-89324-01-22 22:18 J	-30904145.70	-30904145.57	-30904145.43	0.0273	0.0226
Neptune	-89324-09-17 23:30 J	-30903907.69	-30903907.52	-30903907.32	0.0088	0.0062
Saturn	-89323-02-03 14:23 J	-30903769.13	-30903768.90	-30903768.66	0.0273	0.0067
Neptune	-89323-09-20 12:13 J	-30903540.21	-30903539.99	-30903539.73	0.0088	0.0035
Saturn	-89322-02-15 09:06 J	-30903392.34	-30903392.12	-30903391.89	0.0274	0.0097
Neptune	-89322-09-23 00:56 J	-30903172.72	-30903172.46	-30903172.20	0.0088	0.0006
Saturn	-89321-02-27 07:25 J	-30903015.26	-30903015.19	-30903015.11	0.0274	0.0260
Neptune	-89321-09-24 13:25 J	-30902805.19	-30902804.94	-30902804.68	0.0088	0.0022
Neptune	-89320-09-27 01:25 J	-30902437.64	-30902437.44	-30902437.21	0.0088	0.0051
Neptune	-89319-09-29 13:25 J	-30902070.03	-30902069.94	-30902069.80	0.0088	0.0079
Uranus	-89309-03-18 22:32 J	-30898611.63	-30898611.56	-30898611.47	0.0146	0.0138
Saturn	-89309-08-06 17:30 J	-30898471.00	-30898470.77	-30898470.53	0.0286	0.0103
Uranus	-89308-03-23 23:30 J	-30898241.67	-30898241.52	-30898241.37	0.0147	0.0116
Saturn	-89308-08-21 07:11 J	-30898091.43	-30898091.20	-30898090.96	0.0286	0.0100
Uranus	-89307-03-29 00:56 J	-30897871.64	-30897871.46	-30897871.25	0.0147	0.0093
Uranus	-89306-04-03 04:03 J	-30897501.54	-30897501.33	-30897501.10	0.0147	0.0068
Uranus	-89305-04-07 08:08 J	-30897131.39	-30897131.16	-30897130.91	0.0147	0.0043
Uranus	-89304-04-12 12:56 J	-30896761.21	-30896760.96	-30896760.70	0.0147	0.0017
Uranus	-89303-04-17 18:56 J	-30896390.96	-30896390.71	-30896390.45	0.0147	0.0010
Uranus	-89302-04-23 01:39 J	-30896020.68	-30896020.43	-30896020.18	0.0147	0.0036
Uranus	-89301-04-27 08:37 J	-30895650.36	-30895650.14	-30895649.90	0.0147	0.0063
Uranus	-89300-05-02 16:18 J	-30895280.01	-30895279.82	-30895279.60	0.0147	0.0089

Uranus	-89299-05-08 00:13 J	-30894909.63	-30894909.49	-30894909.31	0.0147	0.0114
Uranus	-89298-05-13 08:51 J	-30894539.20	-30894539.13	-30894539.03	0.0147	0.0138
Saturn	-89294-01-30 01:39 J	-30893181.62	-30893181.43	-30893181.21	0.0273	0.0136
Saturn	-89293-02-10 19:39 J	-30892804.92	-30892804.68	-30892804.44	0.0273	0.0026
Mars	-89292-01-03 05:59 J	-30892477.41	-30892477.25	-30892477.08	0.1756	0.0801
Saturn	-89292-02-21 16:03 J	-30892427.99	-30892427.83	-30892427.65	0.0274	0.0189
Jupiter	-89285-09-24 09:49 J	-30889656.17	-30889656.09	-30889655.99	0.0526	0.0482
Saturn	-89280-07-31 16:47 J	-30887884.99	-30887884.80	-30887884.61	0.0286	0.0186
Saturn	-89279-08-15 07:11 J	-30887505.45	-30887505.20	-30887504.94	0.0286	0.0016
Saturn	-89278-08-29 17:15 J	-30887125.93	-30887125.78	-30887125.60	0.0285	0.0211
Jupiter	-89273-09-29 13:54 J	-30885268.14	-30885267.92	-30885267.69	0.0528	0.0128
Uranus	-89269-09-25 12:56 J	-30883811.02	-30883810.96	-30883810.86	0.0132	0.0126
Uranus	-89268-09-29 20:23 J	-30883441.78	-30883441.65	-30883441.48	0.0132	0.0108
Jupiter	-89267-03-21 09:06 J	-30883269.32	-30883269.12	-30883268.92	0.0501	0.0254
Mars	-89267-06-28 10:32 J	-30883170.24	-30883170.06	-30883169.88	0.1760	0.0814
Uranus	-89267-10-04 03:06 J	-30883072.54	-30883072.37	-30883072.17	0.0132	0.0090
Uranus	-89266-10-08 08:51 J	-30882703.34	-30882703.13	-30882702.91	0.0132	0.0072
Saturn	-89265-01-25 01:54 J	-30882594.57	-30882594.42	-30882594.26	0.0273	0.0206
Uranus	-89265-10-11 13:54 J	-30882334.14	-30882333.92	-30882333.68	0.0132	0.0054
Saturn	-89264-02-04 18:13 J	-30882217.97	-30882217.74	-30882217.50	0.0273	0.0047
Uranus	-89264-10-15 18:27 J	-30881964.96	-30881964.73	-30881964.47	0.0132	0.0036
Saturn	-89263-02-16 12:56 J	-30881841.18	-30881840.96	-30881840.75	0.0274	0.0116
Uranus	-89263-10-19 22:32 J	-30881595.81	-30881595.56	-30881595.31	0.0131	0.0017
Uranus	-89262-10-24 02:08 J	-30881226.67	-30881226.41	-30881226.16	0.0131	0.0002
Jupiter	-89261-10-04 19:11 J	-30880879.91	-30880879.70	-30880879.49	0.0530	0.0236
Uranus	-89261-10-27 05:01 J	-30880857.54	-30880857.29	-30880857.04	0.0131	0.0020
Uranus	-89260-10-31 07:39 J	-30880488.41	-30880488.18	-30880487.93	0.0131	0.0038
Uranus	-89259-11-04 10:03 J	-30880119.30	-30880119.08	-30880118.84	0.0132	0.0055
Uranus	-89258-11-08 11:59 J	-30879750.20	-30879750.00	-30879749.78	0.0132	0.0073
Uranus	-89257-11-11 13:39 J	-30879381.10	-30879380.93	-30879380.74	0.0132	0.0090

Uranus -89256-11-15 14:51 J -30879012.00 -30879011.88 -30879011.71 0.0132 0.0107
 Jupiter -89255-03-25 18:42 J -30878881.95 -30878881.72 -30878881.49 0.0499 0.0033
 Uranus -89255-11-19 16:03 J -30878642.89 -30878642.83 -30878642.72 0.0132 0.0124
 Saturn -89251-07-25 06:27 J -30877299.29 -30877299.23 -30877299.18 0.0286 0.0278
 Saturn -89250-08-08 22:18 J -30876919.80 -30876919.57 -30876919.32 0.0286 0.0081
 Saturn -89249-08-22 11:44 J -30876540.24 -30876540.01 -30876539.78 0.0285 0.0120
 Mars -89246-12-27 17:59 J -30875317.87 -30875317.75 -30875317.64 0.1781 0.1357
 Jupiter -89243-03-30 00:42 J -30874494.64 -30874494.47 -30874494.29 0.0498 0.0314
 Neptune -89242-03-10 17:30 J -30874148.81 -30874148.77 -30874148.67 0.0089 0.0085
 Neptune -89241-03-12 04:18 J -30873781.50 -30873781.32 -30873781.11 0.0089 0.0057
 Neptune -89240-03-14 14:51 J -30873414.11 -30873413.88 -30873413.63 0.0089 0.0029
 Neptune -89239-03-17 01:39 J -30873046.68 -30873046.43 -30873046.17 0.0089 0.0001
 Neptune -89238-03-19 12:27 J -30872679.22 -30872678.98 -30872678.73 0.0089 0.0027
 Neptune -89237-03-20 23:15 J -30872311.72 -30872311.53 -30872311.33 0.0089 0.0056
 Saturn -89236-01-19 13:39 J -30872006.96 -30872006.93 -30872006.89 0.0273 0.0270
 Neptune -89236-03-23 09:35 J -30871944.15 -30871944.10 -30871943.98 0.0089 0.0085
 Saturn -89235-01-31 05:30 J -30871630.48 -30871630.27 -30871630.04 0.0273 0.0115
 Saturn -89234-02-11 23:44 J -30871253.75 -30871253.51 -30871253.28 0.0273 0.0046
 Saturn -89233-02-23 20:37 J -30870876.78 -30870876.64 -30870876.47 0.0274 0.0208
 Pluto -89230-06-08 12:42 J -30869676.10 -30869675.97 -30869675.78 0.0067 0.0054
 Pluto -89229-06-09 05:01 J -30869309.46 -30869309.29 -30869309.05 0.0067 0.0042
 Uranus -89225-03-19 06:13 J -30867930.33 -30867930.24 -30867930.13 0.0146 0.0134
 Uranus -89224-03-24 06:42 J -30867560.36 -30867560.22 -30867560.04 0.0147 0.0112
 Uranus -89223-03-29 09:06 J -30867190.32 -30867190.12 -30867189.92 0.0147 0.0088
 Uranus -89222-04-03 11:59 J -30866820.22 -30866820.00 -30866819.77 0.0147 0.0064
 Uranus -89221-04-07 16:18 J -30866450.07 -30866449.82 -30866449.58 0.0147 0.0039
 Saturn -89221-08-01 23:44 J -30866333.71 -30866333.51 -30866333.29 0.0286 0.0162
 Uranus -89220-04-12 21:06 J -30866079.87 -30866079.62 -30866079.36 0.0147 0.0013
 Saturn -89220-08-16 14:08 J -30865954.16 -30865953.91 -30865953.66 0.0286 0.0038
 Uranus -89219-04-18 03:06 J -30865709.62 -30865709.37 -30865709.11 0.0147 0.0013

Saturn	-89219-08-31 00:13 J	-30865574.64	-30865574.49	-30865574.35	0.0285	0.0231
Uranus	-89218-04-23 09:49 J	-30865339.33	-30865339.09	-30865338.84	0.0147	0.0039
Uranus	-89217-04-27 16:47 J	-30864969.01	-30864968.80	-30864968.55	0.0147	0.0065
Uranus	-89216-05-03 00:27 J	-30864598.67	-30864598.48	-30864598.26	0.0147	0.0090
Uranus	-89215-05-08 08:37 J	-30864228.29	-30864228.14	-30864227.97	0.0147	0.0115
Uranus	-89214-05-13 16:47 J	-30863857.86	-30863857.80	-30863857.70	0.0147	0.0139
Mars	-89213-01-06 14:37 J	-30863619.96	-30863619.89	-30863619.82	0.1751	0.1602
Saturn	-89206-01-26 07:25 J	-30861043.36	-30861043.19	-30861043.01	0.0273	0.0184
Saturn	-89205-02-06 23:59 J	-30860666.74	-30860666.50	-30860666.27	0.0273	0.0026
Saturn	-89204-02-17 18:42 J	-30860289.92	-30860289.72	-30860289.51	0.0274	0.0136
Jupiter	-89202-09-24 15:20 J	-30859340.89	-30859340.86	-30859340.82	0.0525	0.0518
Saturn	-89192-07-26 13:25 J	-30855748.04	-30855747.94	-30855747.81	0.0286	0.0254
Saturn	-89191-08-10 05:30 J	-30855368.51	-30855368.27	-30855368.02	0.0286	0.0057
Saturn	-89190-08-24 18:27 J	-30854988.95	-30854988.73	-30854988.51	0.0285	0.0142
Jupiter	-89190-09-29 18:56 J	-30854952.93	-30854952.71	-30854952.48	0.0527	0.0163
Mars	-89188-07-01 12:27 J	-30854312.18	-30854311.98	-30854311.78	0.1767	0.0339
Uranus	-89185-09-25 20:23 J	-30853129.72	-30853129.65	-30853129.52	0.0132	0.0122
Jupiter	-89184-03-20 12:13 J	-30852954.18	-30852953.99	-30852953.80	0.0502	0.0296
Uranus	-89184-09-30 04:18 J	-30852760.47	-30852760.32	-30852760.16	0.0132	0.0104
Uranus	-89183-10-04 10:32 J	-30852391.24	-30852391.06	-30852390.85	0.0132	0.0086
Uranus	-89182-10-08 16:32 J	-30852022.02	-30852021.81	-30852021.59	0.0132	0.0068
Uranus	-89181-10-11 21:35 J	-30851652.82	-30851652.60	-30851652.35	0.0132	0.0051
Uranus	-89180-10-16 02:08 J	-30851283.64	-30851283.41	-30851283.15	0.0131	0.0033
Uranus	-89179-10-20 06:27 J	-30850914.48	-30850914.23	-30850913.97	0.0131	0.0014
Jupiter	-89178-10-04 20:37 J	-30850564.86	-30850564.64	-30850564.42	0.0529	0.0187
Uranus	-89178-10-24 10:03 J	-30850545.34	-30850545.08	-30850544.83	0.0131	0.0005
Saturn	-89177-01-21 18:42 J	-30850455.82	-30850455.72	-30850455.62	0.0273	0.0248
Uranus	-89177-10-27 12:56 J	-30850176.20	-30850175.96	-30850175.70	0.0131	0.0023
Saturn	-89176-02-01 11:01 J	-30850079.26	-30850079.04	-30850078.82	0.0273	0.0093
Uranus	-89176-10-31 15:49 J	-30849807.08	-30849806.84	-30849806.60	0.0131	0.0040

Saturn -89175-02-13 05:15 J -30849702.51 -30849702.28 -30849702.04 0.0273 0.0068
 Uranus -89175-11-04 17:44 J -30849437.97 -30849437.76 -30849437.52 0.0132 0.0058
 Saturn -89174-02-25 02:37 J -30849325.51 -30849325.39 -30849325.24 0.0274 0.0228
 Uranus -89174-11-08 19:39 J -30849068.87 -30849068.68 -30849068.46 0.0132 0.0075
 Uranus -89173-11-11 21:35 J -30848699.77 -30848699.60 -30848699.41 0.0132 0.0091
 Jupiter -89172-03-24 21:49 J -30848566.83 -30848566.59 -30848566.36 0.0500 0.0013
 Uranus -89172-11-15 22:47 J -30848330.68 -30848330.55 -30848330.39 0.0132 0.0107
 Uranus -89171-11-19 23:59 J -30847961.57 -30847961.50 -30847961.39 0.0132 0.0124
 Mars -89167-12-30 04:47 J -30846460.48 -30846460.30 -30846460.12 0.1776 0.0469
 Saturn -89162-08-04 10:03 J -30844782.30 -30844782.08 -30844781.85 0.0286 0.0136
 Saturn -89161-08-17 23:59 J -30844402.74 -30844402.50 -30844402.25 0.0286 0.0062
 Jupiter -89160-03-29 08:37 J -30844179.33 -30844179.14 -30844178.95 0.0498 0.0281
 Saturn -89160-09-01 09:20 J -30844023.21 -30844023.11 -30844022.99 0.0285 0.0254
 Neptune -89160-09-17 09:49 J -30844007.20 -30844007.09 -30844006.92 0.0088 0.0075
 Neptune -89159-09-19 23:01 J -30843639.76 -30843639.54 -30843639.31 0.0088 0.0046
 Neptune -89158-09-22 11:44 J -30843272.26 -30843272.01 -30843271.75 0.0088 0.0018
 Neptune -89157-09-24 00:13 J -30842904.75 -30842904.49 -30842904.23 0.0088 0.0011
 Neptune -89156-09-26 12:27 J -30842537.20 -30842536.98 -30842536.73 0.0088 0.0039
 Neptune -89155-09-29 00:27 J -30842169.63 -30842169.48 -30842169.29 0.0088 0.0067
 Saturn -89147-01-27 13:54 J -30839492.10 -30839491.92 -30839491.72 0.0273 0.0162
 Saturn -89146-02-08 06:42 J -30839115.45 -30839115.22 -30839114.98 0.0273 0.0005
 Saturn -89145-02-20 01:54 J -30838738.61 -30838738.42 -30838738.22 0.0274 0.0158
 Pluto -89144-12-12 18:56 J -30838076.94 -30838076.71 -30838076.47 0.0078 0.0027
 Uranus -89141-03-19 13:11 J -30837249.05 -30837248.95 -30837248.81 0.0146 0.0129
 Uranus -89140-03-24 14:08 J -30836879.07 -30836878.91 -30836878.73 0.0147 0.0107
 Uranus -89139-03-29 16:03 J -30836509.02 -30836508.83 -30836508.61 0.0147 0.0084
 Uranus -89138-04-03 19:11 J -30836138.92 -30836138.70 -30836138.46 0.0147 0.0060
 Uranus -89137-04-07 23:30 J -30835768.76 -30835768.52 -30835768.26 0.0147 0.0035
 Uranus -89136-04-13 04:32 J -30835398.56 -30835398.31 -30835398.05 0.0147 0.0010
 Uranus -89135-04-18 10:47 J -30835028.31 -30835028.05 -30835027.80 0.0147 0.0016

Uranus	-89134-04-23 17:15 J	-30834658.02	-30834657.78	-30834657.53	0.0147	0.0041
Uranus	-89133-04-28 00:13 J	-30834287.71	-30834287.49	-30834287.25	0.0147	0.0067
Saturn	-89133-07-27 23:44 J	-30834196.65	-30834196.51	-30834196.34	0.0286	0.0228
Uranus	-89132-05-03 07:54 J	-30833917.36	-30833917.17	-30833916.96	0.0147	0.0092
Saturn	-89132-08-11 15:35 J	-30833817.10	-30833816.85	-30833816.59	0.0286	0.0031
Uranus	-89131-05-08 15:49 J	-30833546.98	-30833546.84	-30833546.67	0.0147	0.0116
Saturn	-89131-08-26 03:49 J	-30833437.54	-30833437.34	-30833437.13	0.0285	0.0165
Uranus	-89130-05-13 23:59 J	-30833176.56	-30833176.50	-30833176.40	0.0147	0.0140
Saturn	-89118-01-23 00:42 J	-30828904.60	-30828904.47	-30828904.34	0.0274	0.0225
Saturn	-89117-02-03 17:30 J	-30828528.00	-30828527.77	-30828527.54	0.0273	0.0069
Saturn	-89116-02-14 12:27 J	-30828151.21	-30828150.98	-30828150.76	0.0274	0.0090
Saturn	-89115-02-26 10:18 J	-30827774.16	-30827774.07	-30827773.97	0.0274	0.0248
Mars	-89109-07-04 13:11 J	-30825454.06	-30825453.95	-30825453.85	0.1774	0.1494
Jupiter	-89107-09-28 15:06 J	-30824638.08	-30824637.87	-30824637.66	0.0526	0.0229
Saturn	-89103-08-05 22:18 J	-30823230.81	-30823230.57	-30823230.34	0.0286	0.0108
Saturn	-89102-08-20 11:30 J	-30822851.25	-30822851.02	-30822850.77	0.0286	0.0089
Jupiter	-89101-03-19 18:27 J	-30822638.89	-30822638.73	-30822638.55	0.0503	0.0333
Saturn	-89101-09-02 20:23 J	-30822471.69	-30822471.65	-30822471.58	0.0285	0.0277
Uranus	-89101-09-26 04:47 J	-30822448.40	-30822448.30	-30822448.16	0.0132	0.0117
Uranus	-89100-09-30 12:13 J	-30822079.14	-30822078.99	-30822078.80	0.0132	0.0100
Uranus	-89099-10-04 18:56 J	-30821709.90	-30821709.71	-30821709.49	0.0132	0.0082
Uranus	-89098-10-09 00:56 J	-30821340.68	-30821340.46	-30821340.23	0.0132	0.0064
Uranus	-89097-10-12 06:13 J	-30820971.47	-30820971.24	-30820970.99	0.0132	0.0046
Uranus	-89096-10-16 11:01 J	-30820602.29	-30820602.04	-30820601.79	0.0131	0.0029
Jupiter	-89095-10-03 17:30 J	-30820249.99	-30820249.77	-30820249.54	0.0529	0.0123
Uranus	-89095-10-20 15:06 J	-30820233.12	-30820232.87	-30820232.62	0.0131	0.0011
Uranus	-89094-10-24 18:42 J	-30819863.97	-30819863.72	-30819863.47	0.0131	0.0007
Uranus	-89093-10-27 22:03 J	-30819494.83	-30819494.58	-30819494.33	0.0131	0.0025
Uranus	-89092-11-01 00:13 J	-30819125.71	-30819125.49	-30819125.24	0.0131	0.0043
Uranus	-89091-11-05 02:23 J	-30818756.61	-30818756.40	-30818756.16	0.0131	0.0060

Uranus -89090-11-09 04:32 J -30818387.51 -30818387.31 -30818387.10 0.0132 0.0076
 Jupiter -89089-03-24 05:01 J -30818251.52 -30818251.29 -30818251.06 0.0500 0.0042
 Uranus -89089-11-12 06:13 J -30818018.41 -30818018.24 -30818018.06 0.0132 0.0092
 Saturn -89088-01-28 21:49 J -30817940.79 -30817940.59 -30817940.38 0.0273 0.0138
 Uranus -89088-11-16 07:25 J -30817649.32 -30817649.19 -30817649.04 0.0132 0.0108
 Mars -89087-01-01 15:20 J -30817603.04 -30817602.86 -30817602.68 0.1770 0.0390
 Saturn -89087-02-09 15:06 J -30817564.11 -30817563.87 -30817563.64 0.0273 0.0021
 Uranus -89087-11-20 08:23 J -30817280.21 -30817280.15 -30817280.04 0.0132 0.0124
 Saturn -89086-02-21 10:32 J -30817187.23 -30817187.06 -30817186.87 0.0274 0.0180
 Jupiter -89083-10-08 22:18 J -30815861.65 -30815861.57 -30815861.47 0.0531 0.0485
 Neptune -89077-03-11 16:47 J -30813880.94 -30813880.80 -30813880.62 0.0089 0.0069
 Jupiter -89077-03-28 14:08 J -30813864.12 -30813863.91 -30813863.71 0.0498 0.0243
 Neptune -89076-03-14 03:35 J -30813513.56 -30813513.35 -30813513.11 0.0089 0.0041
 Neptune -89075-03-16 14:23 J -30813146.15 -30813145.90 -30813145.65 0.0089 0.0013
 Neptune -89074-03-19 00:56 J -30812778.71 -30812778.46 -30812778.20 0.0089 0.0015
 Saturn -89074-07-30 12:56 J -30812645.13 -30812644.96 -30812644.77 0.0286 0.0200
 Neptune -89073-03-20 11:44 J -30812411.22 -30812411.01 -30812410.78 0.0089 0.0043
 Saturn -89073-08-13 04:18 J -30812265.57 -30812265.32 -30812265.06 0.0285 0.0006
 Neptune -89072-03-22 22:18 J -30812043.71 -30812043.57 -30812043.40 0.0089 0.0071
 Saturn -89072-08-27 16:03 J -30811886.02 -30811885.83 -30811885.65 0.0285 0.0190
 Mars -89062-06-25 13:54 J -30808297.02 -30808296.92 -30808296.82 0.1745 0.1512
 Saturn -89059-01-24 07:11 J -30807353.34 -30807353.20 -30807353.03 0.0274 0.0202
 Saturn -89058-02-05 00:42 J -30806976.70 -30806976.47 -30806976.23 0.0274 0.0046
 Uranus -89058-03-15 20:37 J -30806937.65 -30806937.64 -30806937.59 0.0146 0.0145
 Saturn -89057-02-16 19:54 J -30806599.88 -30806599.67 -30806599.45 0.0274 0.0113
 Uranus -89057-03-19 20:23 J -30806567.76 -30806567.65 -30806567.50 0.0146 0.0124
 Saturn -89056-02-27 18:27 J -30806222.77 -30806222.73 -30806222.69 0.0274 0.0270
 Uranus -89056-03-24 21:06 J -30806197.78 -30806197.62 -30806197.43 0.0146 0.0103
 Uranus -89055-03-29 23:15 J -30805827.73 -30805827.53 -30805827.30 0.0147 0.0080
 Uranus -89054-04-04 02:23 J -30805457.62 -30805457.40 -30805457.15 0.0147 0.0056

Uranus	-89053-04-08 06:42 J	-30805087.46	-30805087.22	-30805086.97	0.0147	0.0031
Uranus	-89052-04-13 11:44 J	-30804717.26	-30804717.01	-30804716.75	0.0147	0.0006
Uranus	-89051-04-18 17:30 J	-30804347.01	-30804346.77	-30804346.51	0.0147	0.0020
Uranus	-89050-04-23 23:59 J	-30803976.74	-30803976.50	-30803976.25	0.0147	0.0044
Uranus	-89049-04-28 06:56 J	-30803606.42	-30803606.21	-30803605.97	0.0147	0.0069
Uranus	-89048-05-03 14:37 J	-30803236.08	-30803235.89	-30803235.68	0.0147	0.0093
Uranus	-89047-05-08 22:32 J	-30802865.70	-30802865.56	-30802865.39	0.0147	0.0117
Uranus	-89046-05-14 06:42 J	-30802495.28	-30802495.22	-30802495.12	0.0147	0.0140
Saturn	-89045-07-23 20:37 J	-30802058.70	-30802058.64	-30802058.56	0.0286	0.0273
Saturn	-89044-08-07 12:27 J	-30801679.21	-30801678.98	-30801678.73	0.0286	0.0080
Saturn	-89043-08-22 01:39 J	-30801299.66	-30801299.43	-30801299.20	0.0286	0.0116
Saturn	-89030-01-19 14:08 J	-30796765.95	-30796765.91	-30796765.85	0.0273	0.0266
Saturn	-89029-01-31 06:13 J	-30796389.45	-30796389.24	-30796389.02	0.0273	0.0114
Saturn	-89028-02-10 23:59 J	-30796012.74	-30796012.50	-30796012.27	0.0273	0.0044
Saturn	-89027-02-22 20:08 J	-30795635.82	-30795635.66	-30795635.50	0.0274	0.0202
Jupiter	-89024-09-27 16:03 J	-30794323.03	-30794322.83	-30794322.63	0.0526	0.0279
Jupiter	-89018-03-19 23:59 J	-30792323.65	-30792323.50	-30792323.34	0.0503	0.0371
Uranus	-89018-09-23 04:32 J	-30792136.35	-30792136.31	-30792136.24	0.0133	0.0129
Uranus	-89017-09-26 12:56 J	-30791767.08	-30791766.96	-30791766.81	0.0132	0.0112
Uranus	-89016-09-30 20:23 J	-30791397.81	-30791397.65	-30791397.46	0.0132	0.0095
Saturn	-89015-08-01 03:49 J	-30791093.53	-30791093.34	-30791093.13	0.0286	0.0171
Uranus	-89015-10-05 03:06 J	-30791028.56	-30791028.37	-30791028.15	0.0132	0.0078
Saturn	-89014-08-15 18:42 J	-30790713.97	-30790713.72	-30790713.47	0.0285	0.0025
Uranus	-89014-10-09 08:51 J	-30790659.34	-30790659.13	-30790658.88	0.0132	0.0061
Saturn	-89013-08-29 05:30 J	-30790334.43	-30790334.27	-30790334.11	0.0285	0.0216
Uranus	-89013-10-12 14:37 J	-30790290.12	-30790289.89	-30790289.64	0.0132	0.0043
Jupiter	-89012-10-02 20:51 J	-30789934.86	-30789934.63	-30789934.40	0.0528	0.0080
Uranus	-89012-10-16 19:11 J	-30789920.94	-30789920.70	-30789920.44	0.0131	0.0025
Uranus	-89011-10-20 23:30 J	-30789551.77	-30789551.52	-30789551.26	0.0131	0.0008
Uranus	-89010-10-25 03:06 J	-30789182.62	-30789182.37	-30789182.11	0.0131	0.0010

Uranus	-89009-10-28 06:13 J	-30788813.48	-30788813.24	-30788812.99	0.0131	0.0027
Mars	-89008-01-04 00:27 J	-30788745.62	-30788745.48	-30788745.35	0.1764	0.1212
Uranus	-89008-11-01 08:37 J	-30788444.36	-30788444.14	-30788443.89	0.0131	0.0045
Uranus	-89007-11-05 11:01 J	-30788075.26	-30788075.04	-30788074.82	0.0131	0.0061
Jupiter	-89006-03-24 05:44 J	-30787936.48	-30787936.26	-30787936.03	0.0501	0.0093
Uranus	-89006-11-09 12:56 J	-30787706.16	-30787705.96	-30787705.76	0.0132	0.0077
Uranus	-89005-11-12 14:37 J	-30787337.06	-30787336.89	-30787336.71	0.0132	0.0093
Uranus	-89004-11-16 15:35 J	-30786967.97	-30786967.85	-30786967.69	0.0132	0.0109
Uranus	-89003-11-20 17:01 J	-30786598.85	-30786598.79	-30786598.69	0.0132	0.0124

89TH MILLENNIUM BCE

This is a list of transits of Earth in the 89th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-89000-01-25 14:37 J	-30785802.07	-30785801.89	-30785801.71	0.0274	0.0178		
Jupiter	-89000-10-07 22:47 J	-30785546.68	-30785546.55	-30785546.41	0.0530	0.0431		
Saturn	-88999-02-06 08:08 J	-30785425.40	-30785425.16	-30785424.92	0.0274	0.0022		
Saturn	-88998-02-18 03:35 J	-30785048.55	-30785048.35	-30785048.13	0.0274	0.0136		
Neptune	-88996-09-16 20:08 J	-30784106.70	-30784106.66	-30784106.58	0.0088	0.0086		
Neptune	-88995-09-19 09:06 J	-30783739.30	-30783739.12	-30783738.91	0.0088	0.0058		
Jupiter	-88994-03-28 14:23 J	-30783549.12	-30783548.90	-30783548.69	0.0499	0.0191		
Neptune	-88994-09-21 21:49 J	-30783371.83	-30783371.59	-30783371.34	0.0088	0.0030		
Neptune	-88993-09-23 10:32 J	-30783004.32	-30783004.06	-30783003.80	0.0088	0.0002		
Neptune	-88992-09-25 22:47 J	-30782636.79	-30782636.55	-30782636.29	0.0088	0.0027		

Neptune -88991-09-28 10:47 J -30782269.24 -30782269.05 -30782268.83 0.0088 0.0054
 Neptune -88990-09-30 23:30 J -30781901.62 -30781901.52 -30781901.43 0.0088 0.0082
 Saturn -88986-07-26 12:27 J -30780507.11 -30780506.98 -30780506.85 0.0286 0.0244
 Saturn -88985-08-09 04:18 J -30780127.57 -30780127.32 -30780127.07 0.0286 0.0051
 Saturn -88984-08-23 17:01 J -30779748.01 -30779747.79 -30779747.57 0.0286 0.0143
 Mars -88983-06-28 10:47 J -30779439.24 -30779439.05 -30779438.85 0.1752 0.0472
 Jupiter -88982-04-02 00:56 J -30779161.52 -30779161.46 -30779161.39 0.0497 0.0477
 Pluto -88982-06-11 03:49 J -30779091.58 -30779091.34 -30779091.08 0.0067 0.0021
 Uranus -88974-03-16 05:01 J -30776256.34 -30776256.29 -30776256.21 0.0146 0.0140
 Uranus -88973-03-20 04:18 J -30775886.44 -30775886.32 -30775886.15 0.0146 0.0121
 Uranus -88972-03-25 05:44 J -30775516.44 -30775516.26 -30775516.07 0.0147 0.0098
 Saturn -88971-01-20 22:18 J -30775214.67 -30775214.57 -30775214.46 0.0273 0.0243
 Uranus -88971-03-30 07:39 J -30775146.38 -30775146.18 -30775145.95 0.0147 0.0076
 Saturn -88970-02-01 14:37 J -30774838.11 -30774837.89 -30774837.66 0.0273 0.0090
 Uranus -88970-04-04 10:47 J -30774776.28 -30774776.05 -30774775.81 0.0147 0.0052
 Saturn -88969-02-13 08:23 J -30774461.37 -30774461.15 -30774460.91 0.0273 0.0068
 Uranus -88969-04-08 14:51 J -30774406.12 -30774405.88 -30774405.62 0.0147 0.0028
 Saturn -88968-02-24 05:01 J -30774084.42 -30774084.29 -30774084.14 0.0274 0.0224
 Uranus -88968-04-13 19:54 J -30774035.92 -30774035.67 -30774035.41 0.0147 0.0004
 Uranus -88967-04-19 01:54 J -30773665.67 -30773665.42 -30773665.17 0.0147 0.0022
 Uranus -88966-04-24 08:08 J -30773295.40 -30773295.16 -30773294.91 0.0147 0.0046
 Uranus -88965-04-28 15:20 J -30772925.09 -30772924.86 -30772924.64 0.0147 0.0071
 Uranus -88964-05-03 22:32 J -30772554.75 -30772554.56 -30772554.35 0.0147 0.0095
 Uranus -88963-05-09 06:13 J -30772184.37 -30772184.24 -30772184.07 0.0147 0.0118
 Uranus -88962-05-14 14:23 J -30771813.96 -30771813.90 -30771813.81 0.0147 0.0140
 Mars -88962-12-28 08:51 J -30771586.28 -30771586.13 -30771585.97 0.1790 0.0997
 Saturn -88956-08-02 19:54 J -30769541.89 -30769541.67 -30769541.45 0.0286 0.0141
 Saturn -88955-08-17 10:18 J -30769162.32 -30769162.07 -30769161.83 0.0285 0.0054
 Saturn -88954-08-31 20:23 J -30768782.78 -30768782.65 -30768782.52 0.0285 0.0242
 Saturn -88941-01-27 21:06 J -30764250.81 -30764250.62 -30764250.42 0.0274 0.0155

Jupiter -88941-09-26 17:15 J -30764007.96 -30764007.78 -30764007.59 0.0525 0.0328
 Saturn -88940-02-07 14:51 J -30763874.12 -30763873.88 -30763873.64 0.0274 0.0002
 Saturn -88939-02-19 10:47 J -30763497.24 -30763497.05 -30763496.85 0.0274 0.0158
 Jupiter -88935-03-18 23:59 J -30762008.62 -30762008.50 -30762008.37 0.0504 0.0425
 Uranus -88934-09-23 12:56 J -30761455.02 -30761454.96 -30761454.85 0.0133 0.0125
 Uranus -88933-09-26 21:49 J -30761085.73 -30761085.59 -30761085.43 0.0132 0.0108
 Uranus -88932-10-01 05:01 J -30760716.46 -30760716.29 -30760716.09 0.0132 0.0091
 Uranus -88931-10-05 11:44 J -30760347.20 -30760347.01 -30760346.78 0.0132 0.0074
 Uranus -88930-10-09 17:59 J -30759977.97 -30759977.75 -30759977.51 0.0132 0.0057
 Jupiter -88929-10-01 14:23 J -30759620.13 -30759619.90 -30759619.66 0.0527 0.0006
 Uranus -88929-10-12 23:44 J -30759608.75 -30759608.51 -30759608.26 0.0132 0.0039
 Uranus -88928-10-17 04:32 J -30759239.56 -30759239.31 -30759239.06 0.0131 0.0022
 Saturn -88927-07-28 03:49 J -30758955.50 -30758955.34 -30758955.17 0.0286 0.0216
 Uranus -88927-10-21 08:51 J -30758870.38 -30758870.13 -30758869.88 0.0131 0.0004
 Saturn -88926-08-11 19:39 J -30758575.94 -30758575.68 -30758575.43 0.0286 0.0023
 Uranus -88926-10-25 12:27 J -30758501.23 -30758500.98 -30758500.73 0.0131 0.0013
 Saturn -88925-08-25 07:54 J -30758196.37 -30758196.17 -30758195.97 0.0285 0.0170
 Uranus -88925-10-28 15:35 J -30758132.09 -30758131.85 -30758131.60 0.0131 0.0030
 Uranus -88924-11-01 17:44 J -30757762.98 -30757762.76 -30757762.51 0.0131 0.0047
 Jupiter -88923-03-23 11:01 J -30757621.27 -30757621.04 -30757620.82 0.0502 0.0133
 Uranus -88923-11-05 20:08 J -30757393.87 -30757393.66 -30757393.43 0.0131 0.0063
 Uranus -88922-11-09 21:49 J -30757024.78 -30757024.59 -30757024.37 0.0132 0.0079
 Uranus -88921-11-12 23:30 J -30756655.68 -30756655.52 -30756655.33 0.0132 0.0095
 Uranus -88920-11-17 00:56 J -30756286.58 -30756286.46 -30756286.30 0.0132 0.0110
 Uranus -88919-11-21 02:23 J -30755917.46 -30755917.40 -30755917.30 0.0132 0.0125
 Jupiter -88917-10-06 16:18 J -30755231.99 -30755231.82 -30755231.64 0.0530 0.0355
 Neptune -88913-03-11 04:32 J -30753980.38 -30753980.31 -30753980.17 0.0089 0.0081
 Saturn -88912-01-22 05:44 J -30753663.39 -30753663.26 -30753663.11 0.0273 0.0220
 Neptune -88912-03-13 15:20 J -30753613.05 -30753612.86 -30753612.64 0.0089 0.0053
 Saturn -88911-02-02 22:18 J -30753286.80 -30753286.57 -30753286.34 0.0273 0.0068

Neptune -88911-03-16 02:08 J -30753245.65 -30753245.41 -30753245.16 0.0089 0.0025
 Jupiter -88911-03-27 21:20 J -30753233.83 -30753233.61 -30753233.39 0.0500 0.0157
 Saturn -88910-02-14 16:18 J -30752910.04 -30752909.82 -30752909.59 0.0273 0.0090
 Neptune -88910-03-18 12:56 J -30752878.21 -30752877.96 -30752877.70 0.0089 0.0003
 Saturn -88909-02-26 13:11 J -30752533.04 -30752532.95 -30752532.83 0.0274 0.0245
 Neptune -88909-03-19 23:30 J -30752510.75 -30752510.52 -30752510.28 0.0089 0.0031
 Neptune -88908-03-22 10:32 J -30752143.25 -30752143.06 -30752142.87 0.0089 0.0058
 Neptune -88907-03-24 21:06 J -30751775.66 -30751775.62 -30751775.54 0.0089 0.0087
 Mars -88904-07-01 11:01 J -30750581.23 -30750581.04 -30750580.85 0.1758 0.0635
 Jupiter -88899-04-01 06:27 J -30748846.34 -30748846.23 -30748846.12 0.0497 0.0438
 Saturn -88897-08-04 10:47 J -30747990.27 -30747990.05 -30747989.81 0.0286 0.0113
 Pluto -88897-12-13 17:59 J -30747858.92 -30747858.75 -30747858.55 0.0078 0.0052
 Saturn -88896-08-19 00:56 J -30747610.69 -30747610.46 -30747610.21 0.0285 0.0082
 Saturn -88895-09-02 10:47 J -30747231.13 -30747231.05 -30747230.97 0.0285 0.0267
 Uranus -88890-03-16 14:08 J -30745574.99 -30745574.91 -30745574.80 0.0146 0.0135
 Uranus -88889-03-20 14:08 J -30745205.06 -30745204.91 -30745204.75 0.0146 0.0115
 Uranus -88888-03-25 14:37 J -30744835.07 -30744834.89 -30744834.68 0.0147 0.0094
 Uranus -88887-03-30 16:47 J -30744465.01 -30744464.80 -30744464.57 0.0147 0.0071
 Uranus -88886-04-04 19:54 J -30744094.90 -30744094.67 -30744094.42 0.0147 0.0048
 Uranus -88885-04-08 23:59 J -30743724.75 -30743724.50 -30743724.25 0.0147 0.0024
 Uranus -88884-04-14 05:01 J -30743354.55 -30743354.29 -30743354.04 0.0147 0.0002
 Uranus -88883-04-19 10:32 J -30742984.31 -30742984.06 -30742983.80 0.0147 0.0025
 Mars -88883-12-30 21:06 J -30742728.81 -30742728.62 -30742728.44 0.1783 0.0096
 Saturn -88882-01-29 03:06 J -30742699.58 -30742699.37 -30742699.16 0.0274 0.0132
 Uranus -88882-04-24 16:47 J -30742614.04 -30742613.80 -30742613.56 0.0147 0.0049
 Saturn -88881-02-09 20:51 J -30742322.87 -30742322.63 -30742322.40 0.0274 0.0023
 Uranus -88881-04-28 23:44 J -30742243.73 -30742243.51 -30742243.28 0.0147 0.0073
 Saturn -88880-02-20 16:47 J -30741945.97 -30741945.80 -30741945.61 0.0274 0.0179
 Uranus -88880-05-04 06:56 J -30741873.39 -30741873.21 -30741873.00 0.0147 0.0096
 Uranus -88879-05-09 14:37 J -30741503.02 -30741502.89 -30741502.72 0.0147 0.0119

Uranus	-88878-05-14 22:47 J	-30741132.60	-30741132.55	-30741132.46	0.0147	0.0141
Saturn	-88868-07-29 17:59 J	-30737403.93	-30737403.75	-30737403.55	0.0286	0.0189
Saturn	-88867-08-13 09:49 J	-30737024.34	-30737024.09	-30737023.84	0.0286	0.0005
Saturn	-88866-08-27 21:35 J	-30736644.77	-30736644.60	-30736644.41	0.0286	0.0196
Jupiter	-88858-09-26 11:15 J	-30733693.18	-30733693.03	-30733692.87	0.0524	0.0396
Saturn	-88853-01-24 12:13 J	-30732112.14	-30732111.99	-30732111.82	0.0273	0.0198
Saturn	-88852-02-04 04:32 J	-30731735.54	-30731735.31	-30731735.07	0.0273	0.0046
Jupiter	-88852-03-18 06:56 J	-30731693.30	-30731693.21	-30731693.11	0.0504	0.0458
Saturn	-88851-02-15 22:47 J	-30731358.77	-30731358.55	-30731358.33	0.0273	0.0110
Saturn	-88850-02-27 20:08 J	-30730981.72	-30730981.66	-30730981.60	0.0274	0.0264
Uranus	-88850-09-23 21:49 J	-30730773.68	-30730773.59	-30730773.47	0.0133	0.0120
Uranus	-88849-09-27 06:13 J	-30730404.38	-30730404.24	-30730404.06	0.0132	0.0104
Uranus	-88848-10-01 14:08 J	-30730035.10	-30730034.91	-30730034.71	0.0132	0.0087
Uranus	-88847-10-05 20:37 J	-30729665.84	-30729665.64	-30729665.41	0.0132	0.0070
Jupiter	-88846-10-01 14:23 J	-30729305.14	-30729304.90	-30729304.67	0.0527	0.0048
Uranus	-88846-10-10 02:51 J	-30729296.60	-30729296.38	-30729296.13	0.0132	0.0053
Uranus	-88845-10-13 08:37 J	-30728927.38	-30728927.14	-30728926.89	0.0132	0.0036
Uranus	-88844-10-17 13:25 J	-30728558.19	-30728557.94	-30728557.69	0.0131	0.0019
Uranus	-88843-10-21 17:30 J	-30728189.02	-30728188.77	-30728188.51	0.0131	0.0003
Uranus	-88842-10-25 21:06 J	-30727819.87	-30727819.62	-30727819.37	0.0131	0.0015
Uranus	-88841-10-28 23:59 J	-30727450.74	-30727450.50	-30727450.25	0.0131	0.0032
Jupiter	-88840-03-22 17:30 J	-30727305.98	-30727305.77	-30727305.55	0.0502	0.0168
Uranus	-88840-11-02 02:37 J	-30727081.63	-30727081.39	-30727081.16	0.0131	0.0048
Saturn	-88839-07-23 08:08 J	-30726818.21	-30726818.16	-30726818.07	0.0286	0.0275
Uranus	-88839-11-06 04:18 J	-30726712.52	-30726712.32	-30726712.08	0.0132	0.0065
Saturn	-88838-08-07 00:56 J	-30726438.70	-30726438.46	-30726438.22	0.0286	0.0085
Uranus	-88838-11-10 06:27 J	-30726343.42	-30726343.23	-30726343.02	0.0132	0.0080
Saturn	-88837-08-20 14:51 J	-30726059.11	-30726058.88	-30726058.64	0.0285	0.0107
Uranus	-88837-11-13 07:54 J	-30725974.32	-30725974.17	-30725973.97	0.0132	0.0096
Uranus	-88836-11-17 09:49 J	-30725605.22	-30725605.09	-30725604.95	0.0132	0.0110

Uranus -88835-11-21 11:01 J -30725236.09 -30725236.04 -30725235.94 0.0132 0.0126
 Jupiter -88834-10-06 19:54 J -30724916.86 -30724916.67 -30724916.48 0.0529 0.0312
 Neptune -88831-09-18 18:42 J -30723838.86 -30723838.72 -30723838.54 0.0088 0.0070
 Neptune -88830-09-21 07:39 J -30723471.40 -30723471.18 -30723470.93 0.0088 0.0042
 Neptune -88829-09-22 20:37 J -30723103.90 -30723103.64 -30723103.38 0.0088 0.0014
 Jupiter -88828-03-27 00:13 J -30722918.71 -30722918.49 -30722918.26 0.0500 0.0111
 Neptune -88828-09-25 08:51 J -30722736.38 -30722736.13 -30722735.86 0.0088 0.0015
 Neptune -88827-09-27 20:51 J -30722368.83 -30722368.63 -30722368.37 0.0088 0.0043
 Neptune -88826-09-30 09:20 J -30722001.25 -30722001.11 -30722000.93 0.0088 0.0070
 Saturn -88824-01-18 15:06 J -30721524.93 -30721524.87 -30721524.79 0.0274 0.0261
 Saturn -88823-01-30 07:39 J -30721148.40 -30721148.18 -30721147.96 0.0274 0.0111
 Saturn -88822-02-11 01:25 J -30720771.68 -30720771.44 -30720771.21 0.0274 0.0044
 Saturn -88821-02-22 21:35 J -30720394.76 -30720394.60 -30720394.44 0.0274 0.0198
 Jupiter -88816-03-31 08:51 J -30718531.27 -30718531.13 -30718530.98 0.0498 0.0391
 Saturn -88809-07-31 05:44 J -30715852.46 -30715852.26 -30715852.05 0.0286 0.0164
 Saturn -88808-08-14 21:35 J -30715472.85 -30715472.60 -30715472.34 0.0286 0.0030
 Saturn -88807-08-29 09:20 J -30715093.26 -30715093.11 -30715092.94 0.0286 0.0219
 Uranus -88806-03-17 00:13 J -30714893.58 -30714893.49 -30714893.36 0.0146 0.0130
 Uranus -88805-03-21 00:13 J -30714523.65 -30714523.49 -30714523.32 0.0146 0.0110
 Uranus -88804-03-26 00:56 J -30714153.64 -30714153.46 -30714153.24 0.0147 0.0089
 Mars -88803-01-02 08:51 J -30713871.30 -30713871.13 -30713870.97 0.1778 0.0796
 Uranus -88803-03-31 03:06 J -30713783.58 -30713783.37 -30713783.13 0.0147 0.0067
 Uranus -88802-04-05 05:59 J -30713413.48 -30713413.25 -30713413.00 0.0147 0.0044
 Uranus -88801-04-09 10:03 J -30713043.32 -30713043.08 -30713042.82 0.0147 0.0021
 Uranus -88800-04-14 14:51 J -30712673.13 -30712672.88 -30712672.62 0.0147 0.0004
 Uranus -88799-04-19 20:23 J -30712302.89 -30712302.65 -30712302.39 0.0147 0.0028
 Uranus -88798-04-25 02:23 J -30711932.62 -30711932.40 -30711932.14 0.0147 0.0052
 Uranus -88797-04-29 09:35 J -30711562.31 -30711562.10 -30711561.87 0.0147 0.0075
 Uranus -88796-05-04 16:47 J -30711191.98 -30711191.80 -30711191.59 0.0147 0.0098
 Uranus -88795-05-10 00:27 J -30710821.61 -30710821.48 -30710821.31 0.0147 0.0120

Saturn -88794-01-25 17:44 J -30710560.94 -30710560.76 -30710560.58 0.0273 0.0177
 Uranus -88794-05-15 08:51 J -30710451.19 -30710451.13 -30710451.06 0.0147 0.0141
 Saturn -88793-02-06 09:49 J -30710184.33 -30710184.09 -30710183.85 0.0273 0.0025
 Saturn -88792-02-17 03:35 J -30709807.55 -30709807.35 -30709807.13 0.0273 0.0130
 Saturn -88780-07-24 20:08 J -30705266.78 -30705266.66 -30705266.53 0.0286 0.0249
 Saturn -88779-08-08 12:42 J -30704887.21 -30704886.97 -30704886.72 0.0286 0.0060
 Mars -88778-06-25 17:59 J -30704565.90 -30704565.75 -30704565.60 0.1737 0.1128
 Saturn -88778-08-23 02:23 J -30704507.61 -30704507.40 -30704507.16 0.0285 0.0133
 Jupiter -88775-09-25 15:06 J -30703378.00 -30703377.87 -30703377.74 0.0524 0.0436
 Jupiter -88769-03-17 11:44 J -30701378.03 -30701378.01 -30701377.97 0.0504 0.0498
 Uranus -88767-09-19 22:32 J -30700461.61 -30700461.56 -30700461.51 0.0133 0.0131
 Uranus -88766-09-24 07:25 J -30700092.30 -30700092.19 -30700092.04 0.0133 0.0115
 Saturn -88765-01-20 18:42 J -30699973.82 -30699973.72 -30699973.60 0.0273 0.0242
 Uranus -88765-09-27 16:03 J -30699722.98 -30699722.83 -30699722.64 0.0132 0.0099
 Saturn -88764-01-31 11:01 J -30699597.27 -30699597.04 -30699596.82 0.0273 0.0091
 Uranus -88764-10-01 23:30 J -30699353.70 -30699353.52 -30699353.30 0.0132 0.0082
 Saturn -88763-02-12 04:18 J -30699220.55 -30699220.32 -30699220.08 0.0274 0.0063
 Jupiter -88763-09-30 18:27 J -30698989.96 -30698989.73 -30698989.49 0.0527 0.0091
 Uranus -88763-10-06 06:42 J -30698984.43 -30698984.22 -30698983.99 0.0132 0.0065
 Saturn -88762-02-24 00:27 J -30698843.62 -30698843.48 -30698843.33 0.0274 0.0216
 Uranus -88762-10-10 12:56 J -30698615.19 -30698614.96 -30698614.72 0.0132 0.0049
 Uranus -88761-10-13 18:27 J -30698245.97 -30698245.73 -30698245.48 0.0132 0.0032
 Uranus -88760-10-17 23:01 J -30697876.79 -30697876.54 -30697876.28 0.0131 0.0015
 Uranus -88759-10-22 03:20 J -30697507.62 -30697507.36 -30697507.11 0.0131 0.0002
 Uranus -88758-10-26 06:27 J -30697138.47 -30697138.23 -30697137.97 0.0131 0.0019
 Jupiter -88757-03-21 21:06 J -30696990.83 -30696990.62 -30696990.41 0.0503 0.0212
 Uranus -88757-10-29 09:35 J -30696769.34 -30696769.10 -30696768.85 0.0131 0.0034
 Mars -88757-12-25 11:01 J -30696712.13 -30696712.04 -30696711.95 0.1804 0.1561
 Uranus -88756-11-02 11:44 J -30696400.23 -30696400.01 -30696399.76 0.0131 0.0051
 Uranus -88755-11-06 14:08 J -30696031.12 -30696030.91 -30696030.68 0.0131 0.0066

Uranus -88754-11-10 15:49 J -30695662.02 -30695661.84 -30695661.62 0.0132 0.0082
 Uranus -88753-11-13 17:30 J -30695292.92 -30695292.77 -30695292.58 0.0132 0.0097
 Uranus -88752-11-17 19:39 J -30694923.81 -30694923.68 -30694923.55 0.0132 0.0111
 Jupiter -88751-10-05 16:47 J -30694602.01 -30694601.80 -30694601.60 0.0528 0.0248
 Uranus -88751-11-21 20:37 J -30694554.68 -30694554.64 -30694554.54 0.0132 0.0127
 Saturn -88750-08-02 14:51 J -30694301.09 -30694300.88 -30694300.65 0.0286 0.0142
 Saturn -88749-08-16 07:25 J -30693921.44 -30693921.19 -30693920.94 0.0286 0.0053
 Neptune -88748-03-13 03:06 J -30693712.53 -30693712.37 -30693712.18 0.0089 0.0065
 Saturn -88748-08-30 19:11 J -30693541.83 -30693541.70 -30693541.56 0.0286 0.0240
 Neptune -88747-03-15 13:25 J -30693345.15 -30693344.94 -30693344.69 0.0089 0.0038
 Neptune -88746-03-18 00:13 J -30692977.74 -30692977.49 -30692977.24 0.0089 0.0010
 Neptune -88745-03-19 10:47 J -30692610.29 -30692610.05 -30692609.79 0.0089 0.0018
 Jupiter -88745-03-26 07:11 J -30692603.43 -30692603.20 -30692602.97 0.0501 0.0077
 Neptune -88744-03-21 21:49 J -30692242.81 -30692242.59 -30692242.37 0.0089 0.0046
 Neptune -88743-03-24 08:23 J -30691875.28 -30691875.15 -30691875.00 0.0089 0.0073
 Saturn -88735-01-26 21:20 J -30689009.80 -30689009.61 -30689009.41 0.0273 0.0157
 Pluto -88735-06-12 04:47 J -30688873.55 -30688873.30 -30688873.02 0.0067 0.0010
 Saturn -88734-02-07 13:11 J -30688633.18 -30688632.95 -30688632.71 0.0273 0.0008
 Saturn -88733-02-19 07:11 J -30688256.40 -30688256.20 -30688256.00 0.0273 0.0148
 Jupiter -88733-03-30 17:44 J -30688215.92 -30688215.76 -30688215.60 0.0499 0.0364
 Mars -88724-01-04 19:11 J -30685013.77 -30685013.70 -30685013.63 0.1772 0.1636
 Uranus -88723-03-12 11:44 J -30684582.04 -30684582.01 -30684581.95 0.0146 0.0143
 Uranus -88722-03-17 10:18 J -30684212.19 -30684212.07 -30684211.93 0.0146 0.0124
 Uranus -88721-03-21 10:03 J -30683842.24 -30683842.08 -30683841.89 0.0146 0.0105
 Saturn -88721-07-26 04:47 J -30683715.44 -30683715.30 -30683715.13 0.0286 0.0226
 Uranus -88720-03-26 11:01 J -30683472.24 -30683472.04 -30683471.82 0.0147 0.0084
 Saturn -88720-08-09 21:49 J -30683335.84 -30683335.59 -30683335.34 0.0286 0.0036
 Uranus -88719-03-31 12:56 J -30683102.18 -30683101.96 -30683101.72 0.0147 0.0062
 Saturn -88719-08-24 11:15 J -30682956.23 -30682956.03 -30682955.81 0.0286 0.0155
 Uranus -88718-04-05 16:03 J -30682732.07 -30682731.83 -30682731.59 0.0147 0.0039

Uranus	-88717-04-09 19:54 J	-30682361.92	-30682361.67	-30682361.41	0.0147	0.0016
Uranus	-88716-04-15 00:42 J	-30681991.72	-30681991.47	-30681991.22	0.0147	0.0007
Uranus	-88715-04-20 06:13 J	-30681621.48	-30681621.24	-30681620.98	0.0147	0.0030
Uranus	-88714-04-25 12:13 J	-30681251.22	-30681250.99	-30681250.74	0.0147	0.0054
Uranus	-88713-04-29 19:11 J	-30680880.91	-30680880.70	-30680880.47	0.0147	0.0077
Uranus	-88712-05-05 02:23 J	-30680510.57	-30680510.40	-30680510.20	0.0147	0.0100
Uranus	-88711-05-10 10:18 J	-30680140.20	-30680140.07	-30680139.91	0.0147	0.0121
Uranus	-88710-05-15 18:27 J	-30679769.78	-30679769.73	-30679769.65	0.0147	0.0142
Saturn	-88706-01-21 21:35 J	-30678422.73	-30678422.60	-30678422.45	0.0273	0.0222
Saturn	-88705-02-02 13:11 J	-30678046.17	-30678045.95	-30678045.71	0.0273	0.0073
Saturn	-88704-02-13 06:13 J	-30677669.46	-30677669.24	-30677669.01	0.0273	0.0081
Saturn	-88703-02-25 01:54 J	-30677292.53	-30677292.42	-30677292.28	0.0274	0.0233
Mars	-88699-06-28 14:37 J	-30675708.09	-30675707.89	-30675707.69	0.1743	0.0110
Jupiter	-88692-09-24 15:06 J	-30673062.96	-30673062.87	-30673062.79	0.0523	0.0484
Saturn	-88691-08-03 21:06 J	-30672749.85	-30672749.62	-30672749.39	0.0286	0.0120
Saturn	-88690-08-18 13:39 J	-30672370.17	-30672369.93	-30672369.68	0.0286	0.0073
Saturn	-88689-09-01 01:54 J	-30671990.51	-30671990.42	-30671990.30	0.0286	0.0259
Uranus	-88683-09-20 07:54 J	-30669780.25	-30669780.17	-30669780.08	0.0133	0.0125
Uranus	-88682-09-24 17:01 J	-30669410.92	-30669410.79	-30669410.63	0.0133	0.0110
Uranus	-88681-09-28 01:39 J	-30669041.60	-30669041.43	-30669041.24	0.0132	0.0094
Jupiter	-88680-09-29 16:18 J	-30668675.04	-30668674.82	-30668674.59	0.0525	0.0146
Uranus	-88680-10-02 09:20 J	-30668672.31	-30668672.11	-30668671.90	0.0132	0.0077
Uranus	-88679-10-06 16:18 J	-30668303.04	-30668302.82	-30668302.58	0.0132	0.0061
Uranus	-88678-10-10 22:18 J	-30667933.80	-30667933.57	-30667933.32	0.0132	0.0045
Mars	-88678-12-28 23:44 J	-30667854.68	-30667854.51	-30667854.34	0.1798	0.0629
Uranus	-88677-10-14 03:49 J	-30667564.58	-30667564.34	-30667564.08	0.0132	0.0029
Saturn	-88676-01-27 23:30 J	-30667458.71	-30667458.52	-30667458.30	0.0272	0.0140
Uranus	-88676-10-18 08:23 J	-30667195.40	-30667195.15	-30667194.89	0.0131	0.0012
Saturn	-88675-02-08 15:20 J	-30667082.09	-30667081.86	-30667081.62	0.0272	0.0013
Uranus	-88675-10-22 12:27 J	-30666826.23	-30666825.98	-30666825.72	0.0131	0.0005

Saturn -88674-02-20 09:06 J -30666705.30 -30666705.12 -30666704.92 0.0273 0.0165
 Jupiter -88674-03-22 06:13 J -30666675.45 -30666675.24 -30666675.04 0.0504 0.0238
 Uranus -88674-10-26 15:49 J -30666457.09 -30666456.84 -30666456.59 0.0131 0.0021
 Uranus -88673-10-29 18:42 J -30666087.96 -30666087.72 -30666087.47 0.0131 0.0036
 Uranus -88672-11-02 20:51 J -30665718.85 -30665718.63 -30665718.38 0.0131 0.0052
 Uranus -88671-11-06 23:15 J -30665349.73 -30665349.53 -30665349.30 0.0131 0.0068
 Uranus -88670-11-11 01:11 J -30664980.64 -30664980.45 -30664980.25 0.0132 0.0083
 Uranus -88669-11-14 02:51 J -30664611.53 -30664611.38 -30664611.20 0.0132 0.0098
 Jupiter -88668-10-04 18:56 J -30664286.93 -30664286.71 -30664286.49 0.0528 0.0201
 Uranus -88668-11-18 04:18 J -30664242.43 -30664242.32 -30664242.17 0.0132 0.0112
 Neptune -88667-09-18 03:35 J -30663938.44 -30663938.35 -30663938.25 0.0088 0.0082
 Uranus -88667-11-22 05:59 J -30663873.30 -30663873.25 -30663873.16 0.0132 0.0126
 Neptune -88666-09-20 16:03 J -30663571.01 -30663570.83 -30663570.60 0.0088 0.0055
 Neptune -88665-09-22 05:01 J -30663203.52 -30663203.29 -30663203.02 0.0088 0.0027
 Neptune -88664-09-24 17:59 J -30662836.01 -30662835.75 -30662835.49 0.0088 0.0002
 Neptune -88663-09-27 06:13 J -30662468.47 -30662468.24 -30662467.98 0.0088 0.0030
 Jupiter -88662-03-26 17:15 J -30662288.01 -30662287.78 -30662287.55 0.0501 0.0052
 Saturn -88662-07-28 11:15 J -30662164.19 -30662164.03 -30662163.84 0.0286 0.0205
 Neptune -88662-09-29 18:27 J -30662100.91 -30662100.73 -30662100.51 0.0088 0.0057
 Saturn -88661-08-11 04:32 J -30661784.56 -30661784.31 -30661784.06 0.0286 0.0014
 Neptune -88661-10-01 06:42 J -30661733.28 -30661733.22 -30661733.13 0.0088 0.0085
 Saturn -88660-08-25 18:13 J -30661404.93 -30661404.74 -30661404.54 0.0286 0.0175
 Jupiter -88650-03-31 01:25 J -30657900.61 -30657900.44 -30657900.26 0.0499 0.0331
 Pluto -88650-12-15 18:13 J -30657640.78 -30657640.74 -30657640.64 0.0078 0.0075
 Pluto -88649-12-16 17:44 J -30657273.86 -30657273.76 -30657273.62 0.0077 0.0068
 Saturn -88647-01-22 23:01 J -30656871.69 -30656871.54 -30656871.38 0.0273 0.0204
 Saturn -88646-02-03 14:23 J -30656495.14 -30656494.90 -30656494.67 0.0273 0.0055
 Saturn -88645-02-15 06:42 J -30656118.44 -30656118.22 -30656117.99 0.0273 0.0098
 Saturn -88644-02-26 02:23 J -30655741.49 -30655741.40 -30655741.29 0.0274 0.0248
 Uranus -88639-03-12 20:23 J -30653900.71 -30653900.65 -30653900.55 0.0146 0.0138

Uranus	-88638-03-17 19:11 J	-30653530.83	-30653530.70	-30653530.54	0.0146	0.0119
Uranus	-88637-03-21 18:56 J	-30653160.88	-30653160.71	-30653160.51	0.0146	0.0100
Uranus	-88636-03-26 19:54 J	-30652790.87	-30652790.67	-30652790.45	0.0147	0.0079
Uranus	-88635-03-31 22:03 J	-30652420.81	-30652420.58	-30652420.34	0.0147	0.0057
Uranus	-88634-04-06 00:56 J	-30652050.70	-30652050.46	-30652050.21	0.0147	0.0035
Uranus	-88633-04-10 05:01 J	-30651680.54	-30651680.29	-30651680.04	0.0147	0.0013
Uranus	-88632-04-15 09:49 J	-30651310.34	-30651310.09	-30651309.83	0.0147	0.0010
Saturn	-88632-08-05 00:27 J	-30651198.71	-30651198.48	-30651198.24	0.0287	0.0100
Uranus	-88631-04-20 15:20 J	-30650940.10	-30650939.86	-30650939.61	0.0147	0.0033
Saturn	-88631-08-19 17:15 J	-30650819.01	-30650818.78	-30650818.54	0.0286	0.0092
Uranus	-88630-04-25 21:20 J	-30650569.83	-30650569.61	-30650569.36	0.0147	0.0057
Saturn	-88630-09-03 05:44 J	-30650439.31	-30650439.26	-30650439.18	0.0286	0.0276
Uranus	-88629-04-30 04:47 J	-30650199.51	-30650199.30	-30650199.08	0.0147	0.0079
Uranus	-88628-05-05 11:44 J	-30649829.17	-30649829.01	-30649828.80	0.0147	0.0102
Uranus	-88627-05-10 20:08 J	-30649458.79	-30649458.66	-30649458.51	0.0147	0.0122
Uranus	-88626-05-16 04:32 J	-30649088.36	-30649088.31	-30649088.24	0.0147	0.0143
Mars	-88620-07-01 12:42 J	-30646850.14	-30646849.97	-30646849.80	0.1749	0.0961
Saturn	-88618-01-18 10:32 J	-30646284.10	-30646284.06	-30646284.00	0.0273	0.0267
Saturn	-88617-01-30 01:11 J	-30645907.65	-30645907.45	-30645907.23	0.0272	0.0122
Saturn	-88616-02-09 16:47 J	-30645531.04	-30645530.80	-30645530.56	0.0272	0.0029
Saturn	-88615-02-21 10:03 J	-30645154.24	-30645154.08	-30645153.89	0.0273	0.0181
Saturn	-88603-07-29 15:06 J	-30640613.06	-30640612.87	-30640612.67	0.0286	0.0184
Saturn	-88602-08-13 08:23 J	-30640233.40	-30640233.15	-30640232.89	0.0286	0.0007
Saturn	-88601-08-26 22:32 J	-30639853.74	-30639853.56	-30639853.37	0.0286	0.0193
Uranus	-88599-09-20 17:44 J	-30639098.85	-30639098.76	-30639098.63	0.0133	0.0120
Mars	-88599-12-31 12:56 J	-30638997.14	-30638996.96	-30638996.78	0.1792	0.0300
Uranus	-88598-09-25 03:06 J	-30638729.51	-30638729.37	-30638729.19	0.0133	0.0105
Uranus	-88597-09-28 11:59 J	-30638360.18	-30638360.00	-30638359.80	0.0132	0.0089
Jupiter	-88597-09-28 22:18 J	-30638359.79	-30638359.57	-30638359.34	0.0525	0.0181
Uranus	-88596-10-02 19:39 J	-30637990.89	-30637990.68	-30637990.46	0.0132	0.0072

Uranus	-88595-10-07 02:51 J	-30637621.61	-30637621.38	-30637621.15	0.0132	0.0056
Uranus	-88594-10-11 08:37 J	-30637252.38	-30637252.14	-30637251.89	0.0132	0.0040
Uranus	-88593-10-14 13:54 J	-30636883.17	-30636882.92	-30636882.66	0.0132	0.0024
Uranus	-88592-10-18 18:27 J	-30636513.98	-30636513.73	-30636513.47	0.0131	0.0008
Jupiter	-88591-03-21 15:06 J	-30636360.06	-30636359.87	-30636359.67	0.0504	0.0266
Uranus	-88591-10-22 22:32 J	-30636144.81	-30636144.56	-30636144.30	0.0131	0.0008
Uranus	-88590-10-27 01:54 J	-30635775.67	-30635775.42	-30635775.17	0.0131	0.0024
Uranus	-88589-10-30 04:32 J	-30635406.54	-30635406.31	-30635406.06	0.0131	0.0040
Saturn	-88588-01-23 23:59 J	-30635320.67	-30635320.50	-30635320.32	0.0273	0.0187
Uranus	-88588-11-03 07:11 J	-30635037.42	-30635037.20	-30635036.97	0.0131	0.0055
Saturn	-88587-02-04 14:51 J	-30634944.12	-30634943.88	-30634943.65	0.0273	0.0038
Uranus	-88587-11-07 09:35 J	-30634668.31	-30634668.10	-30634667.88	0.0131	0.0070
Saturn	-88586-02-16 06:56 J	-30634567.42	-30634567.21	-30634566.99	0.0273	0.0113
Uranus	-88586-11-11 11:15 J	-30634299.21	-30634299.03	-30634298.83	0.0131	0.0085
Saturn	-88585-02-28 02:23 J	-30634190.46	-30634190.40	-30634190.32	0.0273	0.0262
Jupiter	-88585-10-04 02:51 J	-30633971.60	-30633971.38	-30633971.16	0.0528	0.0170
Uranus	-88585-11-14 13:11 J	-30633930.11	-30633929.95	-30633929.78	0.0132	0.0099
Neptune	-88584-03-12 14:08 J	-30633812.00	-30633811.91	-30633811.76	0.0089	0.0078
Uranus	-88584-11-18 14:51 J	-30633561.00	-30633560.88	-30633560.75	0.0132	0.0113
Neptune	-88583-03-15 00:42 J	-30633444.67	-30633444.47	-30633444.26	0.0089	0.0050
Uranus	-88583-11-22 16:03 J	-30633191.87	-30633191.83	-30633191.73	0.0132	0.0127
Neptune	-88582-03-17 11:01 J	-30633077.28	-30633077.04	-30633076.79	0.0089	0.0023
Neptune	-88581-03-18 21:35 J	-30632709.85	-30632709.60	-30632709.35	0.0089	0.0005
Neptune	-88580-03-21 08:08 J	-30632342.39	-30632342.16	-30632341.92	0.0089	0.0032
Neptune	-88579-03-23 18:42 J	-30631974.89	-30631974.72	-30631974.51	0.0089	0.0060
Jupiter	-88579-03-26 01:25 J	-30631972.68	-30631972.44	-30631972.21	0.0502	0.0023
Neptune	-88578-03-26 05:15 J	-30631607.29	-30631607.28	-30631607.21	0.0089	0.0088
Saturn	-88574-07-23 07:39 J	-30630027.26	-30630027.18	-30630027.09	0.0286	0.0269
Mars	-88573-06-22 05:44 J	-30629692.29	-30629692.26	-30629692.22	0.1723	0.1693
Saturn	-88573-08-06 02:37 J	-30629647.63	-30629647.39	-30629647.15	0.0287	0.0082

Jupiter -88573-10-09 03:20 J -30629583.41 -30629583.36 -30629583.30 0.0529 0.0513
 Saturn -88572-08-20 19:25 J -30629267.92 -30629267.69 -30629267.45 0.0287 0.0109
 Jupiter -88567-03-30 09:49 J -30627585.27 -30627585.09 -30627584.91 0.0500 0.0304
 Saturn -88559-01-19 11:30 J -30624733.11 -30624733.02 -30624732.92 0.0272 0.0249
 Saturn -88558-01-31 01:54 J -30624356.63 -30624356.42 -30624356.19 0.0272 0.0104
 Saturn -88557-02-11 17:15 J -30623980.01 -30623979.78 -30623979.54 0.0272 0.0046
 Saturn -88556-02-22 10:32 J -30623603.22 -30623603.06 -30623602.88 0.0273 0.0195
 Uranus -88555-03-13 05:44 J -30623219.36 -30623219.26 -30623219.16 0.0146 0.0132
 Uranus -88554-03-18 03:49 J -30622849.48 -30622849.34 -30622849.17 0.0146 0.0114
 Uranus -88553-03-22 03:35 J -30622479.53 -30622479.35 -30622479.14 0.0146 0.0095
 Uranus -88552-03-27 04:47 J -30622109.52 -30622109.30 -30622109.08 0.0147 0.0074
 Uranus -88551-04-01 06:13 J -30621739.46 -30621739.24 -30621738.99 0.0147 0.0053
 Uranus -88550-04-06 09:20 J -30621369.35 -30621369.11 -30621368.86 0.0147 0.0031
 Uranus -88549-04-10 13:25 J -30620999.19 -30620998.94 -30620998.69 0.0147 0.0009
 Uranus -88548-04-15 17:59 J -30620629.00 -30620628.75 -30620628.49 0.0147 0.0014
 Uranus -88547-04-20 23:30 J -30620258.75 -30620258.52 -30620258.26 0.0147 0.0037
 Uranus -88546-04-26 05:44 J -30619888.48 -30619888.26 -30619888.01 0.0147 0.0060
 Uranus -88545-04-30 12:56 J -30619518.16 -30619517.96 -30619517.73 0.0147 0.0082
 Uranus -88544-05-05 20:37 J -30619147.81 -30619147.64 -30619147.44 0.0147 0.0103
 Saturn -88544-07-30 17:44 J -30619061.96 -30619061.76 -30619061.55 0.0287 0.0164
 Uranus -88543-05-11 04:47 J -30618777.42 -30618777.30 -30618777.15 0.0147 0.0124
 Saturn -88543-08-14 11:15 J -30618682.28 -30618682.03 -30618681.78 0.0286 0.0025
 Uranus -88542-05-16 13:11 J -30618406.98 -30618406.95 -30618406.88 0.0147 0.0144
 Saturn -88542-08-29 01:39 J -30618302.60 -30618302.43 -30618302.26 0.0286 0.0211
 Saturn -88529-01-26 00:42 J -30613769.65 -30613769.47 -30613769.28 0.0272 0.0170
 Saturn -88528-02-05 15:20 J -30613393.10 -30613392.86 -30613392.62 0.0272 0.0022
 Saturn -88527-02-17 07:11 J -30613016.40 -30613016.20 -30613015.98 0.0273 0.0129
 Mars -88519-01-03 02:08 J -30610139.54 -30610139.41 -30610139.27 0.1785 0.1211
 Uranus -88516-09-16 17:30 J -30608786.80 -30608786.77 -30608786.70 0.0133 0.0130
 Saturn -88515-07-24 07:39 J -30608476.29 -30608476.18 -30608476.05 0.0286 0.0251

Uranus -88515-09-21 04:03 J -30608417.44 -30608417.33 -30608417.18 0.0133 0.0115
 Saturn -88514-08-08 02:51 J -30608096.62 -30608096.38 -30608096.13 0.0287 0.0064
 Uranus -88514-09-25 13:39 J -30608048.08 -30608047.93 -30608047.75 0.0133 0.0100
 Jupiter -88514-09-29 03:35 J -30608044.56 -30608044.35 -30608044.13 0.0524 0.0212
 Saturn -88513-08-21 19:54 J -30607716.89 -30607716.67 -30607716.44 0.0287 0.0126
 Uranus -88513-09-28 22:32 J -30607678.76 -30607678.56 -30607678.36 0.0132 0.0084
 Uranus -88512-10-03 05:59 J -30607309.46 -30607309.25 -30607309.02 0.0132 0.0068
 Uranus -88511-10-07 12:56 J -30606940.19 -30606939.96 -30606939.72 0.0132 0.0052
 Uranus -88510-10-11 18:42 J -30606570.96 -30606570.72 -30606570.47 0.0132 0.0036
 Uranus -88509-10-14 23:59 J -30606201.75 -30606201.50 -30606201.24 0.0131 0.0021
 Jupiter -88508-03-20 22:18 J -30606044.75 -30606044.57 -30606044.38 0.0505 0.0295
 Uranus -88508-10-19 04:32 J -30605832.57 -30605832.31 -30605832.06 0.0131 0.0005
 Uranus -88507-10-23 08:23 J -30605463.40 -30605463.15 -30605462.89 0.0131 0.0011
 Uranus -88506-10-27 11:44 J -30605094.25 -30605094.01 -30605093.76 0.0131 0.0026
 Uranus -88505-10-30 14:37 J -30604725.12 -30604724.89 -30604724.64 0.0131 0.0042
 Uranus -88504-11-03 17:15 J -30604356.01 -30604355.78 -30604355.55 0.0131 0.0057
 Uranus -88503-11-07 19:25 J -30603986.89 -30603986.69 -30603986.47 0.0131 0.0072
 Neptune -88502-09-20 00:13 J -30603670.65 -30603670.49 -30603670.31 0.0088 0.0067
 Jupiter -88502-10-04 05:15 J -30603656.51 -30603656.28 -30603656.05 0.0526 0.0128
 Uranus -88502-11-11 21:06 J -30603617.79 -30603617.62 -30603617.41 0.0131 0.0086
 Neptune -88501-09-21 12:56 J -30603303.17 -30603302.96 -30603302.70 0.0088 0.0040
 Uranus -88501-11-14 23:01 J -30603248.68 -30603248.54 -30603248.36 0.0132 0.0101
 Saturn -88500-01-20 11:59 J -30603182.11 -30603182.00 -30603181.86 0.0272 0.0232
 Neptune -88500-09-24 02:08 J -30602935.66 -30602935.41 -30602935.14 0.0088 0.0012
 Uranus -88500-11-19 00:42 J -30602879.57 -30602879.47 -30602879.33 0.0132 0.0114
 Saturn -88499-02-01 02:51 J -30602805.61 -30602805.38 -30602805.16 0.0272 0.0087
 Neptune -88499-09-26 15:06 J -30602568.12 -30602567.87 -30602567.61 0.0088 0.0017
 Uranus -88499-11-23 02:37 J -30602510.45 -30602510.39 -30602510.32 0.0132 0.0127
 Saturn -88498-02-12 17:44 J -30602428.99 -30602428.76 -30602428.52 0.0272 0.0062
 Neptune -88498-09-29 03:06 J -30602200.57 -30602200.37 -30602200.12 0.0088 0.0045

Saturn -88497-02-24 11:15 J -30602052.18 -30602052.03 -30602051.88 0.0272 0.0210
 Neptune -88497-09-30 15:20 J -30601832.99 -30601832.86 -30601832.69 0.0088 0.0072
 Jupiter -88496-03-25 09:49 J -30601657.32 -30601657.09 -30601656.86 0.0503 0.0007
 Mars -88494-06-26 01:11 J -30600834.63 -30600834.45 -30600834.26 0.1729 0.0723
 Jupiter -88490-10-09 06:27 J -30599268.33 -30599268.23 -30599268.12 0.0529 0.0469
 Pluto -88488-06-13 10:47 J -30598655.31 -30598655.05 -30598654.78 0.0067 0.0010
 Saturn -88485-07-31 20:08 J -30597510.87 -30597510.66 -30597510.43 0.0287 0.0145
 Jupiter -88484-03-29 21:20 J -30597269.80 -30597269.61 -30597269.42 0.0501 0.0283
 Saturn -88484-08-15 13:39 J -30597131.18 -30597130.93 -30597130.68 0.0287 0.0044
 Saturn -88483-08-30 04:03 J -30596751.47 -30596751.33 -30596751.17 0.0286 0.0228
 Mars -88473-12-26 00:13 J -30592980.63 -30592980.49 -30592980.36 0.1812 0.1221
 Uranus -88472-03-08 16:47 J -30592907.81 -30592907.80 -30592907.75 0.0145 0.0144
 Uranus -88471-03-13 14:08 J -30592538.02 -30592537.91 -30592537.78 0.0146 0.0127
 Saturn -88470-01-27 01:39 J -30592218.62 -30592218.43 -30592218.23 0.0272 0.0152
 Uranus -88470-03-18 12:42 J -30592168.12 -30592167.97 -30592167.79 0.0146 0.0109
 Saturn -88469-02-07 16:03 J -30591842.07 -30591841.83 -30591841.59 0.0272 0.0005
 Uranus -88469-03-22 12:27 J -30591798.17 -30591797.98 -30591797.77 0.0146 0.0090
 Saturn -88468-02-18 07:54 J -30591465.37 -30591465.17 -30591464.96 0.0273 0.0144
 Uranus -88468-03-27 13:11 J -30591428.16 -30591427.95 -30591427.72 0.0147 0.0070
 Uranus -88467-04-01 15:06 J -30591058.10 -30591057.87 -30591057.63 0.0147 0.0049
 Uranus -88466-04-06 17:59 J -30590687.99 -30590687.75 -30590687.49 0.0147 0.0028
 Uranus -88465-04-10 22:03 J -30590317.83 -30590317.58 -30590317.33 0.0147 0.0006
 Uranus -88464-04-16 02:51 J -30589947.63 -30589947.38 -30589947.13 0.0147 0.0017
 Uranus -88463-04-21 08:08 J -30589577.39 -30589577.16 -30589576.90 0.0148 0.0040
 Uranus -88462-04-26 14:37 J -30589207.11 -30589206.89 -30589206.64 0.0147 0.0062
 Uranus -88461-04-30 21:49 J -30588836.78 -30588836.59 -30588836.36 0.0147 0.0084
 Uranus -88460-05-06 05:30 J -30588466.43 -30588466.27 -30588466.07 0.0147 0.0105
 Uranus -88459-05-11 13:54 J -30588096.04 -30588095.92 -30588095.77 0.0147 0.0125
 Uranus -88458-05-16 22:47 J -30587725.59 -30587725.55 -30587725.50 0.0147 0.0144
 Saturn -88456-07-25 08:37 J -30586925.28 -30586925.14 -30586924.99 0.0286 0.0232

Saturn -88455-08-09 03:35 J -30586545.60 -30586545.35 -30586545.10 0.0287 0.0046
 Saturn -88454-08-23 20:37 J -30586165.85 -30586165.64 -30586165.42 0.0287 0.0143
 Saturn -88441-01-22 12:56 J -30581631.09 -30581630.96 -30581630.80 0.0273 0.0214
 Saturn -88440-02-02 03:35 J -30581254.58 -30581254.35 -30581254.12 0.0272 0.0069
 Saturn -88439-02-13 18:42 J -30580877.94 -30580877.72 -30580877.49 0.0272 0.0079
 Saturn -88438-02-25 12:27 J -30580501.11 -30580500.98 -30580500.85 0.0272 0.0225
 Uranus -88432-09-17 04:47 J -30578105.38 -30578105.30 -30578105.20 0.0133 0.0125
 Uranus -88431-09-21 15:06 J -30577735.99 -30577735.87 -30577735.70 0.0133 0.0110
 Jupiter -88431-09-28 06:13 J -30577729.44 -30577729.24 -30577729.03 0.0523 0.0256
 Uranus -88430-09-26 00:27 J -30577366.64 -30577366.48 -30577366.28 0.0133 0.0095
 Uranus -88429-09-29 09:06 J -30576997.30 -30576997.12 -30576996.89 0.0132 0.0080
 Uranus -88428-10-03 17:01 J -30576628.01 -30576627.79 -30576627.56 0.0132 0.0063
 Uranus -88427-10-07 23:44 J -30576258.74 -30576258.51 -30576258.26 0.0132 0.0048
 Saturn -88426-08-02 22:47 J -30575959.77 -30575959.55 -30575959.32 0.0287 0.0125
 Uranus -88426-10-12 05:30 J -30575889.50 -30575889.27 -30575889.01 0.0132 0.0033
 Jupiter -88425-03-20 09:35 J -30575729.28 -30575729.10 -30575728.92 0.0505 0.0317
 Saturn -88425-08-16 16:03 J -30575580.07 -30575579.83 -30575579.58 0.0287 0.0063
 Uranus -88425-10-15 11:01 J -30575520.29 -30575520.04 -30575519.79 0.0131 0.0016
 Saturn -88424-08-31 06:13 J -30575200.36 -30575200.24 -30575200.10 0.0286 0.0244
 Uranus -88424-10-19 15:35 J -30575151.11 -30575150.85 -30575150.60 0.0131 0.0002
 Uranus -88423-10-23 19:39 J -30574781.93 -30574781.68 -30574781.43 0.0131 0.0014
 Uranus -88422-10-27 22:47 J -30574412.79 -30574412.55 -30574412.30 0.0131 0.0029
 Uranus -88421-10-31 01:54 J -30574043.65 -30574043.42 -30574043.18 0.0131 0.0045
 Uranus -88420-11-04 04:32 J -30573674.53 -30573674.31 -30573674.08 0.0131 0.0059
 Neptune -88419-03-14 11:01 J -30573544.20 -30573544.04 -30573543.85 0.0089 0.0063
 Jupiter -88419-10-03 10:03 J -30573341.32 -30573341.08 -30573340.85 0.0526 0.0089
 Uranus -88419-11-08 06:42 J -30573305.41 -30573305.22 -30573305.00 0.0131 0.0074
 Neptune -88418-03-16 21:06 J -30573176.84 -30573176.62 -30573176.37 0.0089 0.0036
 Uranus -88418-11-12 08:37 J -30572936.31 -30572936.14 -30572935.93 0.0131 0.0089
 Neptune -88417-03-18 07:25 J -30572809.43 -30572809.19 -30572808.93 0.0089 0.0009

Uranus -88417-11-15 10:47 J -30572567.20 -30572567.05 -30572566.88 0.0131 0.0102
 Neptune -88416-03-20 17:59 J -30572441.99 -30572441.75 -30572441.49 0.0089 0.0019
 Uranus -88416-11-19 12:42 J -30572198.09 -30572197.97 -30572197.85 0.0132 0.0115
 Neptune -88415-03-23 04:32 J -30572074.53 -30572074.31 -30572074.09 0.0089 0.0046
 Mars -88415-06-28 20:51 J -30571976.83 -30571976.63 -30571976.43 0.1735 0.0274
 Uranus -88415-11-23 13:54 J -30571828.96 -30571828.92 -30571828.84 0.0132 0.0128
 Neptune -88414-03-25 14:51 J -30571706.99 -30571706.88 -30571706.71 0.0089 0.0074
 Jupiter -88413-03-24 20:23 J -30571341.88 -30571341.65 -30571341.42 0.0503 0.0028
 Saturn -88411-01-28 03:20 J -30570667.56 -30570667.36 -30570667.15 0.0272 0.0134
 Saturn -88410-02-08 17:30 J -30570291.00 -30570290.77 -30570290.53 0.0272 0.0013
 Saturn -88409-02-20 09:20 J -30569914.30 -30569914.11 -30569913.91 0.0272 0.0160
 Jupiter -88407-10-08 14:51 J -30568953.00 -30568952.88 -30568952.75 0.0528 0.0439
 Pluto -88403-12-17 01:39 J -30567422.50 -30567422.43 -30567422.33 0.0078 0.0073
 Pluto -88402-12-19 01:11 J -30567055.54 -30567055.45 -30567055.33 0.0077 0.0070
 Jupiter -88401-03-29 06:13 J -30566954.43 -30566954.24 -30566954.03 0.0501 0.0255
 Saturn -88397-07-26 10:32 J -30565374.23 -30565374.06 -30565373.89 0.0286 0.0212
 Saturn -88396-08-10 05:15 J -30564994.53 -30564994.28 -30564994.03 0.0287 0.0026
 Saturn -88395-08-24 22:18 J -30564614.77 -30564614.57 -30564614.36 0.0287 0.0160
 Mars -88394-12-29 14:37 J -30564123.08 -30564122.89 -30564122.71 0.1806 0.0255
 Uranus -88388-03-09 03:35 J -30562226.41 -30562226.35 -30562226.26 0.0145 0.0138
 Uranus -88387-03-14 00:42 J -30561856.59 -30561856.47 -30561856.32 0.0146 0.0122
 Uranus -88386-03-18 23:15 J -30561486.70 -30561486.53 -30561486.35 0.0146 0.0103
 Uranus -88385-03-22 22:47 J -30561116.75 -30561116.55 -30561116.34 0.0146 0.0085
 Uranus -88384-03-27 23:30 J -30560746.74 -30560746.52 -30560746.29 0.0147 0.0065
 Uranus -88383-04-02 01:11 J -30560376.68 -30560376.45 -30560376.20 0.0147 0.0044
 Saturn -88382-01-23 14:37 J -30560080.04 -30560079.89 -30560079.71 0.0273 0.0195
 Uranus -88382-04-07 04:03 J -30560006.57 -30560006.33 -30560006.07 0.0147 0.0024
 Saturn -88381-02-04 05:01 J -30559703.52 -30559703.29 -30559703.05 0.0272 0.0051
 Uranus -88381-04-11 08:08 J -30559636.42 -30559636.16 -30559635.91 0.0147 0.0002
 Saturn -88380-02-14 20:37 J -30559326.86 -30559326.64 -30559326.42 0.0272 0.0096

Uranus	-88380-04-16 12:42 J	-30559266.22	-30559265.97	-30559265.72	0.0147	0.0020
Saturn	-88379-02-26 14:08 J	-30558950.01	-30558949.91	-30558949.79	0.0272	0.0241
Uranus	-88379-04-21 18:13 J	-30558895.97	-30558895.74	-30558895.48	0.0148	0.0043
Uranus	-88378-04-27 00:42 J	-30558525.68	-30558525.47	-30558525.22	0.0147	0.0065
Uranus	-88377-05-01 08:08 J	-30558155.36	-30558155.16	-30558154.94	0.0147	0.0085
Uranus	-88376-05-06 15:49 J	-30557785.00	-30557784.84	-30557784.65	0.0147	0.0106
Uranus	-88375-05-12 00:13 J	-30557414.61	-30557414.49	-30557414.35	0.0147	0.0126
Uranus	-88374-05-17 08:37 J	-30557044.16	-30557044.14	-30557044.08	0.0147	0.0145
Saturn	-88368-07-20 08:37 J	-30554788.15	-30554788.14	-30554788.10	0.0286	0.0285
Saturn	-88367-08-04 03:06 J	-30554408.60	-30554408.37	-30554408.13	0.0287	0.0104
Saturn	-88366-08-18 20:23 J	-30554028.89	-30554028.65	-30554028.41	0.0287	0.0082
Saturn	-88365-09-01 10:18 J	-30553649.16	-30553649.07	-30553648.96	0.0286	0.0262
Saturn	-88353-01-18 15:20 J	-30549492.92	-30549492.86	-30549492.77	0.0273	0.0258
Saturn	-88352-01-29 05:44 J	-30549116.46	-30549116.26	-30549116.03	0.0272	0.0116
Saturn	-88351-02-09 20:08 J	-30548739.89	-30548739.66	-30548739.42	0.0272	0.0031
Saturn	-88350-02-21 12:13 J	-30548363.17	-30548362.99	-30548362.80	0.0272	0.0176
Uranus	-88348-09-17 15:49 J	-30547423.94	-30547423.84	-30547423.71	0.0133	0.0120
Jupiter	-88348-09-27 13:25 J	-30547414.14	-30547413.94	-30547413.74	0.0523	0.0284
Uranus	-88347-09-22 02:37 J	-30547054.55	-30547054.39	-30547054.23	0.0133	0.0104
Uranus	-88346-09-26 11:44 J	-30546685.18	-30546685.01	-30546684.80	0.0133	0.0090
Uranus	-88345-09-29 20:08 J	-30546315.85	-30546315.66	-30546315.43	0.0132	0.0075
Uranus	-88344-10-04 03:49 J	-30545946.56	-30545946.34	-30545946.10	0.0132	0.0059
Uranus	-88343-10-08 10:47 J	-30545577.29	-30545577.05	-30545576.80	0.0132	0.0044
Jupiter	-88342-03-20 17:59 J	-30545413.91	-30545413.75	-30545413.58	0.0506	0.0345
Uranus	-88342-10-12 16:18 J	-30545208.06	-30545207.82	-30545207.56	0.0132	0.0029
Uranus	-88341-10-15 21:49 J	-30544838.84	-30544838.59	-30544838.33	0.0132	0.0013
Uranus	-88340-10-20 02:23 J	-30544469.65	-30544469.40	-30544469.14	0.0131	0.0003
Uranus	-88339-10-24 06:27 J	-30544100.48	-30544100.23	-30544099.98	0.0131	0.0017
Saturn	-88338-07-28 14:37 J	-30543823.07	-30543822.89	-30543822.69	0.0286	0.0191
Neptune	-88338-09-19 05:59 J	-30543770.33	-30543770.25	-30543770.11	0.0088	0.0081

Uranus -88338-10-28 09:49 J -30543731.33 -30543731.09 -30543730.84 0.0131 0.0032
 Saturn -88337-08-11 09:06 J -30543443.37 -30543443.12 -30543442.86 0.0287 0.0007
 Neptune -88337-09-20 19:11 J -30543402.89 -30543402.70 -30543402.47 0.0088 0.0053
 Uranus -88337-10-31 12:42 J -30543362.19 -30543361.97 -30543361.72 0.0131 0.0048
 Mars -88336-07-01 17:59 J -30543118.88 -30543118.75 -30543118.62 0.1741 0.1309
 Saturn -88336-08-26 01:54 J -30543063.62 -30543063.42 -30543063.22 0.0287 0.0178
 Neptune -88336-09-23 08:51 J -30543035.38 -30543035.13 -30543034.87 0.0088 0.0025
 Jupiter -88336-10-02 16:32 J -30543026.05 -30543025.81 -30543025.58 0.0525 0.0060
 Uranus -88336-11-04 15:35 J -30542993.07 -30542992.85 -30542992.62 0.0131 0.0062
 Neptune -88335-09-25 21:49 J -30542667.85 -30542667.59 -30542667.33 0.0088 0.0003
 Uranus -88335-11-08 18:13 J -30542623.94 -30542623.74 -30542623.53 0.0131 0.0076
 Neptune -88334-09-28 10:18 J -30542300.30 -30542300.07 -30542299.81 0.0088 0.0031
 Uranus -88334-11-12 19:54 J -30542254.84 -30542254.67 -30542254.47 0.0131 0.0089
 Neptune -88333-09-29 22:32 J -30541932.73 -30541932.56 -30541932.34 0.0088 0.0058
 Uranus -88333-11-15 22:03 J -30541885.73 -30541885.58 -30541885.42 0.0131 0.0103
 Neptune -88332-10-02 10:47 J -30541565.08 -30541565.05 -30541564.95 0.0088 0.0086
 Uranus -88332-11-19 23:15 J -30541516.63 -30541516.53 -30541516.39 0.0132 0.0116
 Uranus -88331-11-24 00:42 J -30541147.51 -30541147.47 -30541147.40 0.0132 0.0128
 Jupiter -88330-03-25 00:42 J -30541026.69 -30541026.47 -30541026.24 0.0504 0.0066
 Jupiter -88324-10-07 17:59 J -30538637.90 -30538637.75 -30538637.60 0.0527 0.0397
 Saturn -88323-01-24 17:15 J -30538528.96 -30538528.78 -30538528.60 0.0273 0.0175
 Saturn -88322-02-05 07:54 J -30538152.41 -30538152.17 -30538151.94 0.0272 0.0032
 Saturn -88321-02-16 23:30 J -30537775.73 -30537775.52 -30537775.30 0.0272 0.0114
 Saturn -88320-02-27 17:30 J -30537398.84 -30537398.77 -30537398.68 0.0272 0.0257
 Jupiter -88318-03-29 11:01 J -30536639.24 -30536639.04 -30536638.83 0.0502 0.0219
 Mars -88314-01-01 04:03 J -30535265.50 -30535265.33 -30535265.16 0.1800 0.0684
 Saturn -88309-07-21 14:51 J -30533236.97 -30533236.88 -30533236.77 0.0286 0.0263
 Saturn -88308-08-05 09:20 J -30532857.35 -30532857.11 -30532856.87 0.0287 0.0081
 Saturn -88307-08-20 02:23 J -30532477.63 -30532477.40 -30532477.16 0.0287 0.0104
 Saturn -88306-09-03 16:32 J -30532097.86 -30532097.81 -30532097.76 0.0287 0.0280

Uranus	-88304-03-09 15:20 J	-30531544.96	-30531544.86	-30531544.77	0.0145	0.0133
Uranus	-88303-03-14 11:59 J	-30531175.14	-30531175.00	-30531174.84	0.0146	0.0116
Uranus	-88302-03-19 10:32 J	-30530805.24	-30530805.06	-30530804.87	0.0146	0.0098
Uranus	-88301-03-23 10:03 J	-30530435.29	-30530435.08	-30530434.87	0.0146	0.0080
Uranus	-88300-03-28 10:32 J	-30530065.28	-30530065.06	-30530064.83	0.0147	0.0060
Uranus	-88299-04-02 12:13 J	-30529695.22	-30529694.99	-30529694.74	0.0147	0.0040
Uranus	-88298-04-07 15:20 J	-30529325.11	-30529324.86	-30529324.61	0.0147	0.0019
Uranus	-88297-04-11 19:11 J	-30528954.96	-30528954.70	-30528954.45	0.0147	0.0002
Uranus	-88296-04-16 23:59 J	-30528584.75	-30528584.50	-30528584.25	0.0148	0.0024
Uranus	-88295-04-22 05:44 J	-30528214.49	-30528214.26	-30528214.01	0.0148	0.0046
Saturn	-88294-01-19 19:54 J	-30527941.78	-30527941.67	-30527941.55	0.0273	0.0238
Uranus	-88294-04-27 12:27 J	-30527844.20	-30527843.98	-30527843.74	0.0148	0.0067
Saturn	-88293-01-31 10:03 J	-30527565.29	-30527565.08	-30527564.85	0.0272	0.0096
Uranus	-88293-05-01 19:54 J	-30527473.87	-30527473.67	-30527473.46	0.0147	0.0088
Saturn	-88292-02-11 00:42 J	-30527188.71	-30527188.47	-30527188.24	0.0272	0.0049
Uranus	-88292-05-07 03:35 J	-30527103.52	-30527103.35	-30527103.17	0.0147	0.0108
Saturn	-88291-02-22 17:01 J	-30526811.96	-30526811.79	-30526811.63	0.0272	0.0194
Uranus	-88291-05-12 11:44 J	-30526733.12	-30526733.01	-30526732.86	0.0147	0.0127
Uranus	-88290-05-17 20:08 J	-30526362.67	-30526362.66	-30526362.61	0.0147	0.0146
Mars	-88289-06-22 15:49 J	-30525960.97	-30525960.84	-30525960.71	0.1715	0.1262
Saturn	-88279-07-29 21:20 J	-30522271.80	-30522271.61	-30522271.39	0.0286	0.0169
Saturn	-88278-08-13 15:49 J	-30521892.09	-30521891.84	-30521891.59	0.0287	0.0016
Saturn	-88277-08-27 07:54 J	-30521512.35	-30521512.17	-30521511.98	0.0287	0.0198
Uranus	-88265-09-13 16:32 J	-30517111.87	-30517111.81	-30517111.72	0.0134	0.0128
Jupiter	-88265-09-26 17:01 J	-30517098.97	-30517098.79	-30517098.60	0.0522	0.0320
Saturn	-88264-01-25 20:51 J	-30516977.82	-30516977.63	-30516977.43	0.0273	0.0155
Uranus	-88264-09-18 04:03 J	-30516742.45	-30516742.33	-30516742.18	0.0133	0.0114
Saturn	-88263-02-06 11:59 J	-30516601.24	-30516601.00	-30516600.77	0.0272	0.0012
Uranus	-88263-09-22 14:37 J	-30516373.05	-30516372.89	-30516372.70	0.0133	0.0099
Saturn	-88262-02-18 03:49 J	-30516224.54	-30516224.34	-30516224.13	0.0272	0.0133

Uranus -88262-09-27 00:13 J -30516003.69 -30516003.49 -30516003.29 0.0133 0.0084
 Uranus -88261-09-30 08:23 J -30515634.36 -30515634.15 -30515633.92 0.0132 0.0070
 Uranus -88260-10-04 16:03 J -30515265.06 -30515264.83 -30515264.59 0.0132 0.0054
 Jupiter -88259-03-19 20:23 J -30515098.79 -30515098.65 -30515098.50 0.0507 0.0389
 Uranus -88259-10-08 22:47 J -30514895.79 -30514895.55 -30514895.30 0.0132 0.0039
 Uranus -88258-10-13 04:32 J -30514526.56 -30514526.31 -30514526.05 0.0132 0.0024
 Uranus -88257-10-16 09:49 J -30514157.34 -30514157.09 -30514156.83 0.0132 0.0009
 Uranus -88256-10-20 14:23 J -30513788.15 -30513787.90 -30513787.64 0.0131 0.0006
 Neptune -88255-03-13 20:51 J -30513643.74 -30513643.63 -30513643.48 0.0089 0.0076
 Uranus -88255-10-24 18:27 J -30513418.98 -30513418.73 -30513418.47 0.0131 0.0021
 Neptune -88254-03-16 07:11 J -30513276.40 -30513276.20 -30513275.98 0.0089 0.0049
 Uranus -88254-10-28 21:49 J -30513049.83 -30513049.59 -30513049.34 0.0131 0.0035
 Neptune -88253-03-17 17:30 J -30512909.01 -30512908.77 -30512908.52 0.0089 0.0022
 Jupiter -88253-10-01 14:51 J -30512711.11 -30512710.88 -30512710.64 0.0524 0.0008
 Uranus -88253-11-01 00:56 J -30512680.68 -30512680.46 -30512680.22 0.0131 0.0050
 Neptune -88252-03-20 03:49 J -30512541.60 -30512541.34 -30512541.09 0.0089 0.0005
 Uranus -88252-11-05 03:35 J -30512311.56 -30512311.35 -30512311.12 0.0131 0.0064
 Neptune -88251-03-22 14:08 J -30512174.14 -30512173.91 -30512173.67 0.0089 0.0032
 Uranus -88251-11-09 06:13 J -30511942.44 -30511942.24 -30511942.03 0.0131 0.0078
 Neptune -88250-03-25 00:13 J -30511806.66 -30511806.49 -30511806.29 0.0089 0.0060
 Saturn -88250-07-24 00:13 J -30511685.62 -30511685.49 -30511685.34 0.0286 0.0238
 Uranus -88250-11-13 07:54 J -30511573.33 -30511573.17 -30511572.97 0.0131 0.0092
 Neptune -88249-03-26 11:01 J -30511439.07 -30511439.04 -30511438.98 0.0089 0.0087
 Saturn -88249-08-06 18:27 J -30511305.98 -30511305.73 -30511305.48 0.0287 0.0057
 Uranus -88249-11-16 09:49 J -30511204.22 -30511204.09 -30511203.92 0.0132 0.0104
 Saturn -88248-08-21 11:15 J -30510926.25 -30510926.03 -30510925.79 0.0287 0.0126
 Uranus -88248-11-20 11:15 J -30510835.13 -30510835.03 -30510834.90 0.0132 0.0117
 Jupiter -88247-03-24 08:37 J -30510711.36 -30510711.14 -30510710.91 0.0504 0.0097
 Uranus -88247-11-24 12:27 J -30510466.01 -30510465.98 -30510465.90 0.0132 0.0129
 Pluto -88241-06-14 22:47 J -30508436.77 -30508436.55 -30508436.29 0.0067 0.0029

Jupiter -88241-10-06 17:15 J -30508322.95 -30508322.78 -30508322.60 0.0527 0.0343
 Mars -88235-01-03 18:56 J -30506407.79 -30506407.71 -30506407.63 0.1793 0.1618
 Saturn -88235-01-21 01:25 J -30506390.58 -30506390.44 -30506390.30 0.0273 0.0217
 Jupiter -88235-03-28 19:39 J -30506323.89 -30506323.68 -30506323.46 0.0502 0.0189
 Saturn -88234-02-01 15:35 J -30506014.07 -30506013.85 -30506013.62 0.0272 0.0075
 Saturn -88233-02-13 06:27 J -30505637.46 -30505637.23 -30505637.00 0.0272 0.0069
 Saturn -88232-02-23 23:01 J -30505260.68 -30505260.54 -30505260.38 0.0272 0.0212
 Jupiter -88223-04-02 05:15 J -30501936.35 -30501936.28 -30501936.19 0.0500 0.0468
 Uranus -88221-03-05 07:39 J -30501233.21 -30501233.18 -30501233.12 0.0145 0.0142
 Uranus -88220-03-10 03:35 J -30500863.46 -30500863.35 -30500863.22 0.0145 0.0127
 Saturn -88220-07-31 06:56 J -30500720.42 -30500720.21 -30500719.99 0.0286 0.0144
 Uranus -88219-03-15 00:27 J -30500493.62 -30500493.48 -30500493.30 0.0146 0.0111
 Saturn -88219-08-15 00:56 J -30500340.71 -30500340.46 -30500340.21 0.0287 0.0040
 Uranus -88218-03-19 23:15 J -30500123.72 -30500123.53 -30500123.34 0.0146 0.0093
 Saturn -88218-08-29 16:18 J -30499960.96 -30499960.82 -30499960.64 0.0287 0.0220
 Uranus -88217-03-23 22:18 J -30499753.77 -30499753.57 -30499753.34 0.0146 0.0075
 Uranus -88216-03-28 23:15 J -30499383.76 -30499383.53 -30499383.29 0.0147 0.0055
 Uranus -88215-04-03 00:56 J -30499013.70 -30499013.46 -30499013.21 0.0147 0.0035
 Uranus -88214-04-08 04:03 J -30498643.59 -30498643.33 -30498643.08 0.0147 0.0015
 Uranus -88213-04-12 07:54 J -30498273.42 -30498273.17 -30498272.92 0.0147 0.0007
 Uranus -88212-04-17 12:42 J -30497903.21 -30497902.97 -30497902.71 0.0148 0.0028
 Uranus -88211-04-22 18:42 J -30497532.96 -30497532.72 -30497532.48 0.0148 0.0049
 Uranus -88210-04-28 01:11 J -30497162.66 -30497162.45 -30497162.21 0.0148 0.0070
 Mars -88210-06-26 10:03 J -30497103.28 -30497103.08 -30497102.89 0.1721 0.0320
 Uranus -88209-05-02 08:37 J -30496792.34 -30496792.14 -30496791.94 0.0147 0.0090
 Uranus -88208-05-07 16:18 J -30496421.99 -30496421.82 -30496421.65 0.0147 0.0110
 Uranus -88207-05-13 00:27 J -30496051.60 -30496051.48 -30496051.35 0.0147 0.0129
 Saturn -88206-01-16 10:47 J -30495803.07 -30495803.05 -30495803.03 0.0274 0.0272
 Uranus -88206-05-18 08:37 J -30495681.15 -30495681.14 -30495681.10 0.0147 0.0146
 Saturn -88205-01-28 02:08 J -30495426.61 -30495426.41 -30495426.20 0.0273 0.0134

Saturn -88204-02-07 17:30 J -30495050.01 -30495049.77 -30495049.53 0.0273 0.0010
 Saturn -88203-02-19 09:35 J -30494673.29 -30494673.10 -30494672.90 0.0272 0.0153
 Saturn -88191-07-25 11:59 J -30490134.16 -30490134.00 -30490133.82 0.0286 0.0213
 Saturn -88190-08-09 05:59 J -30489754.50 -30489754.25 -30489753.99 0.0287 0.0033
 Saturn -88189-08-22 22:47 J -30489374.76 -30489374.55 -30489374.33 0.0287 0.0149
 Mars -88189-12-26 11:59 J -30489249.16 -30489249.00 -30489248.84 0.1820 0.0891
 Jupiter -88182-09-26 14:37 J -30486784.05 -30486783.89 -30486783.73 0.0522 0.0378
 Uranus -88181-09-14 05:15 J -30486430.38 -30486430.28 -30486430.17 0.0134 0.0122
 Uranus -88180-09-18 16:18 J -30486060.95 -30486060.82 -30486060.65 0.0133 0.0109
 Uranus -88179-09-23 03:06 J -30485691.55 -30485691.37 -30485691.18 0.0133 0.0093
 Uranus -88178-09-27 12:13 J -30485322.19 -30485321.99 -30485321.77 0.0133 0.0079
 Uranus -88177-09-30 20:23 J -30484952.86 -30484952.65 -30484952.41 0.0132 0.0065
 Saturn -88176-01-22 07:39 J -30484839.33 -30484839.18 -30484839.00 0.0273 0.0196
 Jupiter -88176-03-19 04:03 J -30484783.45 -30484783.33 -30484783.20 0.0507 0.0419
 Uranus -88176-10-05 04:03 J -30484583.56 -30484583.33 -30484583.09 0.0132 0.0050
 Saturn -88175-02-02 22:32 J -30484462.79 -30484462.56 -30484462.33 0.0272 0.0054
 Uranus -88175-10-09 10:47 J -30484214.29 -30484214.05 -30484213.80 0.0132 0.0035
 Saturn -88174-02-14 13:25 J -30484086.15 -30484085.94 -30484085.70 0.0272 0.0091
 Uranus -88174-10-13 16:32 J -30483845.06 -30483844.81 -30483844.55 0.0132 0.0020
 Saturn -88173-02-26 06:27 J -30483709.34 -30483709.23 -30483709.09 0.0272 0.0232
 Neptune -88173-09-20 00:42 J -30483502.62 -30483502.47 -30483502.27 0.0088 0.0067
 Uranus -88173-10-16 21:49 J -30483475.84 -30483475.59 -30483475.33 0.0131 0.0006
 Neptune -88172-09-22 14:08 J -30483135.14 -30483134.91 -30483134.67 0.0088 0.0039
 Uranus -88172-10-21 02:23 J -30483106.65 -30483106.40 -30483106.14 0.0131 0.0010
 Neptune -88171-09-25 03:06 J -30482767.62 -30482767.37 -30482767.10 0.0088 0.0011
 Uranus -88171-10-25 06:13 J -30482737.48 -30482737.24 -30482736.98 0.0131 0.0024
 Neptune -88170-09-27 16:03 J -30482400.08 -30482399.83 -30482399.57 0.0088 0.0016
 Jupiter -88170-10-01 17:30 J -30482396.00 -30482395.77 -30482395.53 0.0524 0.0040
 Uranus -88170-10-29 09:49 J -30482368.33 -30482368.09 -30482367.84 0.0131 0.0039
 Neptune -88169-09-29 04:47 J -30482032.52 -30482032.30 -30482032.07 0.0088 0.0044

Uranus -88169-11-01 13:11 J -30481999.18 -30481998.95 -30481998.72 0.0131 0.0052
 Neptune -88168-10-01 17:01 J -30481664.92 -30481664.79 -30481664.61 0.0088 0.0072
 Uranus -88168-11-05 15:35 J -30481630.05 -30481629.85 -30481629.62 0.0131 0.0067
 Uranus -88167-11-09 18:13 J -30481260.94 -30481260.74 -30481260.54 0.0131 0.0080
 Uranus -88166-11-13 19:54 J -30480891.84 -30480891.67 -30480891.49 0.0131 0.0093
 Uranus -88165-11-16 21:20 J -30480522.74 -30480522.61 -30480522.44 0.0131 0.0106
 Jupiter -88164-03-23 14:51 J -30480396.10 -30480395.88 -30480395.66 0.0505 0.0132
 Uranus -88164-11-20 23:01 J -30480153.65 -30480153.54 -30480153.42 0.0132 0.0117
 Uranus -88163-11-24 23:59 J -30479784.53 -30479784.50 -30479784.44 0.0132 0.0129
 Saturn -88161-08-01 19:25 J -30479168.91 -30479168.69 -30479168.45 0.0286 0.0118
 Saturn -88160-08-16 13:11 J -30478789.19 -30478788.95 -30478788.70 0.0287 0.0066
 Saturn -88159-08-31 04:32 J -30478409.44 -30478409.31 -30478409.18 0.0286 0.0242
 Jupiter -88158-10-06 21:49 J -30478007.78 -30478007.59 -30478007.40 0.0526 0.0306
 Pluto -88156-12-18 14:51 J -30477204.06 -30477203.88 -30477203.68 0.0078 0.0051
 Jupiter -88152-03-27 20:37 J -30476008.85 -30476008.64 -30476008.41 0.0503 0.0142
 Saturn -88147-01-17 16:32 J -30474251.89 -30474251.81 -30474251.71 0.0274 0.0251
 Saturn -88146-01-29 08:08 J -30473875.37 -30473875.16 -30473874.94 0.0273 0.0112
 Saturn -88145-02-09 23:44 J -30473498.75 -30473498.51 -30473498.28 0.0273 0.0031
 Saturn -88144-02-20 16:18 J -30473122.00 -30473121.82 -30473121.63 0.0273 0.0173
 Jupiter -88140-04-01 05:59 J -30471621.37 -30471621.25 -30471621.12 0.0501 0.0419
 Uranus -88137-03-05 18:27 J -30470551.80 -30470551.73 -30470551.64 0.0145 0.0136
 Uranus -88136-03-10 14:08 J -30470182.02 -30470181.91 -30470181.75 0.0145 0.0122
 Uranus -88135-03-15 11:15 J -30469812.18 -30469812.03 -30469811.84 0.0146 0.0105
 Uranus -88134-03-20 10:03 J -30469442.28 -30469442.08 -30469441.88 0.0146 0.0087
 Uranus -88133-03-24 09:20 J -30469072.32 -30469072.11 -30469071.88 0.0147 0.0070
 Uranus -88132-03-29 10:18 J -30468702.30 -30468702.07 -30468701.83 0.0147 0.0050
 Saturn -88132-07-27 01:39 J -30468582.61 -30468582.43 -30468582.22 0.0286 0.0188
 Uranus -88131-04-03 12:13 J -30468332.23 -30468331.99 -30468331.74 0.0147 0.0031
 Mars -88131-06-29 05:15 J -30468245.47 -30468245.28 -30468245.10 0.1727 0.0665
 Saturn -88131-08-10 19:54 J -30468202.92 -30468202.67 -30468202.41 0.0287 0.0007

Uranus	-88130-04-08 15:20 J	-30467962.11	-30467961.86	-30467961.60	0.0147	0.0010
Saturn	-88130-08-25 11:59 J	-30467823.19	-30467823.00	-30467822.79	0.0287	0.0174
Uranus	-88129-04-12 19:25 J	-30467591.94	-30467591.69	-30467591.43	0.0148	0.0011
Uranus	-88128-04-18 00:27 J	-30467221.72	-30467221.48	-30467221.22	0.0148	0.0032
Uranus	-88127-04-23 06:42 J	-30466851.46	-30466851.22	-30466850.98	0.0148	0.0052
Uranus	-88126-04-28 13:11 J	-30466481.16	-30466480.95	-30466480.72	0.0148	0.0073
Uranus	-88125-05-02 20:23 J	-30466110.83	-30466110.65	-30466110.43	0.0148	0.0093
Uranus	-88124-05-08 04:18 J	-30465740.48	-30465740.32	-30465740.14	0.0147	0.0112
Uranus	-88123-05-13 12:42 J	-30465370.08	-30465369.97	-30465369.84	0.0147	0.0130
Uranus	-88122-05-18 21:20 J	-30464999.61	-30464999.61	-30464999.61	0.0147	0.0147
Saturn	-88117-01-24 15:49 J	-30463288.02	-30463287.84	-30463287.65	0.0273	0.0173
Saturn	-88116-02-04 06:42 J	-30462911.46	-30462911.22	-30462910.99	0.0272	0.0032
Saturn	-88115-02-15 21:49 J	-30462534.80	-30462534.59	-30462534.36	0.0272	0.0111
Saturn	-88114-02-27 15:20 J	-30462157.95	-30462157.86	-30462157.77	0.0272	0.0251
Mars	-88110-12-30 03:35 J	-30460391.53	-30460391.35	-30460391.16	0.1814	0.0113
Saturn	-88103-07-20 15:35 J	-30457996.92	-30457996.85	-30457996.75	0.0286	0.0267
Saturn	-88102-08-04 09:49 J	-30457617.33	-30457617.09	-30457616.85	0.0286	0.0091
Saturn	-88101-08-18 03:20 J	-30457237.59	-30457237.36	-30457237.11	0.0287	0.0091
Saturn	-88100-09-01 17:59 J	-30456857.82	-30456857.75	-30456857.64	0.0286	0.0266
Jupiter	-88099-09-25 18:13 J	-30456468.88	-30456468.74	-30456468.60	0.0521	0.0414
Uranus	-88098-09-11 05:15 J	-30456118.32	-30456118.28	-30456118.19	0.0134	0.0130
Uranus	-88097-09-14 18:13 J	-30455748.86	-30455748.74	-30455748.61	0.0134	0.0116
Uranus	-88096-09-19 05:01 J	-30455379.43	-30455379.29	-30455379.10	0.0133	0.0103
Uranus	-88095-09-23 15:35 J	-30455010.03	-30455009.85	-30455009.64	0.0133	0.0088
Uranus	-88094-09-28 00:42 J	-30454640.67	-30454640.47	-30454640.24	0.0133	0.0074
Jupiter	-88093-03-18 04:47 J	-30454468.39	-30454468.30	-30454468.22	0.0508	0.0469
Uranus	-88093-10-01 09:06 J	-30454271.34	-30454271.12	-30454270.88	0.0132	0.0059
Uranus	-88092-10-05 16:32 J	-30453902.04	-30453901.81	-30453901.55	0.0132	0.0045
Uranus	-88091-10-09 23:15 J	-30453532.77	-30453532.53	-30453532.27	0.0132	0.0030
Neptune	-88090-03-15 15:49 J	-30453376.00	-30453375.84	-30453375.64	0.0089	0.0063

Uranus -88090-10-14 05:15 J -30453163.53 -30453163.28 -30453163.02 0.0132 0.0016
 Neptune -88089-03-17 01:39 J -30453008.64 -30453008.43 -30453008.18 0.0089 0.0036
 Uranus -88089-10-17 10:47 J -30452794.31 -30452794.05 -30452793.80 0.0131 0.0002
 Saturn -88088-01-18 23:30 J -30452700.64 -30452700.52 -30452700.39 0.0274 0.0229
 Neptune -88088-03-19 12:13 J -30452641.24 -30452640.99 -30452640.73 0.0089 0.0009
 Uranus -88088-10-21 15:20 J -30452425.12 -30452424.86 -30452424.61 0.0131 0.0014
 Saturn -88087-01-30 14:51 J -30452324.10 -30452323.88 -30452323.65 0.0273 0.0090
 Neptune -88087-03-21 22:32 J -30452273.81 -30452273.56 -30452273.31 0.0089 0.0018
 Jupiter -88087-09-30 19:25 J -30452080.92 -30452080.69 -30452080.46 0.0523 0.0085
 Uranus -88087-10-25 19:11 J -30452055.94 -30452055.70 -30452055.44 0.0131 0.0028
 Saturn -88086-02-11 06:27 J -30451947.46 -30451947.23 -30451946.99 0.0273 0.0053
 Neptune -88086-03-24 08:37 J -30451906.34 -30451906.14 -30451905.91 0.0089 0.0046
 Uranus -88086-10-29 22:32 J -30451686.78 -30451686.56 -30451686.30 0.0131 0.0042
 Saturn -88085-02-22 23:30 J -30451570.67 -30451570.52 -30451570.34 0.0273 0.0194
 Neptune -88085-03-25 18:56 J -30451538.83 -30451538.71 -30451538.54 0.0089 0.0073
 Uranus -88085-11-02 02:08 J -30451317.64 -30451317.41 -30451317.18 0.0131 0.0056
 Uranus -88084-11-06 04:18 J -30450948.51 -30450948.32 -30450948.09 0.0131 0.0070
 Uranus -88083-11-10 06:27 J -30450579.41 -30450579.23 -30450579.02 0.0131 0.0082
 Uranus -88082-11-14 08:23 J -30450210.31 -30450210.15 -30450209.97 0.0131 0.0095
 Jupiter -88081-03-22 14:08 J -30450081.12 -30450080.91 -30450080.69 0.0506 0.0186
 Uranus -88081-11-17 09:49 J -30449841.22 -30449841.09 -30449840.93 0.0131 0.0107
 Uranus -88080-11-21 10:47 J -30449472.13 -30449472.05 -30449471.92 0.0132 0.0119
 Uranus -88079-11-25 12:42 J -30449103.02 -30449102.97 -30449102.93 0.0132 0.0129
 Jupiter -88075-10-05 15:49 J -30447693.04 -30447692.84 -30447692.62 0.0525 0.0236
 Saturn -88073-07-28 17:15 J -30447030.98 -30447030.78 -30447030.56 0.0286 0.0161
 Saturn -88072-08-12 11:30 J -30446651.27 -30446651.02 -30446650.76 0.0287 0.0021
 Saturn -88071-08-27 03:20 J -30446271.53 -30446271.36 -30446271.16 0.0287 0.0199
 Jupiter -88069-03-27 01:54 J -30445693.64 -30445693.42 -30445693.19 0.0504 0.0102
 Saturn -88058-01-25 23:59 J -30441736.69 -30441736.50 -30441736.30 0.0273 0.0151
 Saturn -88057-02-06 14:51 J -30441360.12 -30441359.88 -30441359.64 0.0272 0.0010

Jupiter -88057-03-31 12:42 J -30441306.12 -30441305.97 -30441305.82 0.0501 0.0385
 Saturn -88056-02-17 06:13 J -30440983.44 -30440983.24 -30440983.02 0.0272 0.0132
 Saturn -88055-03-01 00:13 J -30440606.52 -30440606.49 -30440606.46 0.0273 0.0270
 Uranus -88054-03-02 11:15 J -30440240.03 -30440240.03 -30440240.00 0.0144 0.0144
 Uranus -88053-03-06 05:59 J -30439870.34 -30439870.25 -30439870.13 0.0145 0.0130
 Uranus -88052-03-11 01:39 J -30439500.56 -30439500.43 -30439500.26 0.0145 0.0115
 Mars -88052-07-02 00:13 J -30439387.54 -30439387.49 -30439387.43 0.1733 0.1659
 Uranus -88051-03-15 23:01 J -30439130.71 -30439130.54 -30439130.35 0.0146 0.0099
 Uranus -88050-03-20 21:20 J -30438760.80 -30438760.61 -30438760.39 0.0146 0.0082
 Uranus -88049-03-24 20:51 J -30438390.84 -30438390.63 -30438390.39 0.0147 0.0064
 Uranus -88048-03-29 21:49 J -30438020.82 -30438020.59 -30438020.34 0.0147 0.0045
 Uranus -88047-04-03 23:59 J -30437650.75 -30437650.50 -30437650.25 0.0147 0.0025
 Uranus -88046-04-09 03:20 J -30437280.62 -30437280.36 -30437280.11 0.0147 0.0006
 Uranus -88045-04-13 07:25 J -30436910.44 -30436910.19 -30436909.93 0.0148 0.0015
 Uranus -88044-04-18 12:27 J -30436540.22 -30436539.98 -30436539.72 0.0148 0.0036
 Saturn -88044-07-22 07:25 J -30436445.32 -30436445.19 -30436445.04 0.0286 0.0240
 Uranus -88043-04-23 18:27 J -30436169.95 -30436169.73 -30436169.48 0.0148 0.0056
 Saturn -88043-08-06 01:39 J -30436065.68 -30436065.43 -30436065.19 0.0286 0.0063
 Uranus -88042-04-29 01:11 J -30435799.65 -30435799.45 -30435799.22 0.0148 0.0076
 Saturn -88042-08-20 18:42 J -30435685.94 -30435685.72 -30435685.48 0.0286 0.0117
 Uranus -88041-05-03 08:37 J -30435429.33 -30435429.14 -30435428.94 0.0148 0.0095
 Uranus -88040-05-08 16:18 J -30435058.97 -30435058.82 -30435058.64 0.0148 0.0114
 Uranus -88039-05-14 00:27 J -30434688.57 -30434688.48 -30434688.34 0.0147 0.0132
 Mars -88030-01-01 17:59 J -30431533.89 -30431533.75 -30431533.60 0.1808 0.1067
 Saturn -88029-01-21 06:27 J -30431149.37 -30431149.23 -30431149.07 0.0274 0.0208
 Saturn -88028-01-31 22:03 J -30430772.81 -30430772.58 -30430772.35 0.0273 0.0069
 Saturn -88027-02-12 13:54 J -30430396.15 -30430395.92 -30430395.69 0.0273 0.0074
 Saturn -88026-02-24 07:25 J -30430019.34 -30430019.19 -30430019.04 0.0273 0.0213
 Jupiter -88016-09-24 12:56 J -30426154.05 -30426153.96 -30426153.87 0.0520 0.0477
 Saturn -88014-07-31 08:51 J -30425479.35 -30425479.13 -30425478.91 0.0287 0.0134

Uranus -88014-09-11 18:13 J -30425436.81 -30425436.74 -30425436.62 0.0134 0.0124
 Saturn -88013-08-14 02:51 J -30425099.63 -30425099.38 -30425099.13 0.0287 0.0047
 Uranus -88013-09-15 06:56 J -30425067.34 -30425067.21 -30425067.05 0.0134 0.0110
 Saturn -88012-08-28 18:42 J -30424719.87 -30424719.72 -30424719.55 0.0287 0.0223
 Uranus -88012-09-19 18:13 J -30424697.90 -30424697.74 -30424697.55 0.0133 0.0096
 Uranus -88011-09-24 04:18 J -30424328.51 -30424328.32 -30424328.11 0.0133 0.0082
 Uranus -88010-09-28 13:25 J -30423959.15 -30423958.94 -30423958.70 0.0133 0.0069
 Neptune -88009-09-19 05:15 J -30423602.37 -30423602.28 -30423602.16 0.0088 0.0081
 Uranus -88009-10-01 21:49 J -30423589.81 -30423589.59 -30423589.34 0.0132 0.0054
 Neptune -88008-09-21 18:13 J -30423234.93 -30423234.74 -30423234.51 0.0088 0.0054
 Uranus -88008-10-06 05:15 J -30423220.51 -30423220.28 -30423220.02 0.0132 0.0040
 Neptune -88007-09-24 07:39 J -30422867.42 -30422867.18 -30422866.92 0.0088 0.0026
 Uranus -88007-10-10 11:59 J -30422851.24 -30422851.00 -30422850.74 0.0132 0.0026
 Neptune -88006-09-26 20:37 J -30422499.90 -30422499.64 -30422499.37 0.0088 0.0003
 Uranus -88006-10-14 18:13 J -30422482.00 -30422481.74 -30422481.49 0.0131 0.0011
 Mars -88005-06-23 03:35 J -30422229.52 -30422229.35 -30422229.17 0.1708 0.0829
 Neptune -88005-09-28 09:20 J -30422132.34 -30422132.11 -30422131.85 0.0088 0.0030
 Uranus -88005-10-17 23:30 J -30422112.78 -30422112.52 -30422112.27 0.0131 0.0003
 Jupiter -88004-09-29 13:25 J -30421766.17 -30421765.94 -30421765.71 0.0522 0.0152
 Neptune -88004-09-30 22:03 J -30421764.76 -30421764.58 -30421764.36 0.0088 0.0057
 Uranus -88004-10-22 04:03 J -30421743.58 -30421743.33 -30421743.08 0.0131 0.0018
 Neptune -88003-10-03 10:32 J -30421397.12 -30421397.06 -30421396.95 0.0088 0.0084
 Uranus -88003-10-26 07:54 J -30421374.41 -30421374.17 -30421373.91 0.0131 0.0032
 Uranus -88002-10-30 11:30 J -30421005.25 -30421005.02 -30421004.77 0.0131 0.0045
 Uranus -88001-11-02 14:37 J -30420636.11 -30420635.89 -30420635.66 0.0131 0.0058

88TH MILLENNIUM BCE

This is a list of transits of Earth in the 88th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-88000-01-15 16:32 J	-30420561.84	-30420561.81	-30420561.74	0.0273	0.0266		
Uranus	-88000-11-06 17:01 J	-30420267.00	-30420266.79	-30420266.58	0.0131	0.0071		
Saturn	-87999-01-27 08:08 J	-30420185.37	-30420185.16	-30420184.95	0.0272	0.0129		
Uranus	-87999-11-10 18:42 J	-30419897.89	-30419897.72	-30419897.51	0.0131	0.0084		
Saturn	-87998-02-07 23:01 J	-30419808.78	-30419808.54	-30419808.31	0.0272	0.0012		
Jupiter	-87998-03-22 20:37 J	-30419765.84	-30419765.64	-30419765.43	0.0506	0.0220		
Uranus	-87998-11-14 20:23 J	-30419528.80	-30419528.65	-30419528.46	0.0131	0.0097		
Saturn	-87997-02-19 14:23 J	-30419432.09	-30419431.90	-30419431.69	0.0272	0.0153		
Uranus	-87997-11-17 22:18 J	-30419159.71	-30419159.57	-30419159.43	0.0131	0.0108		
Uranus	-87996-11-21 23:30 J	-30418790.62	-30418790.52	-30418790.41	0.0132	0.0119		
Pluto	-87995-06-15 23:15 J	-30418584.73	-30418584.53	-30418584.27	0.0067	0.0035		
Uranus	-87995-11-26 00:27 J	-30418421.51	-30418421.48	-30418421.43	0.0132	0.0130		
Pluto	-87994-06-17 15:49 J	-30418217.91	-30418217.84	-30418217.71	0.0067	0.0062		
Jupiter	-87992-10-04 15:35 J	-30417378.07	-30417377.85	-30417377.63	0.0525	0.0184		
Jupiter	-87986-03-27 07:39 J	-30415378.41	-30415378.18	-30415377.95	0.0504	0.0065		
Saturn	-87985-07-23 23:30 J	-30414893.68	-30414893.52	-30414893.34	0.0286	0.0213		
Saturn	-87984-08-07 17:44 J	-30414514.01	-30414513.76	-30414513.50	0.0286	0.0037		
Mars	-87984-12-24 03:06 J	-30414375.45	-30414375.37	-30414375.29	0.1836	0.1653		
Saturn	-87983-08-22 10:47 J	-30414134.26	-30414134.05	-30414133.82	0.0287	0.0143		
Jupiter	-87974-03-31 14:08 J	-30410991.08	-30410990.91	-30410990.74	0.0502	0.0336		
Saturn	-87970-01-22 12:56 J	-30409598.12	-30409597.96	-30409597.77	0.0273	0.0188		
Uranus	-87970-03-02 21:20 J	-30409558.67	-30409558.61	-30409558.53	0.0144	0.0138		

Saturn	-87969-02-03 04:32 J	-30409221.54	-30409221.31	-30409221.07	0.0273	0.0048
Uranus	-87969-03-06 15:35 J	-30409188.96	-30409188.85	-30409188.71	0.0145	0.0125
Saturn	-87968-02-13 20:23 J	-30408844.87	-30408844.65	-30408844.42	0.0273	0.0094
Uranus	-87968-03-11 11:59 J	-30408819.16	-30408819.00	-30408818.84	0.0145	0.0110
Saturn	-87967-02-25 13:39 J	-30408468.04	-30408467.93	-30408467.80	0.0273	0.0232
Uranus	-87967-03-16 08:37 J	-30408449.32	-30408449.14	-30408448.94	0.0146	0.0094
Uranus	-87966-03-21 06:56 J	-30408079.41	-30408079.21	-30408078.98	0.0146	0.0077
Uranus	-87965-03-25 06:42 J	-30407709.44	-30407709.22	-30407708.98	0.0147	0.0059
Uranus	-87964-03-30 07:39 J	-30407339.41	-30407339.18	-30407338.93	0.0147	0.0040
Uranus	-87963-04-04 09:49 J	-30406969.33	-30406969.09	-30406968.84	0.0147	0.0021
Uranus	-87962-04-09 13:25 J	-30406599.20	-30406598.94	-30406598.69	0.0147	0.0002
Uranus	-87961-04-13 17:30 J	-30406229.02	-30406228.77	-30406228.52	0.0148	0.0019
Uranus	-87960-04-18 22:47 J	-30405858.79	-30405858.55	-30405858.30	0.0148	0.0039
Uranus	-87959-04-24 04:32 J	-30405488.53	-30405488.31	-30405488.06	0.0148	0.0059
Uranus	-87958-04-29 11:30 J	-30405118.23	-30405118.02	-30405117.80	0.0148	0.0078
Uranus	-87957-05-03 18:56 J	-30404747.90	-30404747.71	-30404747.52	0.0148	0.0097
Uranus	-87956-05-09 02:51 J	-30404377.54	-30404377.38	-30404377.22	0.0148	0.0115
Saturn	-87956-07-18 05:15 J	-30404307.31	-30404307.28	-30404307.23	0.0286	0.0282
Uranus	-87955-05-14 10:47 J	-30404007.14	-30404007.05	-30404006.92	0.0147	0.0133
Saturn	-87955-08-01 23:30 J	-30403927.75	-30403927.52	-30403927.28	0.0287	0.0109
Saturn	-87954-08-16 17:44 J	-30403548.00	-30403547.76	-30403547.51	0.0287	0.0071
Saturn	-87953-08-30 09:20 J	-30403168.22	-30403168.11	-30403167.97	0.0287	0.0246
Saturn	-87941-01-18 00:13 J	-30399010.58	-30399010.49	-30399010.38	0.0273	0.0245
Saturn	-87940-01-28 15:20 J	-30398634.07	-30398633.86	-30398633.64	0.0272	0.0109
Saturn	-87939-02-09 05:59 J	-30398257.48	-30398257.25	-30398257.01	0.0272	0.0032
Saturn	-87938-02-20 22:03 J	-30397880.76	-30397880.58	-30397880.39	0.0272	0.0171
Uranus	-87931-09-07 18:27 J	-30395124.78	-30395124.73	-30395124.66	0.0135	0.0131
Uranus	-87930-09-12 07:39 J	-30394755.28	-30394755.18	-30394755.03	0.0134	0.0118
Uranus	-87929-09-15 20:08 J	-30394385.80	-30394385.66	-30394385.48	0.0134	0.0105
Uranus	-87928-09-20 07:39 J	-30394016.37	-30394016.18	-30394015.99	0.0133	0.0091

Uranus -87927-09-24 17:30 J -30393646.96 -30393646.77 -30393646.54 0.0133 0.0077
 Neptune -87926-03-15 00:42 J -30393475.60 -30393475.47 -30393475.35 0.0089 0.0076
 Mars -87926-06-26 19:25 J -30393371.89 -30393371.69 -30393371.49 0.1713 0.0086
 Saturn -87926-07-26 14:08 J -30393342.10 -30393341.91 -30393341.71 0.0286 0.0187
 Uranus -87926-09-29 03:06 J -30393277.59 -30393277.37 -30393277.14 0.0133 0.0063
 Neptune -87925-03-16 10:18 J -30393108.26 -30393108.07 -30393107.84 0.0089 0.0050
 Saturn -87925-08-09 08:23 J -30392962.40 -30392962.15 -30392961.89 0.0287 0.0011
 Uranus -87925-10-02 11:15 J -30392908.26 -30392908.03 -30392907.78 0.0132 0.0049
 Neptune -87924-03-18 20:23 J -30392740.89 -30392740.65 -30392740.40 0.0089 0.0023
 Saturn -87924-08-24 01:11 J -30392582.64 -30392582.45 -30392582.23 0.0287 0.0167
 Uranus -87924-10-06 18:42 J -30392538.96 -30392538.72 -30392538.46 0.0132 0.0035
 Neptune -87923-03-21 06:42 J -30392373.47 -30392373.22 -30392372.96 0.0089 0.0004
 Uranus -87923-10-11 01:25 J -30392169.69 -30392169.44 -30392169.18 0.0132 0.0021
 Neptune -87922-03-23 16:47 J -30392006.03 -30392005.80 -30392005.55 0.0089 0.0031
 Uranus -87922-10-15 07:39 J -30391800.44 -30391800.18 -30391799.92 0.0131 0.0006
 Neptune -87921-03-25 03:06 J -30391638.55 -30391638.37 -30391638.17 0.0089 0.0058
 Jupiter -87921-09-28 16:03 J -30391451.05 -30391450.83 -30391450.61 0.0522 0.0194
 Uranus -87921-10-18 12:56 J -30391431.21 -30391430.96 -30391430.70 0.0131 0.0008
 Neptune -87920-03-27 13:25 J -30391270.99 -30391270.94 -30391270.85 0.0089 0.0085
 Uranus -87920-10-22 17:30 J -30391062.02 -30391061.77 -30391061.52 0.0131 0.0021
 Uranus -87919-10-26 21:35 J -30390692.84 -30390692.60 -30390692.35 0.0131 0.0035
 Uranus -87918-10-31 01:11 J -30390323.68 -30390323.45 -30390323.21 0.0131 0.0048
 Uranus -87917-11-03 04:03 J -30389954.55 -30389954.33 -30389954.10 0.0131 0.0061
 Uranus -87916-11-07 06:13 J -30389585.44 -30389585.24 -30389585.02 0.0131 0.0074
 Jupiter -87915-03-21 23:30 J -30389450.72 -30389450.52 -30389450.33 0.0506 0.0265
 Uranus -87915-11-11 08:08 J -30389216.34 -30389216.16 -30389215.96 0.0131 0.0086
 Uranus -87914-11-15 09:49 J -30388847.24 -30388847.09 -30388846.91 0.0131 0.0098
 Uranus -87913-11-18 11:15 J -30388478.15 -30388478.03 -30388477.88 0.0131 0.0109
 Uranus -87912-11-22 12:13 J -30388109.06 -30388108.99 -30388108.87 0.0132 0.0121
 Saturn -87911-01-23 18:56 J -30388046.89 -30388046.71 -30388046.52 0.0273 0.0167

Uranus -87911-11-26 13:39 J -30387739.94 -30387739.93 -30387739.88 0.0132 0.0131
 Saturn -87910-02-04 10:18 J -30387670.31 -30387670.07 -30387669.84 0.0273 0.0028
 Saturn -87909-02-16 01:39 J -30387293.64 -30387293.43 -30387293.21 0.0273 0.0113
 Jupiter -87909-10-03 18:27 J -30387062.96 -30387062.73 -30387062.51 0.0524 0.0139
 Pluto -87909-12-20 13:25 J -30386985.19 -30386984.94 -30386984.69 0.0078 0.0003
 Saturn -87908-02-26 18:56 J -30386916.79 -30386916.71 -30386916.60 0.0273 0.0250
 Mars -87905-12-26 22:03 J -30385517.76 -30385517.58 -30385517.41 0.1829 0.0583
 Jupiter -87903-03-26 09:06 J -30385063.35 -30385063.12 -30385062.89 0.0504 0.0016
 Saturn -87897-07-19 17:44 J -30382755.86 -30382755.76 -30382755.65 0.0286 0.0259
 Jupiter -87897-10-08 15:49 J -30382674.95 -30382674.84 -30382674.73 0.0526 0.0462
 Saturn -87896-08-03 12:27 J -30382376.22 -30382375.98 -30382375.73 0.0287 0.0085
 Saturn -87895-08-18 06:56 J -30381996.44 -30381996.21 -30381995.97 0.0287 0.0095
 Saturn -87894-09-01 22:47 J -30381616.63 -30381616.55 -30381616.45 0.0287 0.0267
 Jupiter -87891-03-30 19:25 J -30380675.87 -30380675.69 -30380675.50 0.0503 0.0300
 Uranus -87886-03-03 09:20 J -30378877.20 -30378877.11 -30378877.01 0.0144 0.0132
 Uranus -87885-03-07 03:35 J -30378507.47 -30378507.35 -30378507.19 0.0145 0.0119
 Uranus -87884-03-11 23:15 J -30378137.68 -30378137.53 -30378137.34 0.0145 0.0104
 Uranus -87883-03-16 20:37 J -30377767.83 -30377767.64 -30377767.44 0.0146 0.0088
 Saturn -87882-01-19 06:27 J -30377459.35 -30377459.23 -30377459.08 0.0273 0.0226
 Uranus -87882-03-21 18:56 J -30377397.92 -30377397.71 -30377397.48 0.0146 0.0071
 Saturn -87881-01-30 21:20 J -30377082.83 -30377082.61 -30377082.38 0.0272 0.0089
 Uranus -87881-03-25 18:27 J -30377027.95 -30377027.73 -30377027.48 0.0147 0.0054
 Saturn -87880-02-10 11:44 J -30376706.24 -30376706.01 -30376705.77 0.0272 0.0051
 Uranus -87880-03-30 19:54 J -30376657.91 -30376657.67 -30376657.43 0.0147 0.0035
 Saturn -87879-02-22 03:35 J -30376329.51 -30376329.35 -30376329.17 0.0272 0.0189
 Uranus -87879-04-04 21:49 J -30376287.83 -30376287.59 -30376287.33 0.0147 0.0016
 Uranus -87878-04-10 01:11 J -30375917.70 -30375917.45 -30375917.20 0.0147 0.0004
 Uranus -87877-04-14 05:15 J -30375547.52 -30375547.28 -30375547.02 0.0148 0.0023
 Uranus -87876-04-19 10:32 J -30375177.30 -30375177.06 -30375176.81 0.0148 0.0043
 Uranus -87875-04-24 16:18 J -30374807.04 -30374806.82 -30374806.58 0.0148 0.0062

Uranus -87874-04-29 23:01 J -30374436.74 -30374436.54 -30374436.32 0.0148 0.0081
 Uranus -87873-05-04 06:27 J -30374066.42 -30374066.23 -30374066.04 0.0148 0.0099
 Uranus -87872-05-09 14:08 J -30373696.05 -30373695.91 -30373695.74 0.0148 0.0117
 Uranus -87871-05-14 22:18 J -30373325.66 -30373325.57 -30373325.45 0.0147 0.0134
 Saturn -87867-07-28 02:51 J -30371790.58 -30371790.38 -30371790.16 0.0286 0.0164
 Saturn -87866-08-11 21:20 J -30371410.86 -30371410.61 -30371410.36 0.0287 0.0014
 Saturn -87865-08-25 14:23 J -30371031.09 -30371030.90 -30371030.71 0.0287 0.0189
 Saturn -87852-01-24 23:30 J -30366495.72 -30366495.52 -30366495.32 0.0273 0.0148
 Saturn -87851-02-05 14:23 J -30366119.14 -30366118.90 -30366118.67 0.0273 0.0010
 Saturn -87850-02-17 05:30 J -30365742.47 -30365742.27 -30365742.05 0.0273 0.0131
 Saturn -87849-02-28 22:47 J -30365365.59 -30365365.55 -30365365.48 0.0273 0.0266
 Mars -87847-06-29 13:54 J -30364514.07 -30364513.92 -30364513.76 0.1719 0.1045
 Uranus -87847-09-08 07:39 J -30364443.27 -30364443.18 -30364443.08 0.0135 0.0125
 Uranus -87846-09-12 20:51 J -30364073.75 -30364073.63 -30364073.47 0.0134 0.0113
 Uranus -87845-09-16 09:20 J -30363704.27 -30363704.11 -30363703.92 0.0134 0.0099
 Uranus -87844-09-20 20:37 J -30363334.83 -30363334.64 -30363334.43 0.0133 0.0085
 Neptune -87844-09-20 21:06 J -30363334.76 -30363334.62 -30363334.43 0.0088 0.0069 *
 Neptune -87843-09-23 10:32 J -30362967.28 -30362967.06 -30362966.82 0.0088 0.0041
 Uranus -87843-09-25 06:56 J -30362965.42 -30362965.21 -30362964.99 0.0133 0.0071
 Neptune -87842-09-25 23:44 J -30362599.76 -30362599.51 -30362599.24 0.0088 0.0014
 Uranus -87842-09-29 16:18 J -30362596.05 -30362595.82 -30362595.58 0.0133 0.0058
 Neptune -87841-09-27 12:42 J -30362232.22 -30362231.97 -30362231.71 0.0088 0.0014
 Uranus -87841-10-03 00:56 J -30362226.71 -30362226.46 -30362226.22 0.0132 0.0044
 Neptune -87840-09-30 01:11 J -30361864.66 -30361864.45 -30361864.20 0.0088 0.0041
 Uranus -87840-10-07 08:08 J -30361857.40 -30361857.16 -30361856.90 0.0132 0.0030
 Neptune -87839-10-02 13:39 J -30361497.07 -30361496.93 -30361496.74 0.0088 0.0069
 Uranus -87839-10-11 15:06 J -30361488.12 -30361487.87 -30361487.61 0.0132 0.0016
 Saturn -87838-07-22 03:20 J -30361204.49 -30361204.36 -30361204.21 0.0286 0.0238
 Jupiter -87838-09-28 13:54 J -30361136.13 -30361135.92 -30361135.71 0.0521 0.0246
 Uranus -87838-10-15 21:20 J -30361118.87 -30361118.61 -30361118.35 0.0131 0.0002

Saturn	-87837-08-04 22:47 J	-30360824.80	-30360824.55	-30360824.30	0.0287	0.0063
Uranus	-87837-10-19 02:37 J	-30360749.64	-30360749.39	-30360749.13	0.0131	0.0012
Saturn	-87836-08-19 17:15 J	-30360445.00	-30360444.78	-30360444.54	0.0287	0.0117
Uranus	-87836-10-23 07:25 J	-30360380.44	-30360380.19	-30360379.94	0.0131	0.0025
Saturn	-87835-09-03 09:06 J	-30360065.13	-30360065.12	-30360065.10	0.0287	0.0286
Uranus	-87835-10-27 11:30 J	-30360011.27	-30360011.02	-30360010.78	0.0131	0.0039
Uranus	-87834-10-31 14:37 J	-30359642.11	-30359641.89	-30359641.65	0.0131	0.0052
Uranus	-87833-11-03 17:30 J	-30359272.98	-30359272.77	-30359272.54	0.0131	0.0064
Jupiter	-87832-03-21 04:32 J	-30359135.49	-30359135.31	-30359135.13	0.0508	0.0302
Uranus	-87832-11-07 19:39 J	-30358903.87	-30358903.68	-30358903.46	0.0131	0.0077
Uranus	-87831-11-11 21:35 J	-30358534.77	-30358534.60	-30358534.40	0.0131	0.0088
Uranus	-87830-11-15 23:30 J	-30358165.67	-30358165.52	-30358165.35	0.0131	0.0100
Uranus	-87829-11-19 00:56 J	-30357796.59	-30357796.46	-30357796.32	0.0131	0.0111
Uranus	-87828-11-23 01:54 J	-30357427.50	-30357427.42	-30357427.31	0.0131	0.0122
Uranus	-87827-11-27 03:20 J	-30357058.36	-30357058.36	-30357058.34	0.0132	0.0132
Jupiter	-87826-10-03 14:37 J	-30356748.13	-30356747.89	-30356747.66	0.0523	0.0080
Mars	-87826-12-30 14:23 J	-30356660.08	-30356659.90	-30356659.72	0.1823	0.0443
Saturn	-87823-01-20 11:15 J	-30355908.18	-30355908.03	-30355907.87	0.0273	0.0207
Saturn	-87822-02-01 01:39 J	-30355531.65	-30355531.43	-30355531.19	0.0272	0.0071
Saturn	-87821-02-12 16:03 J	-30355155.06	-30355154.83	-30355154.59	0.0272	0.0068
Saturn	-87820-02-23 07:39 J	-30354778.33	-30354778.18	-30354778.02	0.0272	0.0205
Jupiter	-87820-03-25 16:32 J	-30354748.04	-30354747.81	-30354747.57	0.0505	0.0017
Jupiter	-87814-10-08 16:18 J	-30352359.96	-30352359.82	-30352359.67	0.0526	0.0414
Jupiter	-87808-03-30 04:03 J	-30350360.52	-30350360.33	-30350360.14	0.0503	0.0271
Saturn	-87808-07-29 13:11 J	-30350239.17	-30350238.95	-30350238.73	0.0287	0.0141
Saturn	-87807-08-13 07:39 J	-30349859.43	-30349859.18	-30349858.93	0.0287	0.0036
Saturn	-87806-08-28 00:27 J	-30349479.64	-30349479.48	-30349479.30	0.0287	0.0210
Uranus	-87803-02-27 03:35 J	-30348565.38	-30348565.35	-30348565.27	0.0144	0.0140
Uranus	-87802-03-03 20:51 J	-30348195.73	-30348195.63	-30348195.49	0.0144	0.0127
Uranus	-87801-03-07 15:35 J	-30347826.00	-30347825.85	-30347825.69	0.0145	0.0113

Uranus -87800-03-12 11:15 J -30347456.20 -30347456.03 -30347455.84 0.0145 0.0099
 Mars -87800-06-21 01:11 J -30347355.58 -30347355.45 -30347355.32 0.1695 0.1279
 Uranus -87799-03-17 08:08 J -30347086.35 -30347086.16 -30347085.94 0.0146 0.0083
 Uranus -87798-03-22 06:27 J -30346716.44 -30346716.23 -30346715.99 0.0146 0.0066
 Uranus -87797-03-26 06:13 J -30346346.46 -30346346.24 -30346345.99 0.0147 0.0049
 Uranus -87796-03-31 07:25 J -30345976.43 -30345976.19 -30345975.94 0.0147 0.0030
 Uranus -87795-04-05 09:35 J -30345606.35 -30345606.10 -30345605.85 0.0147 0.0011
 Saturn -87794-01-15 11:44 J -30345321.07 -30345321.01 -30345320.95 0.0273 0.0265
 Uranus -87794-04-10 12:42 J -30345236.22 -30345235.97 -30345235.71 0.0147 0.0008
 Saturn -87793-01-27 02:37 J -30344944.59 -30344944.39 -30344944.18 0.0273 0.0131
 Uranus -87793-04-14 16:47 J -30344866.04 -30344865.80 -30344865.55 0.0148 0.0027
 Saturn -87792-02-06 17:01 J -30344568.03 -30344567.79 -30344567.55 0.0272 0.0008
 Uranus -87792-04-19 22:03 J -30344495.82 -30344495.58 -30344495.34 0.0148 0.0046
 Saturn -87791-02-18 07:54 J -30344191.36 -30344191.17 -30344190.96 0.0272 0.0147
 Uranus -87791-04-25 03:49 J -30344125.56 -30344125.34 -30344125.10 0.0148 0.0065
 Uranus -87790-04-30 10:32 J -30343755.27 -30343755.06 -30343754.84 0.0148 0.0083
 Uranus -87789-05-04 17:59 J -30343384.93 -30343384.75 -30343384.56 0.0148 0.0101
 Uranus -87788-05-10 01:54 J -30343014.57 -30343014.42 -30343014.27 0.0148 0.0118
 Uranus -87787-05-15 09:49 J -30342644.18 -30342644.09 -30342643.97 0.0148 0.0135
 Saturn -87779-07-23 10:18 J -30339653.22 -30339653.07 -30339652.89 0.0286 0.0218
 Saturn -87778-08-07 06:13 J -30339273.49 -30339273.24 -30339272.99 0.0287 0.0042
 Saturn -87777-08-21 01:11 J -30338893.67 -30338893.45 -30338893.22 0.0287 0.0135
 Saturn -87764-01-21 14:08 J -30334357.07 -30334356.91 -30334356.73 0.0272 0.0190
 Uranus -87764-09-04 07:11 J -30334131.26 -30334131.20 -30334131.15 0.0135 0.0132
 Saturn -87763-02-02 04:32 J -30333980.54 -30333980.31 -30333980.07 0.0272 0.0053
 Uranus -87763-09-08 21:20 J -30333761.72 -30333761.61 -30333761.48 0.0135 0.0119
 Saturn -87762-02-13 18:42 J -30333603.94 -30333603.72 -30333603.49 0.0272 0.0085
 Uranus -87762-09-13 10:47 J -30333392.19 -30333392.05 -30333391.87 0.0134 0.0107
 Saturn -87761-02-25 10:03 J -30333227.21 -30333227.08 -30333226.94 0.0272 0.0220
 Neptune -87761-03-15 17:30 J -30333207.93 -30333207.77 -30333207.58 0.0089 0.0064

Uranus -87761-09-16 23:15 J -30333022.70 -30333022.53 -30333022.33 0.0134 0.0093
 Neptune -87760-03-18 03:49 J -30332840.56 -30332840.34 -30332840.10 0.0089 0.0037
 Uranus -87760-09-21 10:32 J -30332653.26 -30332653.06 -30332652.84 0.0133 0.0080
 Neptune -87759-03-20 14:08 J -30332473.16 -30332472.91 -30332472.66 0.0089 0.0010
 Uranus -87759-09-25 20:51 J -30332283.84 -30332283.63 -30332283.40 0.0133 0.0066
 Neptune -87758-03-23 00:13 J -30332105.74 -30332105.49 -30332105.24 0.0089 0.0016
 Uranus -87758-09-30 06:13 J -30331914.46 -30331914.24 -30331913.99 0.0133 0.0053
 Neptune -87757-03-24 10:03 J -30331738.28 -30331738.08 -30331737.84 0.0089 0.0044
 Uranus -87757-10-03 14:51 J -30331545.12 -30331544.88 -30331544.63 0.0132 0.0039
 Neptune -87756-03-26 20:37 J -30331370.78 -30331370.64 -30331370.47 0.0089 0.0070
 Uranus -87756-10-07 22:32 J -30331175.81 -30331175.56 -30331175.30 0.0132 0.0025
 Jupiter -87755-09-27 15:20 J -30330821.05 -30330820.86 -30330820.66 0.0520 0.0290
 Uranus -87755-10-12 05:30 J -30330806.53 -30330806.27 -30330806.01 0.0132 0.0011
 Uranus -87754-10-16 11:44 J -30330437.27 -30330437.01 -30330436.76 0.0132 0.0003
 Uranus -87753-10-19 17:01 J -30330068.04 -30330067.79 -30330067.53 0.0131 0.0016
 Uranus -87752-10-23 21:35 J -30329698.85 -30329698.60 -30329698.35 0.0131 0.0029
 Uranus -87751-10-28 01:25 J -30329329.67 -30329329.44 -30329329.19 0.0131 0.0042
 Uranus -87750-11-01 05:01 J -30328960.52 -30328960.29 -30328960.06 0.0131 0.0054
 Jupiter -87749-03-20 14:08 J -30328820.08 -30328819.91 -30328819.73 0.0508 0.0327
 Saturn -87749-07-30 20:23 J -30328687.88 -30328687.65 -30328687.42 0.0287 0.0120
 Uranus -87749-11-04 07:11 J -30328591.40 -30328591.20 -30328590.96 0.0131 0.0068
 Pluto -87748-06-17 22:47 J -30328365.80 -30328365.55 -30328365.28 0.0067 0.0014
 Saturn -87748-08-14 15:06 J -30328308.11 -30328307.87 -30328307.62 0.0287 0.0056
 Uranus -87748-11-08 10:03 J -30328222.28 -30328222.08 -30328221.88 0.0131 0.0079
 Saturn -87747-08-29 08:23 J -30327928.30 -30327928.15 -30327928.00 0.0287 0.0228
 Uranus -87747-11-12 11:44 J -30327853.18 -30327853.01 -30327852.81 0.0131 0.0090
 Mars -87746-01-02 05:59 J -30327802.36 -30327802.25 -30327802.13 0.1817 0.1428
 Uranus -87746-11-16 13:39 J -30327484.08 -30327483.93 -30327483.76 0.0131 0.0101
 Uranus -87745-11-19 14:51 J -30327114.99 -30327114.88 -30327114.73 0.0131 0.0112
 Uranus -87744-11-23 16:18 J -30326745.89 -30326745.82 -30326745.72 0.0131 0.0123

Jupiter -87743-10-02 19:25 J -30326432.93 -30326432.69 -30326432.46 0.0523 0.0045
 Jupiter -87737-03-25 00:13 J -30324432.72 -30324432.49 -30324432.26 0.0506 0.0044
 Saturn -87735-01-16 13:54 J -30323770.01 -30323769.92 -30323769.82 0.0273 0.0248
 Saturn -87734-01-28 04:18 J -30323393.52 -30323393.32 -30323393.09 0.0272 0.0115
 Saturn -87733-02-08 18:27 J -30323016.96 -30323016.73 -30323016.49 0.0272 0.0024
 Saturn -87732-02-19 09:06 J -30322640.30 -30322640.12 -30322639.92 0.0272 0.0161
 Jupiter -87731-10-07 22:47 J -30322044.70 -30322044.55 -30322044.38 0.0525 0.0381
 Jupiter -87725-03-29 10:18 J -30320045.27 -30320045.07 -30320044.86 0.0504 0.0236
 Mars -87721-06-23 15:20 J -30318498.05 -30318497.86 -30318497.67 0.1700 0.0413
 Saturn -87720-07-24 14:23 J -30318102.08 -30318101.90 -30318101.71 0.0287 0.0199
 Uranus -87719-02-27 18:42 J -30317883.79 -30317883.72 -30317883.61 0.0144 0.0134
 Saturn -87719-08-08 10:18 J -30317722.32 -30317722.07 -30317721.82 0.0287 0.0024
 Uranus -87718-03-04 12:13 J -30317514.12 -30317513.99 -30317513.85 0.0144 0.0121
 Saturn -87718-08-23 05:30 J -30317342.47 -30317342.27 -30317342.05 0.0287 0.0153
 Uranus -87717-03-08 06:27 J -30317144.39 -30317144.23 -30317144.06 0.0145 0.0107
 Uranus -87716-03-13 02:08 J -30316774.59 -30316774.41 -30316774.21 0.0145 0.0092
 Uranus -87715-03-17 23:01 J -30316404.73 -30316404.54 -30316404.31 0.0146 0.0077
 Uranus -87714-03-22 21:35 J -30316034.81 -30316034.60 -30316034.36 0.0146 0.0060
 Uranus -87713-03-26 21:20 J -30315664.84 -30315664.61 -30315664.36 0.0147 0.0043
 Uranus -87712-03-31 22:32 J -30315294.80 -30315294.56 -30315294.31 0.0147 0.0025
 Uranus -87711-04-06 00:27 J -30314924.73 -30314924.48 -30314924.22 0.0147 0.0006
 Uranus -87710-04-11 03:35 J -30314554.60 -30314554.35 -30314554.10 0.0147 0.0012
 Uranus -87709-04-15 07:25 J -30314184.43 -30314184.19 -30314183.93 0.0148 0.0032
 Uranus -87708-04-20 12:42 J -30313814.21 -30313813.97 -30313813.73 0.0148 0.0050
 Uranus -87707-04-25 18:13 J -30313443.96 -30313443.74 -30313443.51 0.0148 0.0068
 Uranus -87706-05-01 00:56 J -30313073.66 -30313073.46 -30313073.25 0.0148 0.0086
 Saturn -87705-01-23 16:18 J -30312806.00 -30312805.82 -30312805.63 0.0272 0.0172
 Uranus -87705-05-05 07:54 J -30312703.33 -30312703.17 -30312702.97 0.0148 0.0104
 Saturn -87704-02-03 06:13 J -30312429.47 -30312429.24 -30312429.00 0.0272 0.0037
 Uranus -87704-05-10 15:35 J -30312332.97 -30312332.85 -30312332.68 0.0148 0.0121

Saturn -87703-02-14 20:08 J -30312052.88 -30312052.66 -30312052.44 0.0271 0.0100
 Uranus -87703-05-15 23:59 J -30311962.57 -30311962.50 -30311962.38 0.0148 0.0137
 Saturn -87702-02-26 11:01 J -30311676.15 -30311676.04 -30311675.91 0.0272 0.0234
 Mars -87700-12-24 09:49 J -30310644.22 -30310644.09 -30310643.97 0.1845 0.1387
 Saturn -87691-07-18 06:42 J -30307516.30 -30307516.22 -30307516.13 0.0286 0.0269
 Saturn -87690-08-02 01:11 J -30307136.68 -30307136.45 -30307136.21 0.0287 0.0101
 Saturn -87689-08-15 20:23 J -30306756.89 -30306756.65 -30306756.40 0.0287 0.0075
 Saturn -87688-08-30 13:25 J -30306377.06 -30306376.94 -30306376.80 0.0287 0.0245
 Uranus -87680-09-04 20:37 J -30303449.71 -30303449.64 -30303449.52 0.0135 0.0126
 Neptune -87680-09-19 23:15 J -30303434.58 -30303434.53 -30303434.41 0.0088 0.0084
 Uranus -87679-09-09 11:30 J -30303080.15 -30303080.02 -30303079.87 0.0135 0.0113
 Neptune -87679-09-22 13:25 J -30303067.14 -30303066.94 -30303066.73 0.0088 0.0056
 Uranus -87678-09-14 00:56 J -30302710.61 -30302710.46 -30302710.27 0.0134 0.0101
 Neptune -87678-09-25 02:23 J -30302699.64 -30302699.40 -30302699.14 0.0088 0.0029
 Uranus -87677-09-17 13:25 J -30302341.13 -30302340.94 -30302340.74 0.0134 0.0087
 Neptune -87677-09-26 15:35 J -30302332.11 -30302331.85 -30302331.59 0.0088 0.0001
 Saturn -87676-01-17 14:51 J -30302218.99 -30302218.88 -30302218.74 0.0273 0.0232
 Uranus -87676-09-22 00:27 J -30301971.67 -30301971.48 -30301971.24 0.0133 0.0075
 Neptune -87676-09-29 04:18 J -30301964.57 -30301964.32 -30301964.07 0.0088 0.0026
 Saturn -87675-01-29 05:15 J -30301842.50 -30301842.28 -30301842.06 0.0272 0.0098
 Uranus -87675-09-26 11:15 J -30301602.26 -30301602.03 -30301601.80 0.0133 0.0060
 Neptune -87675-10-01 17:01 J -30301596.99 -30301596.79 -30301596.57 0.0088 0.0053
 Saturn -87674-02-09 18:56 J -30301465.95 -30301465.71 -30301465.47 0.0272 0.0039
 Uranus -87674-09-30 20:51 J -30301232.87 -30301232.63 -30301232.39 0.0133 0.0047
 Neptune -87674-10-04 05:30 J -30301229.36 -30301229.27 -30301229.14 0.0088 0.0080
 Saturn -87673-02-21 09:06 J -30301089.29 -30301089.12 -30301088.93 0.0272 0.0175
 Uranus -87673-10-04 05:15 J -30300863.52 -30300863.28 -30300863.02 0.0132 0.0033
 Jupiter -87672-09-26 23:01 J -30300505.72 -30300505.54 -30300505.35 0.0520 0.0316
 Uranus -87672-10-08 12:56 J -30300494.21 -30300493.96 -30300493.70 0.0132 0.0020
 Uranus -87671-10-12 19:54 J -30300124.92 -30300124.67 -30300124.41 0.0132 0.0007

Uranus	-87670-10-17 02:08 J	-30299755.66	-30299755.41	-30299755.15	0.0132	0.0007
Uranus	-87669-10-20 07:11 J	-30299386.45	-30299386.20	-30299385.94	0.0131	0.0020
Uranus	-87668-10-24 11:44 J	-30299017.25	-30299017.01	-30299016.76	0.0131	0.0033
Uranus	-87667-10-28 15:35 J	-30298648.08	-30298647.85	-30298647.60	0.0131	0.0045
Jupiter	-87666-03-20 21:49 J	-30298504.76	-30298504.59	-30298504.43	0.0508	0.0357
Uranus	-87666-11-01 18:42 J	-30298278.93	-30298278.72	-30298278.48	0.0131	0.0058
Uranus	-87665-11-04 21:35 J	-30297909.81	-30297909.60	-30297909.38	0.0131	0.0070
Uranus	-87664-11-08 23:44 J	-30297540.69	-30297540.51	-30297540.30	0.0131	0.0081
Uranus	-87663-11-13 01:54 J	-30297171.59	-30297171.42	-30297171.23	0.0131	0.0092
Pluto	-87663-12-21 16:32 J	-30297132.90	-30297132.81	-30297132.70	0.0078	0.0071
Uranus	-87662-11-17 03:35 J	-30296802.49	-30296802.35	-30296802.18	0.0131	0.0103
Pluto	-87662-12-23 16:03 J	-30296765.90	-30296765.83	-30296765.74	0.0078	0.0073
Saturn	-87661-07-25 16:18 J	-30296551.00	-30296550.82	-30296550.61	0.0287	0.0181
Uranus	-87661-11-20 05:01 J	-30296433.40	-30296433.29	-30296433.15	0.0131	0.0114
Saturn	-87660-08-09 12:42 J	-30296171.23	-30296170.97	-30296170.72	0.0287	0.0008
Jupiter	-87660-10-01 23:15 J	-30296117.77	-30296117.53	-30296117.30	0.0522	0.0013
Uranus	-87660-11-24 06:13 J	-30296064.30	-30296064.24	-30296064.13	0.0131	0.0124
Saturn	-87659-08-24 07:54 J	-30295791.36	-30295791.17	-30295790.95	0.0288	0.0169
Jupiter	-87654-03-25 06:42 J	-30294117.44	-30294117.22	-30294116.99	0.0507	0.0075
Jupiter	-87648-10-07 00:13 J	-30291729.67	-30291729.49	-30291729.31	0.0524	0.0337
Saturn	-87646-01-24 17:01 J	-30291254.98	-30291254.79	-30291254.59	0.0272	0.0156
Saturn	-87645-02-05 06:42 J	-30290878.46	-30290878.22	-30290877.98	0.0272	0.0021
Saturn	-87644-02-15 20:23 J	-30290501.87	-30290501.65	-30290501.44	0.0271	0.0114
Saturn	-87643-02-27 11:15 J	-30290125.12	-30290125.03	-30290124.92	0.0271	0.0247
Jupiter	-87642-03-29 18:42 J	-30289729.93	-30289729.72	-30289729.51	0.0505	0.0212
Mars	-87642-06-27 05:44 J	-30289640.45	-30289640.26	-30289640.07	0.1705	0.0475
Uranus	-87636-02-23 15:49 J	-30287571.88	-30287571.84	-30287571.77	0.0143	0.0139
Uranus	-87635-02-28 07:39 J	-30287202.27	-30287202.18	-30287202.05	0.0144	0.0128
Uranus	-87634-03-05 00:42 J	-30286832.60	-30286832.47	-30286832.30	0.0144	0.0115
Uranus	-87633-03-08 19:25 J	-30286462.86	-30286462.69	-30286462.50	0.0145	0.0101

Uranus	-87632-03-13 15:20 J	-30286093.05	-30286092.86	-30286092.65	0.0145	0.0086
Saturn	-87632-07-19 08:51 J	-30285965.24	-30285965.13	-30285965.00	0.0286	0.0252
Uranus	-87631-03-18 12:27 J	-30285723.18	-30285722.98	-30285722.75	0.0146	0.0071
Saturn	-87631-08-03 03:49 J	-30285585.58	-30285585.34	-30285585.09	0.0287	0.0083
Uranus	-87630-03-23 11:01 J	-30285353.26	-30285353.04	-30285352.80	0.0146	0.0054
Jupiter	-87630-04-03 06:42 J	-30285342.26	-30285342.22	-30285342.17	0.0502	0.0493
Saturn	-87630-08-17 23:15 J	-30285205.77	-30285205.53	-30285205.29	0.0287	0.0092
Uranus	-87629-03-27 11:01 J	-30284983.29	-30284983.04	-30284982.80	0.0147	0.0037
Saturn	-87629-08-31 16:47 J	-30284825.90	-30284825.80	-30284825.70	0.0287	0.0261
Uranus	-87628-04-01 11:44 J	-30284613.25	-30284613.01	-30284612.76	0.0147	0.0019
Uranus	-87627-04-06 13:39 J	-30284243.18	-30284242.93	-30284242.68	0.0147	0.0001
Uranus	-87626-04-11 16:32 J	-30283873.05	-30283872.81	-30283872.55	0.0147	0.0018
Uranus	-87625-04-15 20:23 J	-30283502.88	-30283502.65	-30283502.39	0.0148	0.0036
Uranus	-87624-04-21 01:25 J	-30283132.66	-30283132.44	-30283132.19	0.0148	0.0054
Uranus	-87623-04-26 07:25 J	-30282762.41	-30282762.19	-30282761.97	0.0148	0.0071
Uranus	-87622-05-01 13:54 J	-30282392.11	-30282391.92	-30282391.71	0.0148	0.0089
Uranus	-87621-05-05 21:06 J	-30282021.78	-30282021.62	-30282021.43	0.0148	0.0106
Mars	-87621-12-27 04:18 J	-30281786.50	-30281786.32	-30281786.13	0.1838	0.0310
Uranus	-87620-05-11 05:15 J	-30281651.41	-30281651.28	-30281651.13	0.0148	0.0122
Uranus	-87619-05-16 13:25 J	-30281281.01	-30281280.94	-30281280.83	0.0148	0.0138
Saturn	-87617-01-19 15:49 J	-30280667.97	-30280667.84	-30280667.68	0.0273	0.0216
Saturn	-87616-01-30 05:59 J	-30280291.47	-30280291.25	-30280291.02	0.0272	0.0082
Saturn	-87615-02-10 19:25 J	-30279914.93	-30279914.69	-30279914.46	0.0272	0.0054
Saturn	-87614-02-22 09:06 J	-30279538.28	-30279538.12	-30279537.94	0.0272	0.0188
Saturn	-87602-07-27 16:32 J	-30275000.00	-30274999.81	-30274999.59	0.0287	0.0164
Saturn	-87601-08-10 13:11 J	-30274620.20	-30274619.95	-30274619.69	0.0287	0.0011
Saturn	-87600-08-25 08:51 J	-30274240.32	-30274240.13	-30274239.93	0.0288	0.0184
Neptune	-87597-03-15 00:27 J	-30273307.58	-30273307.48	-30273307.35	0.0089	0.0078
Uranus	-87597-08-31 19:39 J	-30273137.74	-30273137.68	-30273137.61	0.0136	0.0131
Neptune	-87596-03-17 10:18 J	-30272940.26	-30272940.07	-30272939.85	0.0089	0.0052

Uranus -87596-09-05 11:30 J -30272768.13 -30272768.02 -30272767.89 0.0135 0.0119
 Neptune -87595-03-19 20:23 J -30272572.88 -30272572.65 -30272572.40 0.0089 0.0025
 Mars -87595-06-19 00:13 J -30272481.49 -30272481.49 -30272481.48 0.1683 0.1682
 Uranus -87595-09-10 01:54 J -30272398.56 -30272398.42 -30272398.25 0.0135 0.0107
 Neptune -87594-03-22 06:42 J -30272205.47 -30272205.22 -30272204.96 0.0089 0.0002
 Uranus -87594-09-14 15:35 J -30272029.02 -30272028.85 -30272028.65 0.0134 0.0094
 Neptune -87593-03-23 17:01 J -30271838.03 -30271837.79 -30271837.55 0.0089 0.0028
 Uranus -87593-09-18 04:18 J -30271659.53 -30271659.32 -30271659.11 0.0134 0.0081
 Neptune -87592-03-26 03:06 J -30271470.56 -30271470.37 -30271470.16 0.0089 0.0055
 Uranus -87592-09-22 15:20 J -30271290.07 -30271289.86 -30271289.62 0.0133 0.0068
 Neptune -87591-03-28 13:11 J -30271103.03 -30271102.95 -30271102.84 0.0089 0.0082
 Uranus -87591-09-27 01:54 J -30270920.64 -30270920.42 -30270920.17 0.0133 0.0055
 Uranus -87590-10-01 11:30 J -30270551.25 -30270551.02 -30270550.76 0.0133 0.0042
 Jupiter -87589-09-26 03:06 J -30270190.55 -30270190.37 -30270190.20 0.0519 0.0347
 Uranus -87589-10-04 19:54 J -30270181.91 -30270181.67 -30270181.41 0.0132 0.0029
 Saturn -87588-01-14 02:37 J -30270080.42 -30270080.39 -30270080.34 0.0273 0.0269
 Uranus -87588-10-09 03:49 J -30269812.59 -30269812.34 -30269812.08 0.0132 0.0015
 Saturn -87587-01-25 17:30 J -30269703.97 -30269703.77 -30269703.56 0.0272 0.0139
 Uranus -87587-10-13 11:01 J -30269443.30 -30269443.04 -30269442.79 0.0132 0.0002
 Saturn -87586-02-06 06:56 J -30269327.45 -30269327.21 -30269326.97 0.0271 0.0005
 Uranus -87586-10-17 17:01 J -30269074.05 -30269073.79 -30269073.54 0.0132 0.0012
 Saturn -87585-02-17 20:08 J -30268950.86 -30268950.66 -30268950.44 0.0271 0.0130
 Uranus -87585-10-20 22:03 J -30268704.83 -30268704.58 -30268704.33 0.0131 0.0024
 Saturn -87584-02-28 11:15 J -30268574.09 -30268574.03 -30268573.95 0.0271 0.0259
 Uranus -87584-10-25 02:37 J -30268335.64 -30268335.39 -30268335.15 0.0131 0.0037
 Jupiter -87583-03-20 04:47 J -30268189.45 -30268189.30 -30268189.15 0.0510 0.0385
 Uranus -87583-10-29 06:13 J -30267966.47 -30267966.24 -30267966.00 0.0131 0.0049
 Uranus -87582-11-02 09:20 J -30267597.32 -30267597.11 -30267596.87 0.0131 0.0061
 Uranus -87581-11-05 11:59 J -30267228.20 -30267228.00 -30267227.78 0.0131 0.0073
 Uranus -87580-11-09 14:37 J -30266859.08 -30266858.89 -30266858.69 0.0131 0.0083

Uranus	-87579-11-13 16:32 J	-30266489.98	-30266489.81	-30266489.63	0.0131	0.0094
Uranus	-87578-11-17 17:59 J	-30266120.88	-30266120.75	-30266120.58	0.0131	0.0105
Jupiter	-87577-10-01 02:37 J	-30265802.63	-30265802.39	-30265802.16	0.0521	0.0031
Uranus	-87577-11-20 19:54 J	-30265751.79	-30265751.67	-30265751.55	0.0131	0.0115
Uranus	-87576-11-24 21:06 J	-30265382.68	-30265382.62	-30265382.53	0.0131	0.0125
Saturn	-87573-07-20 10:47 J	-30264414.18	-30264414.05	-30264413.89	0.0287	0.0234
Saturn	-87572-08-04 05:59 J	-30264034.49	-30264034.25	-30264034.00	0.0287	0.0064
Jupiter	-87571-03-24 18:13 J	-30263801.97	-30263801.74	-30263801.52	0.0507	0.0094
Saturn	-87571-08-19 01:25 J	-30263654.67	-30263654.44	-30263654.20	0.0288	0.0110
Saturn	-87570-09-02 19:11 J	-30263274.76	-30263274.70	-30263274.63	0.0288	0.0276
Jupiter	-87565-10-06 05:44 J	-30261414.45	-30261414.26	-30261414.07	0.0524	0.0302
Mars	-87563-06-29 22:47 J	-30260782.66	-30260782.55	-30260782.44	0.1711	0.1413
Jupiter	-87559-03-29 05:30 J	-30259414.48	-30259414.27	-30259414.05	0.0505	0.0190
Saturn	-87558-01-20 17:01 J	-30259116.95	-30259116.79	-30259116.63	0.0272	0.0199
Saturn	-87557-02-01 06:42 J	-30258740.45	-30258740.22	-30258739.99	0.0272	0.0066
Saturn	-87556-02-11 19:39 J	-30258363.91	-30258363.68	-30258363.45	0.0271	0.0069
Saturn	-87555-02-23 09:20 J	-30257987.26	-30257987.11	-30257986.95	0.0271	0.0201
Uranus	-87552-02-24 05:44 J	-30256890.32	-30256890.26	-30256890.15	0.0143	0.0133
Uranus	-87551-02-28 22:03 J	-30256520.70	-30256520.58	-30256520.44	0.0144	0.0121
Uranus	-87550-03-05 15:20 J	-30256151.02	-30256150.86	-30256150.69	0.0144	0.0108
Uranus	-87549-03-09 09:49 J	-30255781.26	-30255781.09	-30255780.89	0.0145	0.0095
Uranus	-87548-03-14 05:44 J	-30255411.45	-30255411.26	-30255411.03	0.0145	0.0080
Uranus	-87547-03-19 03:06 J	-30255041.58	-30255041.37	-30255041.14	0.0146	0.0065
Jupiter	-87547-04-02 16:03 J	-30255026.91	-30255026.83	-30255026.75	0.0503	0.0466
Uranus	-87546-03-24 01:39 J	-30254671.66	-30254671.43	-30254671.18	0.0146	0.0048
Uranus	-87545-03-28 01:25 J	-30254301.68	-30254301.44	-30254301.19	0.0147	0.0031
Uranus	-87544-04-02 02:23 J	-30253931.65	-30253931.40	-30253931.15	0.0147	0.0014
Uranus	-87543-04-07 04:18 J	-30253561.57	-30253561.32	-30253561.07	0.0147	0.0004
Saturn	-87543-07-28 16:47 J	-30253449.01	-30253448.80	-30253448.57	0.0287	0.0146
Uranus	-87542-04-12 07:25 J	-30253191.44	-30253191.19	-30253190.94	0.0148	0.0022

Saturn -87542-08-12 13:25 J -30253069.19 -30253068.94 -30253068.69 0.0288 0.0027
 Mars -87542-12-30 23:01 J -30252928.71 -30252928.54 -30252928.37 0.1832 0.0757
 Uranus -87541-04-16 11:15 J -30252821.27 -30252821.03 -30252820.78 0.0148 0.0040
 Saturn -87541-08-26 08:51 J -30252689.30 -30252689.13 -30252688.93 0.0288 0.0199
 Uranus -87540-04-21 16:03 J -30252451.05 -30252450.83 -30252450.58 0.0148 0.0058
 Uranus -87539-04-26 21:49 J -30252080.80 -30252080.59 -30252080.36 0.0148 0.0075
 Uranus -87538-05-02 04:32 J -30251710.49 -30251710.31 -30251710.09 0.0148 0.0092
 Uranus -87537-05-06 12:13 J -30251340.16 -30251339.99 -30251339.81 0.0148 0.0108
 Uranus -87536-05-11 19:54 J -30250969.79 -30250969.67 -30250969.52 0.0148 0.0125
 Uranus -87535-05-17 04:47 J -30250599.38 -30250599.30 -30250599.21 0.0148 0.0139
 Saturn -87529-01-16 03:35 J -30248529.44 -30248529.35 -30248529.26 0.0273 0.0252
 Saturn -87528-01-26 18:13 J -30248152.95 -30248152.74 -30248152.53 0.0272 0.0122
 Saturn -87527-02-07 07:39 J -30247776.42 -30247776.18 -30247775.94 0.0271 0.0011
 Saturn -87526-02-18 20:51 J -30247399.82 -30247399.63 -30247399.42 0.0271 0.0144
 Mars -87516-06-21 14:37 J -30243624.06 -30243623.89 -30243623.72 0.1688 0.0853
 Neptune -87515-09-21 14:08 J -30243167.03 -30243166.91 -30243166.73 0.0088 0.0072
 Saturn -87514-07-22 12:27 J -30242863.13 -30242862.98 -30242862.80 0.0287 0.0215
 Neptune -87514-09-24 03:35 J -30242799.55 -30242799.35 -30242799.10 0.0088 0.0045
 Saturn -87513-08-05 07:54 J -30242483.42 -30242483.17 -30242482.92 0.0287 0.0046
 Uranus -87513-09-01 10:03 J -30242456.17 -30242456.08 -30242455.97 0.0136 0.0125
 Neptune -87513-09-25 17:01 J -30242432.04 -30242431.79 -30242431.53 0.0088 0.0017
 Saturn -87512-08-20 03:20 J -30242103.58 -30242103.36 -30242103.13 0.0288 0.0127
 Uranus -87512-09-06 01:39 J -30242086.55 -30242086.43 -30242086.27 0.0135 0.0113
 Neptune -87512-09-28 05:59 J -30242064.50 -30242064.25 -30242063.98 0.0088 0.0011
 Uranus -87511-09-10 16:32 J -30241716.97 -30241716.81 -30241716.63 0.0135 0.0101
 Neptune -87511-09-30 18:42 J -30241696.94 -30241696.72 -30241696.47 0.0088 0.0037
 Uranus -87510-09-15 05:59 J -30241347.43 -30241347.25 -30241347.03 0.0134 0.0089
 Neptune -87510-10-03 07:11 J -30241329.35 -30241329.20 -30241328.99 0.0088 0.0065
 Uranus -87509-09-18 18:42 J -30240977.93 -30240977.72 -30240977.50 0.0134 0.0075
 Uranus -87508-09-23 05:59 J -30240608.46 -30240608.25 -30240608.00 0.0133 0.0063

Uranus -87507-09-27 16:32 J -30240239.04 -30240238.81 -30240238.56 0.0133 0.0049
 Jupiter -87506-09-26 07:39 J -30239875.33 -30239875.18 -30239875.01 0.0519 0.0382
 Uranus -87506-10-02 02:23 J -30239869.65 -30239869.40 -30239869.15 0.0133 0.0036
 Uranus -87505-10-05 11:01 J -30239500.29 -30239500.04 -30239499.79 0.0132 0.0023
 Uranus -87504-10-09 18:42 J -30239130.97 -30239130.72 -30239130.46 0.0132 0.0010
 Uranus -87503-10-14 01:39 J -30238761.69 -30238761.43 -30238761.17 0.0132 0.0003
 Pluto -87502-06-19 08:23 J -30238513.40 -30238513.15 -30238512.90 0.0067 0.0025
 Uranus -87502-10-18 07:25 J -30238392.44 -30238392.19 -30238391.93 0.0131 0.0017
 Uranus -87501-10-21 12:27 J -30238023.23 -30238022.98 -30238022.73 0.0131 0.0028
 Jupiter -87500-03-19 15:49 J -30237873.97 -30237873.84 -30237873.70 0.0510 0.0405
 Uranus -87500-10-25 17:01 J -30237654.03 -30237653.79 -30237653.54 0.0131 0.0041
 Saturn -87499-01-21 18:27 J -30237565.90 -30237565.73 -30237565.55 0.0272 0.0182
 Uranus -87499-10-29 20:37 J -30237284.86 -30237284.64 -30237284.40 0.0131 0.0052
 Saturn -87498-02-02 07:54 J -30237189.40 -30237189.17 -30237188.93 0.0272 0.0050
 Uranus -87498-11-02 23:44 J -30236915.72 -30236915.51 -30236915.28 0.0131 0.0064
 Saturn -87497-02-13 20:51 J -30236812.86 -30236812.63 -30236812.41 0.0271 0.0085
 Uranus -87497-11-06 02:23 J -30236546.59 -30236546.40 -30236546.18 0.0131 0.0075
 Saturn -87496-02-24 10:18 J -30236436.20 -30236436.07 -30236435.92 0.0271 0.0215
 Uranus -87496-11-10 05:01 J -30236177.47 -30236177.29 -30236177.09 0.0131 0.0086
 Uranus -87495-11-14 06:42 J -30235808.37 -30235808.22 -30235808.03 0.0131 0.0097
 Jupiter -87494-10-01 11:01 J -30235487.28 -30235487.04 -30235486.81 0.0521 0.0054
 Uranus -87494-11-18 08:23 J -30235439.27 -30235439.15 -30235438.98 0.0131 0.0107
 Uranus -87493-11-21 10:03 J -30235070.18 -30235070.08 -30235069.95 0.0131 0.0117
 Uranus -87492-11-25 11:30 J -30234701.07 -30234701.02 -30234700.93 0.0131 0.0126
 Jupiter -87488-03-24 03:35 J -30233486.58 -30233486.35 -30233486.13 0.0508 0.0119
 Saturn -87484-07-29 18:42 J -30231897.95 -30231897.72 -30231897.50 0.0287 0.0127
 Saturn -87483-08-13 14:51 J -30231518.13 -30231517.88 -30231517.63 0.0288 0.0045
 Saturn -87482-08-28 10:32 J -30231138.22 -30231138.06 -30231137.89 0.0288 0.0214
 Jupiter -87482-10-06 13:11 J -30231099.15 -30231098.95 -30231098.75 0.0523 0.0278
 Jupiter -87476-03-28 11:01 J -30229099.25 -30229099.04 -30229098.82 0.0506 0.0157

Saturn -87470-01-17 04:18 J -30226978.43 -30226978.32 -30226978.19 0.0273 0.0235
 Saturn -87469-01-28 19:11 J -30226601.91 -30226601.70 -30226601.48 0.0272 0.0105
 Uranus -87469-02-21 03:20 J -30226578.41 -30226578.36 -30226578.29 0.0142 0.0138
 Saturn -87468-02-08 08:51 J -30226225.37 -30226225.13 -30226224.90 0.0272 0.0028
 Uranus -87468-02-24 17:44 J -30226208.85 -30226208.76 -30226208.63 0.0143 0.0127
 Saturn -87467-02-19 22:03 J -30225848.76 -30225848.58 -30225848.38 0.0271 0.0159
 Uranus -87467-03-01 09:35 J -30225839.23 -30225839.10 -30225838.94 0.0143 0.0116
 Uranus -87466-03-06 02:51 J -30225469.53 -30225469.38 -30225469.19 0.0144 0.0103
 Uranus -87465-03-09 21:49 J -30225099.78 -30225099.59 -30225099.39 0.0145 0.0089
 Uranus -87464-03-14 17:30 J -30224729.97 -30224729.77 -30224729.55 0.0145 0.0074
 Jupiter -87464-04-01 21:49 J -30224711.69 -30224711.59 -30224711.46 0.0504 0.0437
 Uranus -87463-03-19 14:37 J -30224360.11 -30224359.89 -30224359.65 0.0146 0.0059
 Mars -87462-01-02 15:20 J -30224070.90 -30224070.86 -30224070.81 0.1825 0.1767
 Uranus -87462-03-24 12:56 J -30223990.19 -30223989.96 -30223989.71 0.0146 0.0043
 Uranus -87461-03-28 12:42 J -30223620.21 -30223619.97 -30223619.72 0.0147 0.0026
 Uranus -87460-04-02 13:39 J -30223250.18 -30223249.93 -30223249.68 0.0147 0.0009
 Uranus -87459-04-07 15:20 J -30222880.11 -30222879.86 -30222879.61 0.0147 0.0008
 Uranus -87458-04-12 18:27 J -30222509.98 -30222509.73 -30222509.48 0.0148 0.0026
 Uranus -87457-04-16 22:03 J -30222139.81 -30222139.58 -30222139.32 0.0148 0.0044
 Uranus -87456-04-22 03:06 J -30221769.59 -30221769.37 -30221769.13 0.0148 0.0061
 Uranus -87455-04-27 09:06 J -30221399.33 -30221399.12 -30221398.90 0.0148 0.0078
 Saturn -87455-07-23 15:49 J -30221312.02 -30221311.84 -30221311.66 0.0287 0.0195
 Uranus -87454-05-02 15:49 J -30221029.02 -30221028.84 -30221028.63 0.0148 0.0095
 Saturn -87454-08-07 11:01 J -30220932.29 -30220932.04 -30220931.78 0.0287 0.0027
 Uranus -87453-05-06 23:15 J -30220658.68 -30220658.53 -30220658.34 0.0148 0.0111
 Saturn -87453-08-21 06:42 J -30220552.44 -30220552.22 -30220552.00 0.0288 0.0144
 Uranus -87452-05-12 07:39 J -30220288.30 -30220288.18 -30220288.03 0.0148 0.0126
 Uranus -87451-05-17 16:03 J -30219917.88 -30219917.83 -30219917.73 0.0148 0.0141
 Saturn -87440-01-22 20:51 J -30216014.81 -30216014.63 -30216014.43 0.0272 0.0164
 Saturn -87439-02-03 10:32 J -30215638.30 -30215638.06 -30215637.83 0.0272 0.0032

Saturn -87438-02-14 23:01 J -30215261.75 -30215261.54 -30215261.31 0.0271 0.0102
 Saturn -87437-02-26 13:11 J -30214885.08 -30214884.95 -30214884.83 0.0271 0.0230
 Mars -87437-06-24 03:35 J -30214766.54 -30214766.35 -30214766.15 0.1693 0.0027
 Neptune -87432-03-16 16:47 J -30213039.95 -30213039.80 -30213039.62 0.0089 0.0066
 Neptune -87431-03-19 02:37 J -30212672.60 -30212672.39 -30212672.15 0.0089 0.0040
 Neptune -87430-03-21 12:56 J -30212305.21 -30212304.96 -30212304.71 0.0089 0.0013
 Uranus -87430-08-29 07:25 J -30212144.26 -30212144.19 -30212144.11 0.0136 0.0131
 Neptune -87429-03-22 23:15 J -30211937.78 -30211937.53 -30211937.28 0.0089 0.0013
 Uranus -87429-09-02 00:13 J -30211774.61 -30211774.49 -30211774.36 0.0136 0.0119
 Neptune -87428-03-25 09:20 J -30211570.33 -30211570.11 -30211569.88 0.0089 0.0040
 Uranus -87428-09-06 16:03 J -30211404.97 -30211404.83 -30211404.66 0.0135 0.0108
 Neptune -87427-03-27 19:11 J -30211202.84 -30211202.70 -30211202.50 0.0089 0.0067
 Uranus -87427-09-11 06:56 J -30211035.38 -30211035.21 -30211035.02 0.0135 0.0095
 Saturn -87426-07-17 02:37 J -30210726.46 -30210726.39 -30210726.30 0.0286 0.0271
 Uranus -87426-09-15 20:37 J -30210665.84 -30210665.64 -30210665.43 0.0134 0.0082
 Saturn -87425-07-30 21:20 J -30210346.84 -30210346.61 -30210346.37 0.0287 0.0108
 Uranus -87425-09-19 09:06 J -30210296.33 -30210296.12 -30210295.89 0.0134 0.0070
 Saturn -87424-08-14 17:15 J -30209967.02 -30209966.78 -30209966.53 0.0288 0.0064
 Uranus -87424-09-23 20:51 J -30209926.86 -30209926.63 -30209926.39 0.0133 0.0056
 Saturn -87423-08-29 12:42 J -30209587.11 -30209586.97 -30209586.81 0.0288 0.0231
 Jupiter -87423-09-25 15:49 J -30209559.99 -30209559.84 -30209559.69 0.0518 0.0401
 Uranus -87423-09-28 07:11 J -30209557.43 -30209557.20 -30209556.94 0.0133 0.0044
 Uranus -87422-10-02 17:01 J -30209188.03 -30209187.79 -30209187.53 0.0133 0.0031
 Uranus -87421-10-06 01:39 J -30208818.68 -30208818.43 -30208818.17 0.0132 0.0018
 Uranus -87420-10-10 09:35 J -30208449.36 -30208449.10 -30208448.84 0.0132 0.0005
 Uranus -87419-10-14 16:18 J -30208080.08 -30208079.82 -30208079.57 0.0132 0.0008
 Uranus -87418-10-18 21:49 J -30207710.84 -30207710.59 -30207710.33 0.0131 0.0021
 Jupiter -87417-03-18 19:39 J -30207558.79 -30207558.68 -30207558.57 0.0511 0.0443
 Uranus -87417-10-22 02:51 J -30207341.62 -30207341.38 -30207341.13 0.0131 0.0032
 Uranus -87416-10-26 07:11 J -30206972.43 -30206972.20 -30206971.95 0.0131 0.0045

Pluto	-87416-12-24 01:25 J	-30206913.68	-30206913.44	-30206913.19	0.0078	0.0020
Mars	-87416-12-24 14:23 J	-30206913.05	-30206912.90	-30206912.76	0.1854	0.1150
Uranus	-87415-10-30 11:01 J	-30206603.26	-30206603.04	-30206602.80	0.0131	0.0056
Uranus	-87414-11-03 14:08 J	-30206234.11	-30206233.91	-30206233.67	0.0131	0.0067
Uranus	-87413-11-06 17:01 J	-30205864.98	-30205864.79	-30205864.58	0.0131	0.0078
Uranus	-87412-11-10 19:11 J	-30205495.86	-30205495.70	-30205495.49	0.0131	0.0089
Saturn	-87411-01-18 06:42 J	-30205427.36	-30205427.22	-30205427.07	0.0273	0.0216
Jupiter	-87411-09-30 16:18 J	-30205172.05	-30205171.82	-30205171.59	0.0520	0.0084
Uranus	-87411-11-14 21:20 J	-30205126.75	-30205126.61	-30205126.43	0.0131	0.0099
Saturn	-87410-01-29 21:35 J	-30205050.82	-30205050.60	-30205050.37	0.0272	0.0086
Uranus	-87410-11-18 23:30 J	-30204757.66	-30204757.52	-30204757.38	0.0131	0.0108
Saturn	-87409-02-10 11:01 J	-30204674.27	-30204674.04	-30204673.80	0.0272	0.0046
Uranus	-87409-11-22 00:56 J	-30204388.56	-30204388.46	-30204388.34	0.0131	0.0118
Saturn	-87408-02-21 00:42 J	-30204297.65	-30204297.47	-30204297.29	0.0271	0.0175
Uranus	-87408-11-26 02:23 J	-30204019.45	-30204019.40	-30204019.32	0.0131	0.0126
Jupiter	-87405-03-23 07:11 J	-30203171.42	-30203171.20	-30203170.98	0.0509	0.0157
Jupiter	-87399-10-05 13:54 J	-30200784.13	-30200783.92	-30200783.71	0.0522	0.0230
Saturn	-87396-07-24 21:06 J	-30199760.81	-30199760.62	-30199760.41	0.0287	0.0175
Saturn	-87395-08-08 16:47 J	-30199381.05	-30199380.80	-30199380.55	0.0288	0.0006
Saturn	-87394-08-23 12:13 J	-30199001.19	-30199000.99	-30199000.78	0.0288	0.0163
Jupiter	-87393-03-27 20:23 J	-30198783.87	-30198783.65	-30198783.42	0.0506	0.0131
Uranus	-87386-02-17 03:06 J	-30196266.37	-30196266.37	-30196266.35	0.0142	0.0141
Uranus	-87385-02-21 16:32 J	-30195896.89	-30195896.81	-30195896.71	0.0142	0.0132
Uranus	-87384-02-25 06:56 J	-30195527.32	-30195527.21	-30195527.06	0.0143	0.0121
Uranus	-87383-03-01 22:47 J	-30195157.69	-30195157.55	-30195157.37	0.0143	0.0110
Saturn	-87382-01-13 08:37 J	-30194840.14	-30194840.14	-30194840.10	0.0273	0.0273
Uranus	-87382-03-06 16:32 J	-30194787.99	-30194787.81	-30194787.63	0.0144	0.0096
Saturn	-87381-01-25 00:13 J	-30194463.68	-30194463.49	-30194463.28	0.0272	0.0146
Uranus	-87381-03-10 11:01 J	-30194418.24	-30194418.04	-30194417.83	0.0145	0.0083
Jupiter	-87381-04-01 07:54 J	-30194396.29	-30194396.17	-30194396.03	0.0504	0.0412

Saturn -87380-02-04 14:08 J -30194087.15 -30194086.91 -30194086.67 0.0272 0.0014
 Uranus -87380-03-15 06:42 J -30194048.43 -30194048.22 -30194047.99 0.0145 0.0068
 Saturn -87379-02-16 02:51 J -30193710.58 -30193710.38 -30193710.16 0.0271 0.0118
 Uranus -87379-03-20 03:49 J -30193678.57 -30193678.34 -30193678.10 0.0146 0.0053
 Saturn -87378-02-27 16:47 J -30193333.89 -30193333.80 -30193333.69 0.0271 0.0245
 Uranus -87378-03-25 02:08 J -30193308.65 -30193308.41 -30193308.16 0.0146 0.0037
 Uranus -87377-03-29 01:39 J -30192938.67 -30192938.43 -30192938.18 0.0147 0.0021
 Uranus -87376-04-03 02:23 J -30192568.65 -30192568.40 -30192568.15 0.0147 0.0004
 Uranus -87375-04-08 04:03 J -30192198.58 -30192198.33 -30192198.08 0.0147 0.0013
 Uranus -87374-04-13 06:56 J -30191828.45 -30191828.21 -30191827.96 0.0148 0.0030
 Uranus -87373-04-17 10:47 J -30191458.28 -30191458.05 -30191457.80 0.0148 0.0048
 Uranus -87372-04-22 15:35 J -30191088.06 -30191087.85 -30191087.60 0.0148 0.0065
 Uranus -87371-04-27 21:49 J -30190717.80 -30190717.59 -30190717.38 0.0148 0.0081
 Uranus -87370-05-03 04:32 J -30190347.48 -30190347.31 -30190347.10 0.0148 0.0098
 Uranus -87369-05-07 12:13 J -30189977.14 -30189976.99 -30189976.81 0.0148 0.0113
 Uranus -87368-05-12 20:23 J -30189606.76 -30189606.65 -30189606.51 0.0148 0.0128
 Uranus -87367-05-18 05:01 J -30189236.34 -30189236.29 -30189236.20 0.0148 0.0142
 Saturn -87367-07-18 08:23 J -30189175.26 -30189175.15 -30189175.02 0.0286 0.0250
 Saturn -87366-08-02 03:06 J -30188795.61 -30188795.37 -30188795.12 0.0287 0.0086
 Saturn -87365-08-15 23:01 J -30188415.78 -30188415.54 -30188415.30 0.0287 0.0084
 Saturn -87364-08-30 17:59 J -30188035.86 -30188035.75 -30188035.61 0.0288 0.0249
 Mars -87358-06-27 17:01 J -30185908.96 -30185908.79 -30185908.62 0.1698 0.0863
 Saturn -87352-01-19 09:49 J -30183876.25 -30183876.09 -30183875.92 0.0273 0.0197
 Saturn -87351-01-31 00:42 J -30183499.69 -30183499.47 -30183499.23 0.0272 0.0068
 Neptune -87351-09-20 15:20 J -30183266.89 -30183266.86 -30183266.78 0.0088 0.0087
 Saturn -87350-02-11 14:37 J -30183123.12 -30183122.89 -30183122.66 0.0272 0.0064
 Neptune -87350-09-23 05:01 J -30182899.47 -30182899.29 -30182899.08 0.0088 0.0060
 Saturn -87349-02-23 04:32 J -30182746.47 -30182746.31 -30182746.14 0.0271 0.0192
 Neptune -87349-09-24 18:27 J -30182531.97 -30182531.73 -30182531.48 0.0088 0.0033
 Neptune -87348-09-27 07:54 J -30182164.43 -30182164.17 -30182163.91 0.0088 0.0005

Uranus -87347-08-25 02:51 J -30181832.39 -30181832.38 -30181832.34 0.0137 0.0136
 Neptune -87347-09-29 20:37 J -30181796.88 -30181796.64 -30181796.38 0.0088 0.0022
 Uranus -87346-08-29 21:20 J -30181462.71 -30181462.61 -30181462.50 0.0136 0.0125
 Neptune -87346-10-02 09:06 J -30181429.32 -30181429.12 -30181428.88 0.0088 0.0049
 Uranus -87345-09-02 14:37 J -30181093.04 -30181092.89 -30181092.75 0.0136 0.0113
 Neptune -87345-10-03 22:03 J -30181061.71 -30181061.58 -30181061.44 0.0088 0.0075
 Uranus -87344-09-07 06:13 J -30180723.39 -30180723.24 -30180723.05 0.0135 0.0102
 Uranus -87343-09-11 21:06 J -30180353.80 -30180353.62 -30180353.41 0.0135 0.0089
 Uranus -87342-09-16 11:01 J -30179984.24 -30179984.04 -30179983.81 0.0134 0.0077
 Uranus -87341-09-19 23:30 J -30179614.73 -30179614.52 -30179614.28 0.0134 0.0064
 Uranus -87340-09-24 11:44 J -30179245.25 -30179245.01 -30179244.77 0.0133 0.0051
 Jupiter -87340-09-24 15:35 J -30179244.96 -30179244.85 -30179244.72 0.0517 0.0448 *
 Uranus -87339-09-28 22:03 J -30178875.82 -30178875.58 -30178875.32 0.0133 0.0038
 Uranus -87338-10-03 07:39 J -30178506.43 -30178506.18 -30178505.92 0.0133 0.0025
 Saturn -87337-07-26 05:01 J -30178209.49 -30178209.29 -30178209.06 0.0287 0.0153
 Uranus -87337-10-06 16:18 J -30178137.07 -30178136.82 -30178136.56 0.0132 0.0012
 Mars -87337-12-27 09:20 J -30178055.30 -30178055.11 -30178054.92 0.1847 0.0052
 Saturn -87336-08-10 00:27 J -30177829.73 -30177829.48 -30177829.22 0.0288 0.0016
 Uranus -87336-10-11 00:13 J -30177767.75 -30177767.49 -30177767.24 0.0132 0.0001
 Saturn -87335-08-24 19:39 J -30177449.86 -30177449.68 -30177449.47 0.0288 0.0184
 Uranus -87335-10-15 06:42 J -30177398.48 -30177398.22 -30177397.96 0.0132 0.0013
 Jupiter -87334-03-19 03:20 J -30177243.44 -30177243.36 -30177243.28 0.0512 0.0474
 Uranus -87334-10-19 12:27 J -30177029.22 -30177028.98 -30177028.72 0.0131 0.0025
 Uranus -87333-10-22 17:30 J -30176660.01 -30176659.77 -30176659.52 0.0131 0.0036
 Uranus -87332-10-26 22:03 J -30176290.81 -30176290.58 -30176290.33 0.0131 0.0048
 Uranus -87331-10-31 01:54 J -30175921.64 -30175921.42 -30175921.19 0.0131 0.0059
 Uranus -87330-11-04 05:15 J -30175552.49 -30175552.28 -30175552.06 0.0131 0.0070
 Uranus -87329-11-07 07:54 J -30175183.36 -30175183.17 -30175182.96 0.0131 0.0081
 Jupiter -87328-09-29 16:18 J -30174857.05 -30174856.82 -30174856.59 0.0519 0.0133
 Uranus -87328-11-11 10:32 J -30174814.23 -30174814.06 -30174813.87 0.0131 0.0091

Uranus	-87327-11-15 12:27 J	-30174445.13	-30174444.98	-30174444.81	0.0131	0.0101
Uranus	-87326-11-19 14:23 J	-30174076.02	-30174075.90	-30174075.75	0.0131	0.0110
Uranus	-87325-11-22 15:49 J	-30173706.92	-30173706.84	-30173706.72	0.0131	0.0120
Uranus	-87324-11-26 17:15 J	-30173337.82	-30173337.78	-30173337.71	0.0131	0.0128
Saturn	-87323-01-14 13:54 J	-30173289.00	-30173288.92	-30173288.83	0.0273	0.0253
Saturn	-87322-01-26 05:30 J	-30172912.48	-30172912.27	-30172912.06	0.0272	0.0125
Jupiter	-87322-03-23 16:18 J	-30172856.03	-30172855.82	-30172855.60	0.0509	0.0183
Saturn	-87321-02-06 19:11 J	-30172535.93	-30172535.70	-30172535.46	0.0272	0.0008
Saturn	-87320-02-17 08:23 J	-30172159.35	-30172159.15	-30172158.94	0.0271	0.0136
Saturn	-87319-02-28 22:18 J	-30171782.61	-30171782.57	-30171782.49	0.0271	0.0262
Jupiter	-87316-10-04 18:42 J	-30170468.93	-30170468.72	-30170468.50	0.0522	0.0195
Mars	-87311-06-19 16:18 J	-30168749.95	-30168749.82	-30168749.69	0.1676	0.1240
Jupiter	-87310-03-28 03:49 J	-30168468.56	-30168468.34	-30168468.11	0.0507	0.0101
Saturn	-87308-07-19 17:15 J	-30167623.92	-30167623.78	-30167623.62	0.0286	0.0227
Saturn	-87307-08-03 11:59 J	-30167244.24	-30167244.00	-30167243.75	0.0287	0.0064
Saturn	-87306-08-18 07:39 J	-30166864.41	-30166864.18	-30166863.94	0.0287	0.0105
Saturn	-87305-09-01 02:23 J	-30166484.48	-30166484.40	-30166484.30	0.0288	0.0268
Uranus	-87302-02-17 16:03 J	-30165584.89	-30165584.83	-30165584.76	0.0141	0.0136
Uranus	-87301-02-22 05:15 J	-30165215.38	-30165215.28	-30165215.16	0.0142	0.0126
Uranus	-87300-02-25 19:39 J	-30164845.81	-30164845.68	-30164845.52	0.0143	0.0116
Uranus	-87299-03-02 11:44 J	-30164476.17	-30164476.01	-30164475.83	0.0143	0.0104
Uranus	-87298-03-07 04:47 J	-30164106.48	-30164106.30	-30164106.10	0.0144	0.0091
Jupiter	-87298-04-01 10:03 J	-30164081.23	-30164081.08	-30164080.91	0.0505	0.0369
Uranus	-87297-03-10 23:01 J	-30163736.73	-30163736.54	-30163736.31	0.0144	0.0078
Uranus	-87296-03-15 18:42 J	-30163366.94	-30163366.72	-30163366.49	0.0145	0.0063
Uranus	-87295-03-20 15:35 J	-30162997.08	-30162996.85	-30162996.61	0.0146	0.0048
Uranus	-87294-03-25 13:39 J	-30162627.17	-30162626.93	-30162626.68	0.0146	0.0032
Saturn	-87293-01-21 14:23 J	-30162325.08	-30162324.90	-30162324.72	0.0274	0.0177
Uranus	-87293-03-29 12:56 J	-30162257.21	-30162256.96	-30162256.71	0.0146	0.0016
Saturn	-87292-02-01 05:30 J	-30161948.50	-30161948.27	-30161948.03	0.0273	0.0047

Uranus -87292-04-03 13:25 J -30161887.19 -30161886.94 -30161886.68 0.0147 0.0003
 Saturn -87291-02-12 19:25 J -30161571.92 -30161571.69 -30161571.46 0.0272 0.0083
 Uranus -87291-04-08 15:06 J -30161517.12 -30161516.87 -30161516.62 0.0147 0.0017
 Saturn -87290-02-24 09:49 J -30161195.24 -30161195.09 -30161194.94 0.0272 0.0210
 Uranus -87290-04-13 17:44 J -30161146.99 -30161146.76 -30161146.50 0.0147 0.0035
 Uranus -87289-04-17 21:49 J -30160776.82 -30160776.59 -30160776.35 0.0148 0.0051
 Uranus -87288-04-23 02:37 J -30160406.60 -30160406.39 -30160406.15 0.0148 0.0068
 Uranus -87287-04-28 08:37 J -30160036.34 -30160036.14 -30160035.92 0.0148 0.0084
 Uranus -87286-05-03 15:35 J -30159666.02 -30159665.85 -30159665.65 0.0148 0.0100
 Uranus -87285-05-07 23:01 J -30159295.69 -30159295.54 -30159295.37 0.0148 0.0115
 Uranus -87284-05-13 07:25 J -30158925.30 -30158925.19 -30158925.06 0.0148 0.0129
 Uranus -87283-05-18 15:49 J -30158554.88 -30158554.84 -30158554.75 0.0148 0.0143
 Saturn -87278-07-28 16:18 J -30156658.04 -30156657.82 -30156657.58 0.0287 0.0129
 Saturn -87277-08-11 11:30 J -30156278.27 -30156278.02 -30156277.77 0.0288 0.0039
 Saturn -87276-08-26 06:27 J -30155898.39 -30155898.23 -30155898.04 0.0288 0.0205
 Neptune -87268-03-15 22:47 J -30153139.62 -30153139.55 -30153139.41 0.0089 0.0081
 Neptune -87267-03-18 08:51 J -30152772.32 -30152772.13 -30152771.92 0.0089 0.0054
 Neptune -87266-03-20 18:42 J -30152404.95 -30152404.72 -30152404.47 0.0089 0.0028
 Neptune -87265-03-22 05:01 J -30152037.55 -30152037.29 -30152037.04 0.0089 0.0002
 Saturn -87264-01-15 19:54 J -30151737.79 -30151737.67 -30151737.54 0.0273 0.0233
 Neptune -87264-03-24 14:51 J -30151670.12 -30151669.88 -30151669.63 0.0089 0.0025
 Saturn -87263-01-27 11:30 J -30151361.23 -30151361.02 -30151360.79 0.0272 0.0106
 Neptune -87263-03-27 01:11 J -30151302.65 -30151302.45 -30151302.24 0.0089 0.0051
 Uranus -87263-08-25 16:03 J -30151150.90 -30151150.83 -30151150.75 0.0137 0.0130
 Saturn -87262-02-08 01:39 J -30150984.67 -30150984.43 -30150984.20 0.0272 0.0026
 Neptune -87262-03-29 11:15 J -30150935.13 -30150935.03 -30150934.89 0.0089 0.0078
 Uranus -87262-08-30 10:18 J -30150781.18 -30150781.07 -30150780.93 0.0137 0.0120
 Saturn -87261-02-19 15:06 J -30150608.07 -30150607.87 -30150607.67 0.0271 0.0154
 Uranus -87261-09-03 03:20 J -30150411.49 -30150411.36 -30150411.18 0.0136 0.0108
 Uranus -87260-09-07 20:08 J -30150041.84 -30150041.66 -30150041.47 0.0135 0.0096

Uranus -87259-09-12 11:15 J -30149672.23 -30149672.03 -30149671.82 0.0135 0.0083
 Uranus -87258-09-17 00:42 J -30149302.67 -30149302.47 -30149302.23 0.0134 0.0072
 Mars -87258-12-31 04:47 J -30149197.45 -30149197.30 -30149197.14 0.1841 0.1045
 Uranus -87257-09-20 13:54 J -30148933.15 -30148932.92 -30148932.68 0.0134 0.0058
 Jupiter -87257-09-23 18:13 J -30148929.81 -30148929.74 -30148929.65 0.0517 0.0486
 Pluto -87256-06-19 21:49 J -30148660.74 -30148660.59 -30148660.41 0.0067 0.0052
 Uranus -87256-09-25 01:54 J -30148563.66 -30148563.42 -30148563.17 0.0133 0.0045
 Pluto -87255-06-21 13:54 J -30148294.09 -30148293.92 -30148293.69 0.0067 0.0045
 Uranus -87255-09-29 12:27 J -30148194.23 -30148193.98 -30148193.73 0.0133 0.0033
 Uranus -87254-10-03 22:18 J -30147824.83 -30147824.57 -30147824.32 0.0133 0.0020
 Uranus -87253-10-07 06:42 J -30147455.47 -30147455.22 -30147454.96 0.0132 0.0008
 Uranus -87252-10-11 14:37 J -30147086.15 -30147085.89 -30147085.64 0.0132 0.0005
 Jupiter -87251-03-18 09:49 J -30146928.12 -30146928.09 -30146928.05 0.0512 0.0506
 Uranus -87251-10-15 21:06 J -30146716.87 -30146716.62 -30146716.36 0.0132 0.0017
 Uranus -87250-10-20 02:51 J -30146347.62 -30146347.38 -30146347.12 0.0132 0.0029
 Saturn -87249-07-21 05:15 J -30146072.45 -30146072.28 -30146072.10 0.0286 0.0203
 Uranus -87249-10-23 08:08 J -30145978.39 -30145978.16 -30145977.91 0.0131 0.0040
 Saturn -87248-08-04 23:59 J -30145692.75 -30145692.50 -30145692.25 0.0287 0.0040
 Uranus -87248-10-27 12:42 J -30145609.19 -30145608.97 -30145608.72 0.0131 0.0052
 Saturn -87247-08-19 19:25 J -30145312.91 -30145312.69 -30145312.46 0.0287 0.0128
 Uranus -87247-10-31 16:47 J -30145240.02 -30145239.80 -30145239.57 0.0131 0.0062
 Saturn -87246-09-03 13:39 J -30144932.93 -30144932.93 -30144932.92 0.0288 0.0287
 Uranus -87246-11-04 19:54 J -30144870.86 -30144870.67 -30144870.44 0.0131 0.0073
 Jupiter -87245-09-28 21:20 J -30144541.83 -30144541.61 -30144541.38 0.0519 0.0163
 Uranus -87245-11-07 23:15 J -30144501.72 -30144501.53 -30144501.33 0.0131 0.0083
 Uranus -87244-11-12 01:39 J -30144132.59 -30144132.43 -30144132.24 0.0131 0.0093
 Uranus -87243-11-16 03:35 J -30143763.48 -30143763.35 -30143763.17 0.0131 0.0103
 Uranus -87242-11-20 05:30 J -30143394.38 -30143394.27 -30143394.12 0.0131 0.0112
 Uranus -87241-11-23 06:56 J -30143025.29 -30143025.21 -30143025.09 0.0131 0.0121
 Uranus -87240-11-27 08:23 J -30142656.18 -30142656.15 -30142656.08 0.0131 0.0128

Jupiter -87239-03-22 17:15 J -30142540.98 -30142540.78 -30142540.57 0.0510 0.0231
 Saturn -87234-01-22 19:54 J -30140773.87 -30140773.67 -30140773.48 0.0274 0.0157
 Saturn -87233-02-03 11:01 J -30140397.27 -30140397.04 -30140396.80 0.0273 0.0027
 Jupiter -87233-10-03 21:49 J -30140153.81 -30140153.59 -30140153.36 0.0521 0.0155
 Saturn -87232-02-14 01:11 J -30140020.66 -30140020.45 -30140020.22 0.0272 0.0102
 Mars -87232-06-22 04:32 J -30139892.50 -30139892.31 -30139892.12 0.1681 0.0434
 Saturn -87231-02-25 15:49 J -30139643.96 -30139643.84 -30139643.70 0.0272 0.0228
 Jupiter -87227-03-27 03:35 J -30138153.58 -30138153.35 -30138153.12 0.0508 0.0050
 Jupiter -87221-10-08 18:13 J -30135765.84 -30135765.74 -30135765.63 0.0523 0.0465
 Saturn -87220-07-15 12:27 J -30135486.06 -30135485.98 -30135485.87 0.0286 0.0264
 Uranus -87219-02-13 19:11 J -30135272.72 -30135272.70 -30135272.64 0.0141 0.0139
 Saturn -87219-07-30 05:44 J -30135106.49 -30135106.26 -30135106.02 0.0287 0.0105
 Uranus -87218-02-18 07:39 J -30134903.27 -30134903.18 -30134903.08 0.0141 0.0130
 Saturn -87218-08-14 00:56 J -30134726.71 -30134726.46 -30134726.21 0.0288 0.0063
 Uranus -87217-02-22 20:37 J -30134533.75 -30134533.64 -30134533.49 0.0142 0.0121
 Saturn -87217-08-27 19:54 J -30134346.82 -30134346.67 -30134346.51 0.0288 0.0226
 Uranus -87216-02-26 11:30 J -30134164.17 -30134164.02 -30134163.86 0.0143 0.0109
 Uranus -87215-03-03 03:06 J -30133794.54 -30133794.37 -30133794.18 0.0143 0.0098
 Jupiter -87215-03-31 16:03 J -30133766.00 -30133765.83 -30133765.66 0.0506 0.0332
 Uranus -87214-03-07 19:54 J -30133424.85 -30133424.67 -30133424.45 0.0144 0.0085
 Uranus -87213-03-11 14:08 J -30133055.11 -30133054.91 -30133054.68 0.0144 0.0072
 Uranus -87212-03-16 09:35 J -30132685.31 -30132685.10 -30132684.86 0.0145 0.0057
 Uranus -87211-03-21 06:42 J -30132315.46 -30132315.22 -30132314.98 0.0146 0.0042
 Uranus -87210-03-26 04:32 J -30131945.55 -30131945.31 -30131945.06 0.0146 0.0026
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 Uranus -87208-04-04 04:03 J -30131205.58 -30131205.33 -30131205.08 0.0147 0.0006
 Uranus -87207-04-09 05:30 J -30130835.51 -30130835.27 -30130835.01 0.0147 0.0023
 Uranus -87206-04-14 08:23 J -30130465.38 -30130465.15 -30130464.90 0.0147 0.0039
 Saturn -87205-01-18 03:20 J -30130186.50 -30130186.36 -30130186.21 0.0273 0.0212
 Uranus -87205-04-18 12:13 J -30130095.22 -30130094.99 -30130094.75 0.0148 0.0055

Saturn -87204-01-28 19:11 J -30129809.93 -30129809.70 -30129809.48 0.0272 0.0085
 Uranus -87204-04-23 17:30 J -30129724.99 -30129724.77 -30129724.55 0.0148 0.0071
 Saturn -87203-02-09 08:51 J -30129433.36 -30129433.13 -30129432.89 0.0272 0.0045
 Uranus -87203-04-28 23:15 J -30129354.73 -30129354.53 -30129354.32 0.0148 0.0087
 Saturn -87202-02-20 22:32 J -30129056.74 -30129056.56 -30129056.37 0.0271 0.0173
 Uranus -87202-05-04 05:59 J -30128984.42 -30128984.25 -30128984.05 0.0148 0.0103
 Uranus -87201-05-08 13:39 J -30128614.08 -30128613.93 -30128613.77 0.0148 0.0117
 Uranus -87200-05-13 21:35 J -30128243.70 -30128243.60 -30128243.46 0.0148 0.0131
 Uranus -87199-05-19 06:13 J -30127873.28 -30127873.24 -30127873.16 0.0148 0.0144
 Saturn -87190-07-23 19:54 J -30124520.87 -30124520.67 -30124520.47 0.0286 0.0178
 Saturn -87189-08-06 14:23 J -30124141.15 -30124140.90 -30124140.65 0.0287 0.0014
 Saturn -87188-08-21 09:49 J -30123761.30 -30123761.09 -30123760.87 0.0287 0.0152
 Neptune -87186-09-22 05:59 J -30122999.38 -30122999.25 -30122999.10 0.0088 0.0075
 Neptune -87185-09-23 19:54 J -30122631.89 -30122631.67 -30122631.45 0.0088 0.0048
 Neptune -87184-09-26 09:06 J -30122264.37 -30122264.12 -30122263.86 0.0088 0.0021
 Neptune -87183-09-28 22:18 J -30121896.82 -30121896.57 -30121896.30 0.0088 0.0006
 Neptune -87182-10-01 11:15 J -30121529.27 -30121529.03 -30121528.78 0.0088 0.0033
 Neptune -87181-10-02 23:59 J -30121161.68 -30121161.50 -30121161.29 0.0088 0.0059
 Uranus -87180-08-21 10:03 J -30120839.12 -30120839.08 -30120839.02 0.0138 0.0135
 Neptune -87180-10-05 12:42 J -30120794.02 -30120793.97 -30120793.90 0.0088 0.0086
 Uranus -87179-08-26 05:44 J -30120469.35 -30120469.26 -30120469.14 0.0137 0.0125
 Uranus -87178-08-31 00:42 J -30120099.62 -30120099.47 -30120099.33 0.0137 0.0113
 Uranus -87177-09-03 17:30 J -30119729.92 -30119729.77 -30119729.57 0.0136 0.0102
 Saturn -87176-01-12 08:23 J -30119599.22 -30119599.15 -30119599.09 0.0275 0.0263
 Uranus -87176-09-08 10:18 J -30119360.25 -30119360.07 -30119359.86 0.0135 0.0090
 Saturn -87175-01-24 01:39 J -30119222.62 -30119222.43 -30119222.21 0.0274 0.0138
 Uranus -87175-09-13 01:25 J -30118990.65 -30118990.44 -30118990.22 0.0135 0.0077
 Saturn -87174-02-04 17:15 J -30118846.02 -30118845.78 -30118845.54 0.0273 0.0008
 Uranus -87174-09-17 15:35 J -30118621.07 -30118620.85 -30118620.62 0.0134 0.0065
 Saturn -87173-02-16 07:25 J -30118469.39 -30118469.19 -30118468.96 0.0272 0.0122

Uranus	-87173-09-21 04:32 J	-30118251.55	-30118251.31	-30118251.07	0.0134	0.0052
Saturn	-87172-02-26 22:32 J	-30118092.65	-30118092.56	-30118092.45	0.0272	0.0246
Uranus	-87172-09-25 16:32 J	-30117882.06	-30117881.81	-30117881.56	0.0133	0.0040
Uranus	-87171-09-30 03:06 J	-30117512.62	-30117512.37	-30117512.12	0.0133	0.0027
Uranus	-87170-10-04 12:42 J	-30117143.23	-30117142.97	-30117142.71	0.0133	0.0015
Pluto	-87170-12-25 13:39 J	-30117061.15	-30117060.93	-30117060.67	0.0078	0.0023
Uranus	-87169-10-07 21:20 J	-30116773.87	-30116773.61	-30116773.36	0.0132	0.0003
Uranus	-87168-10-12 05:01 J	-30116404.55	-30116404.29	-30116404.03	0.0132	0.0009
Uranus	-87167-10-16 11:30 J	-30116035.27	-30116035.02	-30116034.76	0.0132	0.0021
Uranus	-87166-10-20 17:30 J	-30115666.01	-30115665.77	-30115665.51	0.0132	0.0033
Uranus	-87165-10-23 22:47 J	-30115296.78	-30115296.55	-30115296.30	0.0131	0.0044
Uranus	-87164-10-28 03:20 J	-30114927.58	-30114927.36	-30114927.12	0.0131	0.0055
Uranus	-87163-11-01 07:25 J	-30114558.40	-30114558.19	-30114557.96	0.0131	0.0066
Jupiter	-87162-09-28 16:47 J	-30114227.01	-30114226.80	-30114226.58	0.0518	0.0222
Uranus	-87162-11-05 11:01 J	-30114189.24	-30114189.04	-30114188.83	0.0131	0.0076
Saturn	-87161-07-17 03:35 J	-30113934.48	-30113934.35	-30113934.21	0.0286	0.0240
Uranus	-87161-11-08 13:54 J	-30113820.09	-30113819.92	-30113819.71	0.0131	0.0086
Saturn	-87160-07-31 21:06 J	-30113554.86	-30113554.62	-30113554.37	0.0287	0.0080
Uranus	-87160-11-12 16:32 J	-30113450.96	-30113450.81	-30113450.62	0.0131	0.0096
Saturn	-87159-08-15 16:18 J	-30113175.06	-30113174.82	-30113174.58	0.0288	0.0087
Uranus	-87159-11-16 18:27 J	-30113081.85	-30113081.73	-30113081.55	0.0131	0.0105
Saturn	-87158-08-30 10:47 J	-30112795.16	-30112795.05	-30112794.91	0.0288	0.0249
Uranus	-87158-11-20 20:37 J	-30112712.75	-30112712.64	-30112712.50	0.0131	0.0113
Uranus	-87157-11-23 22:03 J	-30112343.65	-30112343.58	-30112343.47	0.0131	0.0122
Jupiter	-87156-03-21 21:20 J	-30112225.80	-30112225.61	-30112225.41	0.0511	0.0271
Uranus	-87156-11-27 23:30 J	-30111974.56	-30111974.52	-30111974.46	0.0131	0.0129
Mars	-87153-06-24 17:44 J	-30111034.95	-30111034.76	-30111034.57	0.1686	0.0408
Jupiter	-87150-10-03 16:32 J	-30109839.04	-30109838.81	-30109838.57	0.0520	0.0093
Saturn	-87146-01-19 11:01 J	-30108635.20	-30108635.04	-30108634.86	0.0273	0.0193
Saturn	-87145-01-31 02:51 J	-30108258.61	-30108258.38	-30108258.15	0.0272	0.0064

Saturn -87144-02-10 16:47 J -30107882.04 -30107881.80 -30107881.57 0.0272 0.0065
 Jupiter -87144-03-26 10:03 J -30107838.31 -30107838.08 -30107837.85 0.0508 0.0018
 Saturn -87143-02-22 06:27 J -30107505.39 -30107505.23 -30107505.05 0.0271 0.0192
 Jupiter -87138-10-08 18:27 J -30105450.87 -30105450.73 -30105450.59 0.0523 0.0416
 Uranus -87135-02-14 11:01 J -30104591.12 -30104591.04 -30104590.97 0.0141 0.0133
 Uranus -87134-02-18 22:32 J -30104221.66 -30104221.56 -30104221.42 0.0141 0.0124
 Uranus -87133-02-23 11:59 J -30103852.13 -30103852.00 -30103851.84 0.0142 0.0114
 Uranus -87132-02-27 02:08 J -30103482.55 -30103482.41 -30103482.22 0.0143 0.0104
 Jupiter -87132-03-30 21:20 J -30103450.79 -30103450.61 -30103450.42 0.0506 0.0295
 Mars -87132-12-24 16:18 J -30103181.99 -30103181.82 -30103181.66 0.1863 0.0946
 Uranus -87131-03-03 18:13 J -30103112.92 -30103112.74 -30103112.54 0.0143 0.0091
 Saturn -87131-07-25 11:30 J -30102969.23 -30102969.02 -30102968.80 0.0286 0.0153
 Uranus -87130-03-08 10:47 J -30102743.24 -30102743.05 -30102742.83 0.0144 0.0079
 Saturn -87130-08-09 05:59 J -30102589.50 -30102589.25 -30102589.00 0.0287 0.0011
 Uranus -87129-03-12 05:01 J -30102373.50 -30102373.29 -30102373.06 0.0144 0.0066
 Saturn -87129-08-23 01:11 J -30102209.64 -30102209.45 -30102209.24 0.0287 0.0175
 Uranus -87128-03-17 00:27 J -30102003.71 -30102003.48 -30102003.25 0.0145 0.0051
 Uranus -87127-03-21 20:51 J -30101633.86 -30101633.63 -30101633.38 0.0146 0.0037
 Uranus -87126-03-26 18:42 J -30101263.96 -30101263.72 -30101263.47 0.0146 0.0022
 Uranus -87125-03-30 17:44 J -30100894.01 -30100893.76 -30100893.51 0.0146 0.0006
 Uranus -87124-04-04 17:59 J -30100524.00 -30100523.75 -30100523.50 0.0147 0.0010
 Uranus -87123-04-09 19:25 J -30100153.93 -30100153.69 -30100153.44 0.0147 0.0026
 Uranus -87122-04-14 22:03 J -30099783.81 -30099783.58 -30099783.33 0.0147 0.0043
 Uranus -87121-04-19 01:54 J -30099413.64 -30099413.42 -30099413.18 0.0148 0.0059
 Uranus -87120-04-24 06:42 J -30099043.42 -30099043.22 -30099042.99 0.0148 0.0075
 Uranus -87119-04-29 12:42 J -30098673.16 -30098672.97 -30098672.76 0.0148 0.0090
 Uranus -87118-05-04 19:25 J -30098302.85 -30098302.69 -30098302.50 0.0148 0.0105
 Saturn -87117-01-14 15:20 J -30098047.95 -30098047.86 -30098047.74 0.0275 0.0244
 Uranus -87117-05-09 02:37 J -30097932.52 -30097932.39 -30097932.22 0.0148 0.0119
 Saturn -87116-01-25 08:51 J -30097671.34 -30097671.13 -30097670.91 0.0273 0.0117

Uranus -87116-05-14 10:47 J -30097562.15 -30097562.05 -30097561.92 0.0148 0.0132
 Saturn -87115-02-05 23:59 J -30097294.73 -30097294.50 -30097294.26 0.0273 0.0014
 Uranus -87115-05-19 19:25 J -30097191.74 -30097191.69 -30097191.63 0.0148 0.0144
 Saturn -87114-02-17 14:37 J -30096918.09 -30096917.89 -30096917.69 0.0272 0.0141
 Saturn -87113-02-29 05:30 J -30096541.31 -30096541.27 -30096541.20 0.0272 0.0263
 Mars -87106-06-17 23:01 J -30093875.60 -30093875.54 -30093875.48 0.1665 0.1578
 Neptune -87103-03-17 15:06 J -30092872.00 -30092871.87 -30092871.68 0.0089 0.0069
 Neptune -87102-03-20 00:56 J -30092504.66 -30092504.46 -30092504.22 0.0089 0.0043
 Saturn -87102-07-19 18:56 J -30092382.87 -30092382.71 -30092382.54 0.0286 0.0216
 Neptune -87101-03-21 11:15 J -30092137.28 -30092137.03 -30092136.78 0.0089 0.0016
 Saturn -87101-08-02 12:56 J -30092003.21 -30092002.96 -30092002.71 0.0287 0.0055
 Neptune -87100-03-23 21:06 J -30091769.87 -30091769.62 -30091769.37 0.0089 0.0010
 Saturn -87100-08-17 08:37 J -30091623.38 -30091623.14 -30091622.91 0.0288 0.0111
 Neptune -87099-03-26 07:11 J -30091402.43 -30091402.20 -30091401.97 0.0089 0.0036
 Saturn -87099-09-01 03:20 J -30091243.44 -30091243.36 -30091243.28 0.0288 0.0270
 Neptune -87098-03-28 17:01 J -30091034.95 -30091034.79 -30091034.59 0.0089 0.0063
 Uranus -87096-08-21 23:01 J -30090157.60 -30090157.54 -30090157.43 0.0138 0.0130
 Uranus -87095-08-26 19:25 J -30089787.82 -30089787.69 -30089787.56 0.0137 0.0119
 Uranus -87094-08-31 13:54 J -30089418.06 -30089417.92 -30089417.74 0.0137 0.0108
 Uranus -87093-09-04 07:25 J -30089048.35 -30089048.19 -30089047.98 0.0136 0.0096
 Uranus -87092-09-09 00:13 J -30088678.68 -30088678.49 -30088678.28 0.0135 0.0084
 Uranus -87091-09-13 15:20 J -30088309.07 -30088308.86 -30088308.62 0.0135 0.0072
 Uranus -87090-09-18 05:30 J -30087939.49 -30087939.27 -30087939.02 0.0134 0.0060
 Uranus -87089-09-21 18:42 J -30087569.96 -30087569.72 -30087569.47 0.0134 0.0047
 Uranus -87088-09-26 06:42 J -30087200.47 -30087200.22 -30087199.97 0.0134 0.0035
 Saturn -87087-01-20 19:25 J -30087083.87 -30087083.69 -30087083.51 0.0273 0.0173
 Uranus -87087-09-30 17:15 J -30086831.04 -30086830.78 -30086830.53 0.0133 0.0022
 Saturn -87086-02-01 10:32 J -30086707.29 -30086707.06 -30086706.82 0.0272 0.0045
 Uranus -87086-10-05 02:51 J -30086461.64 -30086461.38 -30086461.12 0.0133 0.0010
 Saturn -87085-02-13 00:27 J -30086330.70 -30086330.48 -30086330.25 0.0272 0.0084

Uranus	-87085-10-08 11:30 J	-30086092.28	-30086092.02	-30086091.76	0.0132	0.0002
Saturn	-87084-02-23 14:23 J	-30085954.04	-30085953.90	-30085953.74	0.0271	0.0210
Uranus	-87084-10-12 19:11 J	-30085722.95	-30085722.70	-30085722.44	0.0132	0.0013
Uranus	-87083-10-17 01:54 J	-30085353.67	-30085353.42	-30085353.16	0.0132	0.0025
Uranus	-87082-10-21 07:54 J	-30084984.40	-30084984.17	-30084983.91	0.0132	0.0037
Uranus	-87081-10-24 13:25 J	-30084615.17	-30084614.94	-30084614.69	0.0131	0.0048
Uranus	-87080-10-28 18:13 J	-30084245.96	-30084245.74	-30084245.50	0.0131	0.0058
Jupiter	-87079-09-27 16:03 J	-30083912.03	-30083911.83	-30083911.63	0.0518	0.0270
Uranus	-87079-11-01 22:18 J	-30083876.78	-30083876.57	-30083876.35	0.0131	0.0069
Uranus	-87078-11-06 02:08 J	-30083507.61	-30083507.41	-30083507.21	0.0131	0.0078
Uranus	-87077-11-09 05:01 J	-30083138.47	-30083138.29	-30083138.09	0.0131	0.0088
Uranus	-87076-11-13 07:54 J	-30082769.34	-30082769.17	-30082769.00	0.0131	0.0097
Uranus	-87075-11-17 09:35 J	-30082400.23	-30082400.10	-30082399.94	0.0131	0.0106
Mars	-87074-06-28 06:13 J	-30082177.37	-30082177.24	-30082177.11	0.1691	0.1255
Uranus	-87074-11-21 11:44 J	-30082031.12	-30082031.01	-30082030.88	0.0131	0.0114
Jupiter	-87073-03-21 03:06 J	-30081910.55	-30081910.37	-30081910.19	0.0511	0.0306
Saturn	-87073-07-12 11:59 J	-30081797.02	-30081797.00	-30081796.95	0.0285	0.0282
Uranus	-87073-11-24 12:42 J	-30081662.04	-30081661.97	-30081661.86	0.0131	0.0122
Saturn	-87072-07-27 04:03 J	-30081417.55	-30081417.33	-30081417.10	0.0286	0.0128
Uranus	-87072-11-28 13:54 J	-30081292.94	-30081292.92	-30081292.85	0.0131	0.0130
Saturn	-87071-08-10 22:32 J	-30081037.81	-30081037.56	-30081037.30	0.0287	0.0036
Saturn	-87070-08-25 17:44 J	-30080657.93	-30080657.76	-30080657.57	0.0287	0.0198
Jupiter	-87067-10-02 19:11 J	-30079523.94	-30079523.70	-30079523.47	0.0520	0.0053
Jupiter	-87061-03-25 11:15 J	-30077523.26	-30077523.03	-30077522.80	0.0508	0.0032
Saturn	-87058-01-15 22:47 J	-30076496.69	-30076496.55	-30076496.42	0.0274	0.0225
Saturn	-87057-01-27 15:49 J	-30076120.06	-30076119.84	-30076119.62	0.0273	0.0098
Saturn	-87056-02-07 06:42 J	-30075743.46	-30075743.22	-30075742.98	0.0273	0.0031
Saturn	-87055-02-18 20:51 J	-30075366.81	-30075366.63	-30075366.43	0.0272	0.0159
Jupiter	-87055-10-07 20:23 J	-30075135.82	-30075135.65	-30075135.49	0.0522	0.0371
Mars	-87053-12-27 13:39 J	-30074324.11	-30074323.93	-30074323.74	0.1856	0.0207

Uranus	-87052-02-10 14:51 J	-30074278.93	-30074278.88	-30074278.80	0.0140	0.0135
Uranus	-87051-02-15 02:08 J	-30073909.51	-30073909.41	-30073909.30	0.0141	0.0127
Uranus	-87050-02-19 14:23 J	-30073540.03	-30073539.90	-30073539.76	0.0141	0.0118
Uranus	-87049-02-24 03:20 J	-30073170.50	-30073170.36	-30073170.18	0.0142	0.0108
Jupiter	-87049-03-29 21:06 J	-30073135.82	-30073135.62	-30073135.41	0.0506	0.0244
Uranus	-87048-02-27 17:59 J	-30072800.92	-30072800.75	-30072800.56	0.0143	0.0097
Uranus	-87047-03-04 09:20 J	-30072431.29	-30072431.11	-30072430.89	0.0143	0.0086
Uranus	-87046-03-09 02:37 J	-30072061.60	-30072061.39	-30072061.18	0.0144	0.0072
Uranus	-87045-03-12 20:23 J	-30071691.87	-30071691.65	-30071691.41	0.0144	0.0059
Uranus	-87044-03-17 15:49 J	-30071322.07	-30071321.84	-30071321.60	0.0145	0.0045
Uranus	-87043-03-22 12:27 J	-30070952.22	-30070951.98	-30070951.74	0.0146	0.0031
Saturn	-87043-07-21 09:49 J	-30070831.27	-30070831.09	-30070830.90	0.0286	0.0193
Uranus	-87042-03-27 10:03 J	-30070582.32	-30070582.08	-30070581.83	0.0146	0.0016
Saturn	-87042-08-05 04:03 J	-30070451.58	-30070451.33	-30070451.08	0.0287	0.0032
Uranus	-87041-03-31 09:20 J	-30070212.36	-30070212.11	-30070211.86	0.0146	0.0001
Saturn	-87041-08-18 23:44 J	-30070071.72	-30070071.51	-30070071.28	0.0288	0.0134
Uranus	-87040-04-05 09:20 J	-30069842.35	-30069842.11	-30069841.85	0.0147	0.0016
Uranus	-87039-04-10 11:01 J	-30069472.28	-30069472.04	-30069471.79	0.0147	0.0032
Uranus	-87038-04-15 13:54 J	-30069102.15	-30069101.92	-30069101.67	0.0147	0.0047
Uranus	-87037-04-19 17:44 J	-30068731.98	-30068731.76	-30068731.52	0.0148	0.0063
Uranus	-87036-04-24 22:47 J	-30068361.76	-30068361.55	-30068361.33	0.0148	0.0078
Uranus	-87035-04-30 04:32 J	-30067991.50	-30067991.31	-30067991.10	0.0148	0.0093
Uranus	-87034-05-05 11:01 J	-30067621.20	-30067621.04	-30067620.85	0.0148	0.0108
Uranus	-87033-05-09 18:13 J	-30067250.87	-30067250.74	-30067250.58	0.0148	0.0121
Uranus	-87032-05-15 02:08 J	-30066880.49	-30066880.41	-30066880.28	0.0148	0.0134
Uranus	-87031-05-20 10:47 J	-30066510.09	-30066510.05	-30066510.00	0.0148	0.0145
Saturn	-87028-01-22 03:20 J	-30065532.56	-30065532.36	-30065532.16	0.0273	0.0153
Saturn	-87027-02-02 18:13 J	-30065155.98	-30065155.74	-30065155.50	0.0272	0.0025
Mars	-87027-06-20 09:49 J	-30065018.26	-30065018.09	-30065017.92	0.1670	0.0799
Saturn	-87026-02-14 07:54 J	-30064779.38	-30064779.17	-30064778.94	0.0271	0.0103

Saturn -87025-02-25 21:49 J -30064402.70 -30064402.59 -30064402.44 0.0271 0.0226
 Neptune -87021-09-22 21:06 J -30062731.80 -30062731.62 -30062731.43 0.0088 0.0063
 Neptune -87020-09-25 10:18 J -30062364.29 -30062364.07 -30062363.81 0.0088 0.0036
 Neptune -87019-09-27 23:59 J -30061996.76 -30061996.50 -30061996.24 0.0088 0.0009
 Neptune -87018-09-30 13:11 J -30061629.20 -30061628.95 -30061628.69 0.0088 0.0018
 Neptune -87017-10-02 01:54 J -30061261.63 -30061261.42 -30061261.17 0.0088 0.0045
 Neptune -87016-10-04 14:51 J -30060894.02 -30060893.88 -30060893.71 0.0088 0.0071
 Saturn -87014-07-15 02:51 J -30060245.47 -30060245.38 -30060245.27 0.0285 0.0259
 Saturn -87013-07-28 19:11 J -30059865.93 -30059865.70 -30059865.46 0.0286 0.0104
 Uranus -87013-08-17 16:32 J -30059845.85 -30059845.81 -30059845.72 0.0138 0.0134
 Saturn -87012-08-12 14:23 J -30059486.15 -30059485.90 -30059485.65 0.0287 0.0060
 Uranus -87012-08-22 13:54 J -30059476.02 -30059475.92 -30059475.79 0.0138 0.0123
 Saturn -87011-08-27 09:35 J -30059106.26 -30059106.10 -30059105.93 0.0288 0.0221
 Uranus -87011-08-27 09:49 J -30059106.23 -30059106.09 -30059105.93 0.0137 0.0112 *
 Uranus -87010-09-01 04:47 J -30058736.47 -30058736.30 -30058736.12 0.0136 0.0101
 Pluto -87009-06-22 05:59 J -30058441.50 -30058441.25 -30058440.99 0.0067 0.0022
 Uranus -87009-09-04 22:32 J -30058366.75 -30058366.56 -30058366.36 0.0136 0.0089
 Uranus -87008-09-09 14:51 J -30057997.08 -30057996.88 -30057996.65 0.0135 0.0077
 Uranus -87007-09-14 06:13 J -30057627.47 -30057627.24 -30057627.01 0.0135 0.0065
 Uranus -87006-09-18 20:08 J -30057257.89 -30057257.66 -30057257.41 0.0134 0.0054
 Uranus -87005-09-22 09:06 J -30056888.36 -30056888.12 -30056887.86 0.0134 0.0041
 Uranus -87004-09-26 21:06 J -30056518.87 -30056518.62 -30056518.37 0.0134 0.0029
 Uranus -87003-10-01 07:25 J -30056149.44 -30056149.19 -30056148.92 0.0133 0.0017
 Uranus -87002-10-05 17:15 J -30055780.03 -30055779.78 -30055779.52 0.0133 0.0005
 Uranus -87001-10-09 01:54 J -30055410.68 -30055410.42 -30055410.16 0.0132 0.0007

87TH MILLENNIUM BCE

This is a list of transits of Earth in the 87th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-87000-10-13 09:49 J	-30055041.35	-30055041.09	-30055040.83	0.0132	0.0018		
Saturn	-86999-01-17 05:30 J	-30054945.42	-30054945.27	-30054945.11	0.0274	0.0206		
Uranus	-86999-10-17 16:18 J	-30054672.06	-30054671.82	-30054671.56	0.0132	0.0030		
Saturn	-86998-01-28 22:03 J	-30054568.81	-30054568.58	-30054568.35	0.0273	0.0079		
Uranus	-86998-10-21 22:47 J	-30054302.79	-30054302.55	-30054302.30	0.0132	0.0041		
Saturn	-86997-02-09 12:27 J	-30054192.21	-30054191.98	-30054191.74	0.0272	0.0049		
Uranus	-86997-10-25 04:03 J	-30053933.55	-30053933.33	-30053933.08	0.0131	0.0051		
Saturn	-86996-02-20 02:37 J	-30053815.57	-30053815.39	-30053815.20	0.0272	0.0175		
Jupiter	-86996-09-26 18:42 J	-30053596.90	-30053596.72	-30053596.52	0.0517	0.0309		
Uranus	-86996-10-29 08:37 J	-30053564.34	-30053564.14	-30053563.90	0.0131	0.0063		
Uranus	-86995-11-02 12:42 J	-30053195.16	-30053194.97	-30053194.73	0.0131	0.0073		
Uranus	-86994-11-06 16:32 J	-30052825.99	-30052825.81	-30052825.59	0.0131	0.0082		
Uranus	-86993-11-09 19:39 J	-30052456.84	-30052456.68	-30052456.48	0.0131	0.0091		
Uranus	-86992-11-13 22:18 J	-30052087.72	-30052087.57	-30052087.39	0.0131	0.0100		
Uranus	-86991-11-18 00:13 J	-30051718.62	-30051718.49	-30051718.33	0.0131	0.0108		
Jupiter	-86990-03-21 03:35 J	-30051595.51	-30051595.35	-30051595.18	0.0511	0.0356		
Uranus	-86990-11-22 02:23 J	-30051349.51	-30051349.40	-30051349.28	0.0131	0.0116		
Uranus	-86989-11-25 03:06 J	-30050980.43	-30050980.37	-30050980.26	0.0131	0.0124		
Uranus	-86988-11-29 04:32 J	-30050611.33	-30050611.31	-30050611.26	0.0131	0.0130		
Saturn	-86984-07-22 23:15 J	-30049279.73	-30049279.53	-30049279.33	0.0286	0.0171		
Jupiter	-86984-10-01 15:20 J	-30049209.09	-30049208.86	-30049208.62	0.0519	0.0008		
Saturn	-86983-08-06 17:59 J	-30048900.00	-30048899.75	-30048899.49	0.0287	0.0010		

Saturn	-86982-08-21 14:08 J	-30048520.12	-30048519.91	-30048519.69	0.0288	0.0155
Jupiter	-86978-03-25 14:51 J	-30047208.10	-30047207.88	-30047207.65	0.0510	0.0071
Mars	-86974-12-31 09:49 J	-30045466.22	-30045466.09	-30045465.96	0.1850	0.1323
Jupiter	-86972-10-06 15:06 J	-30044821.05	-30044820.87	-30044820.68	0.0521	0.0311
Saturn	-86970-01-12 16:47 J	-30044357.87	-30044357.80	-30044357.72	0.0274	0.0258
Saturn	-86969-01-24 09:49 J	-30043981.28	-30043981.09	-30043980.87	0.0273	0.0135
Uranus	-86969-02-07 18:56 J	-30043966.73	-30043966.71	-30043966.65	0.0139	0.0138
Saturn	-86968-02-04 00:42 J	-30043604.71	-30043604.47	-30043604.23	0.0272	0.0007
Uranus	-86968-02-11 04:47 J	-30043597.37	-30043597.30	-30043597.19	0.0140	0.0130
Saturn	-86967-02-15 14:08 J	-30043228.12	-30043227.91	-30043227.69	0.0271	0.0120
Uranus	-86967-02-15 15:49 J	-30043227.94	-30043227.84	-30043227.70	0.0141	0.0122 *
Uranus	-86966-02-20 04:03 J	-30042858.46	-30042858.33	-30042858.17	0.0141	0.0112
Saturn	-86966-02-27 04:03 J	-30042851.43	-30042851.33	-30042851.21	0.0271	0.0241
Jupiter	-86966-03-30 03:35 J	-30042820.56	-30042820.35	-30042820.14	0.0507	0.0212
Uranus	-86965-02-24 17:15 J	-30042488.94	-30042488.78	-30042488.60	0.0142	0.0102
Uranus	-86964-02-28 07:39 J	-30042119.37	-30042119.18	-30042118.99	0.0143	0.0091
Uranus	-86963-03-04 23:01 J	-30041749.73	-30041749.54	-30041749.32	0.0143	0.0080
Uranus	-86962-03-09 15:35 J	-30041380.06	-30041379.85	-30041379.62	0.0144	0.0067
Uranus	-86961-03-13 09:35 J	-30041010.32	-30041010.10	-30041009.86	0.0144	0.0054
Uranus	-86960-03-18 04:47 J	-30040640.54	-30040640.30	-30040640.06	0.0145	0.0040
Uranus	-86959-03-23 01:25 J	-30040270.69	-30040270.44	-30040270.20	0.0145	0.0025
Uranus	-86958-03-27 23:01 J	-30039900.79	-30039900.54	-30039900.29	0.0146	0.0011
Uranus	-86957-03-31 22:03 J	-30039530.83	-30039530.58	-30039530.33	0.0146	0.0004
Uranus	-86956-04-05 22:18 J	-30039160.81	-30039160.57	-30039160.32	0.0147	0.0020
Uranus	-86955-04-10 23:59 J	-30038790.74	-30038790.50	-30038790.25	0.0147	0.0035
Saturn	-86955-07-16 15:49 J	-30038693.97	-30038693.84	-30038693.69	0.0285	0.0237
Jupiter	-86954-04-03 15:06 J	-30038432.92	-30038432.87	-30038432.81	0.0505	0.0488
Uranus	-86954-04-16 02:37 J	-30038420.62	-30038420.39	-30038420.14	0.0147	0.0051
Saturn	-86954-07-31 08:37 J	-30038314.38	-30038314.14	-30038313.89	0.0287	0.0081
Uranus	-86953-04-20 06:27 J	-30038050.44	-30038050.23	-30038049.99	0.0148	0.0067

Saturn -86953-08-14 04:03 J -30037934.57 -30037934.33 -30037934.09 0.0287 0.0082
 Uranus -86952-04-25 11:15 J -30037680.22 -30037680.03 -30037679.80 0.0148 0.0082
 Saturn -86952-08-28 23:30 J -30037554.65 -30037554.52 -30037554.38 0.0288 0.0241
 Uranus -86951-04-30 17:01 J -30037309.97 -30037309.79 -30037309.58 0.0148 0.0096
 Uranus -86950-05-05 23:30 J -30036939.67 -30036939.52 -30036939.33 0.0148 0.0110
 Uranus -86949-05-10 06:27 J -30036569.35 -30036569.23 -30036569.06 0.0148 0.0123
 Uranus -86948-05-15 14:23 J -30036198.98 -30036198.90 -30036198.77 0.0148 0.0135
 Mars -86948-06-22 21:06 J -30036160.82 -30036160.62 -30036160.42 0.1674 0.0009
 Uranus -86947-05-20 22:32 J -30035828.57 -30035828.56 -30035828.49 0.0148 0.0146
 Saturn -86940-01-18 11:30 J -30033394.18 -30033394.02 -30033393.84 0.0274 0.0189
 Saturn -86939-01-30 03:20 J -30033017.59 -30033017.36 -30033017.12 0.0273 0.0062
 Neptune -86939-03-16 21:20 J -30032971.67 -30032971.61 -30032971.49 0.0089 0.0083
 Saturn -86938-02-10 17:30 J -30032641.00 -30032640.77 -30032640.54 0.0272 0.0066
 Neptune -86938-03-19 07:11 J -30032604.37 -30032604.20 -30032603.99 0.0089 0.0057
 Saturn -86937-02-22 07:25 J -30032264.35 -30032264.19 -30032264.02 0.0272 0.0191
 Neptune -86937-03-20 17:01 J -30032237.01 -30032236.79 -30032236.53 0.0089 0.0031
 Neptune -86936-03-23 03:06 J -30031869.61 -30031869.37 -30031869.11 0.0089 0.0005
 Neptune -86935-03-25 13:11 J -30031502.19 -30031501.95 -30031501.70 0.0089 0.0022
 Neptune -86934-03-27 23:01 J -30031134.74 -30031134.54 -30031134.31 0.0089 0.0048
 Neptune -86933-03-29 09:20 J -30030767.23 -30030767.11 -30030766.96 0.0089 0.0074
 Uranus -86930-08-14 06:27 J -30029534.24 -30029534.23 -30029534.17 0.0139 0.0138
 Uranus -86929-08-18 05:01 J -30029164.36 -30029164.29 -30029164.17 0.0138 0.0129
 Uranus -86928-08-23 02:23 J -30028794.52 -30028794.40 -30028794.25 0.0138 0.0118
 Uranus -86927-08-27 22:47 J -30028424.71 -30028424.55 -30028424.39 0.0137 0.0107
 Uranus -86926-09-01 17:30 J -30028054.94 -30028054.77 -30028054.57 0.0137 0.0096
 Saturn -86925-07-24 09:20 J -30027728.32 -30027728.11 -30027727.89 0.0286 0.0151
 Uranus -86925-09-05 11:15 J -30027685.22 -30027685.03 -30027684.81 0.0136 0.0084
 Saturn -86924-08-08 04:47 J -30027348.55 -30027348.30 -30027348.04 0.0287 0.0011
 Uranus -86924-09-10 04:03 J -30027315.55 -30027315.33 -30027315.10 0.0135 0.0072
 Pluto -86924-12-26 04:32 J -30027208.47 -30027208.31 -30027208.10 0.0078 0.0054

Saturn	-86923-08-23 01:11 J	-30026968.64	-30026968.45	-30026968.24	0.0288	0.0174
Uranus	-86923-09-14 19:11 J	-30026945.92	-30026945.70	-30026945.45	0.0135	0.0060
Uranus	-86922-09-19 09:35 J	-30026576.34	-30026576.10	-30026575.85	0.0134	0.0048
Uranus	-86921-09-22 22:18 J	-30026206.81	-30026206.57	-30026206.31	0.0134	0.0036
Uranus	-86920-09-27 10:18 J	-30025837.32	-30025837.07	-30025836.81	0.0134	0.0024
Uranus	-86919-10-01 20:51 J	-30025467.89	-30025467.63	-30025467.37	0.0133	0.0012
Uranus	-86918-10-06 06:42 J	-30025098.48	-30025098.22	-30025097.96	0.0133	0.0001
Uranus	-86917-10-09 15:20 J	-30024729.12	-30024728.86	-30024728.60	0.0132	0.0011
Uranus	-86916-10-13 23:01 J	-30024359.79	-30024359.54	-30024359.28	0.0132	0.0023
Uranus	-86915-10-18 06:13 J	-30023990.49	-30023990.24	-30023989.99	0.0132	0.0033
Uranus	-86914-10-22 12:13 J	-30023621.21	-30023620.99	-30023620.73	0.0132	0.0045
Jupiter	-86913-09-25 16:03 J	-30023282.00	-30023281.83	-30023281.66	0.0516	0.0357
Uranus	-86913-10-25 17:59 J	-30023251.98	-30023251.75	-30023251.51	0.0131	0.0055
Uranus	-86912-10-29 22:32 J	-30022882.76	-30022882.56	-30022882.32	0.0131	0.0066
Saturn	-86911-01-13 23:15 J	-30022806.64	-30022806.53	-30022806.42	0.0274	0.0240
Uranus	-86911-11-03 02:51 J	-30022513.57	-30022513.38	-30022513.16	0.0131	0.0075
Saturn	-86910-01-25 15:49 J	-30022430.05	-30022429.84	-30022429.62	0.0273	0.0117
Uranus	-86910-11-07 06:42 J	-30022144.40	-30022144.22	-30022144.01	0.0131	0.0084
Saturn	-86909-02-06 05:59 J	-30022053.48	-30022053.25	-30022053.01	0.0272	0.0011
Uranus	-86909-11-10 09:35 J	-30021775.26	-30021775.10	-30021774.90	0.0131	0.0093
Saturn	-86908-02-16 19:11 J	-30021676.90	-30021676.70	-30021676.49	0.0271	0.0135
Uranus	-86908-11-14 12:13 J	-30021406.14	-30021405.99	-30021405.82	0.0131	0.0101
Saturn	-86907-02-28 08:51 J	-30021300.20	-30021300.13	-30021300.05	0.0271	0.0255
Jupiter	-86907-03-20 09:35 J	-30021280.25	-30021280.10	-30021279.95	0.0513	0.0387
Uranus	-86907-11-18 14:08 J	-30021037.03	-30021036.91	-30021036.76	0.0131	0.0109
Uranus	-86906-11-22 16:18 J	-30020667.93	-30020667.82	-30020667.71	0.0131	0.0116
Uranus	-86905-11-25 17:15 J	-30020298.85	-30020298.78	-30020298.68	0.0131	0.0124
Uranus	-86904-11-29 18:13 J	-30019929.75	-30019929.74	-30019929.68	0.0131	0.0131
Jupiter	-86901-09-30 15:35 J	-30018894.09	-30018893.85	-30018893.61	0.0518	0.0049
Saturn	-86896-07-18 02:37 J	-30017142.55	-30017142.39	-30017142.22	0.0286	0.0217

Jupiter -86895-03-24 22:47 J -30016892.77 -30016892.55 -30016892.32 0.0510 0.0100
 Saturn -86895-08-01 19:54 J -30016762.92 -30016762.67 -30016762.42 0.0287 0.0060
 Saturn -86894-08-16 15:35 J -30016383.08 -30016382.85 -30016382.61 0.0288 0.0103
 Saturn -86893-08-30 11:01 J -30016003.13 -30016003.04 -30016002.92 0.0288 0.0260
 Jupiter -86889-10-05 18:27 J -30014505.93 -30014505.73 -30014505.53 0.0521 0.0272
 Uranus -86886-02-03 23:44 J -30013654.51 -30013654.51 -30013654.48 0.0139 0.0138
 Uranus -86885-02-08 08:51 J -30013285.20 -30013285.13 -30013285.05 0.0139 0.0132
 Uranus -86884-02-11 18:27 J -30012915.83 -30012915.73 -30012915.61 0.0140 0.0124
 Uranus -86883-02-16 05:30 J -30012546.40 -30012546.27 -30012546.12 0.0141 0.0116
 Jupiter -86883-03-29 09:06 J -30012505.34 -30012505.12 -30012504.91 0.0508 0.0176
 Uranus -86882-02-20 17:15 J -30012176.93 -30012176.78 -30012176.60 0.0141 0.0106
 Saturn -86881-01-20 16:18 J -30011843.00 -30011842.82 -30011842.63 0.0273 0.0171
 Uranus -86881-02-25 06:27 J -30011807.40 -30011807.23 -30011807.04 0.0142 0.0096
 Saturn -86880-01-31 07:25 J -30011466.42 -30011466.19 -30011465.95 0.0272 0.0045
 Uranus -86880-02-28 20:51 J -30011437.83 -30011437.63 -30011437.44 0.0143 0.0085
 Saturn -86879-02-11 21:06 J -30011089.84 -30011089.62 -30011089.39 0.0272 0.0082
 Uranus -86879-03-05 11:59 J -30011068.20 -30011068.00 -30011067.78 0.0143 0.0073
 Saturn -86878-02-23 10:47 J -30010713.20 -30010713.05 -30010712.89 0.0272 0.0205
 Uranus -86878-03-10 04:32 J -30010698.52 -30010698.31 -30010698.08 0.0144 0.0061
 Uranus -86877-03-13 22:18 J -30010328.79 -30010328.57 -30010328.32 0.0144 0.0048
 Uranus -86876-03-18 17:44 J -30009959.00 -30009958.76 -30009958.52 0.0145 0.0034
 Uranus -86875-03-23 14:08 J -30009589.15 -30009588.91 -30009588.66 0.0145 0.0020
 Uranus -86874-03-28 11:44 J -30009219.26 -30009219.01 -30009218.76 0.0146 0.0006
 Uranus -86873-04-01 11:01 J -30008849.29 -30008849.04 -30008848.79 0.0146 0.0010
 Uranus -86872-04-06 11:15 J -30008479.27 -30008479.03 -30008478.78 0.0147 0.0025
 Jupiter -86871-04-02 19:11 J -30008117.80 -30008117.70 -30008117.59 0.0505 0.0448
 Uranus -86871-04-11 12:56 J -30008109.20 -30008108.96 -30008108.72 0.0147 0.0040
 Uranus -86870-04-16 15:35 J -30007739.08 -30007738.85 -30007738.61 0.0147 0.0055
 Uranus -86869-04-20 19:11 J -30007368.91 -30007368.70 -30007368.46 0.0147 0.0071
 Mars -86869-06-25 09:06 J -30007303.29 -30007303.12 -30007302.94 0.1679 0.0823

Uranus	-86868-04-26 00:13 J	-30006998.69	-30006998.49	-30006998.27	0.0148	0.0085
Uranus	-86867-05-01 05:44 J	-30006628.43	-30006628.26	-30006628.05	0.0148	0.0099
Saturn	-86867-07-12 00:27 J	-30006556.50	-30006556.48	-30006556.44	0.0285	0.0283
Uranus	-86866-05-06 12:13 J	-30006258.14	-30006257.99	-30006257.81	0.0148	0.0112
Saturn	-86866-07-26 16:47 J	-30006177.02	-30006176.80	-30006176.57	0.0286	0.0132
Uranus	-86865-05-10 19:25 J	-30005887.81	-30005887.69	-30005887.54	0.0148	0.0124
Saturn	-86865-08-09 12:56 J	-30005797.21	-30005796.96	-30005796.71	0.0288	0.0030
Uranus	-86864-05-16 03:20 J	-30005517.44	-30005517.36	-30005517.25	0.0148	0.0136
Saturn	-86864-08-24 09:35 J	-30005417.28	-30005417.10	-30005416.90	0.0288	0.0192
Uranus	-86863-05-21 11:44 J	-30005147.04	-30005147.01	-30005146.97	0.0148	0.0146
Neptune	-86857-09-21 23:15 J	-30002831.63	-30002831.53	-30002831.37	0.0088	0.0077
Neptune	-86856-09-24 12:56 J	-30002464.16	-30002463.96	-30002463.73	0.0088	0.0051
Neptune	-86855-09-27 02:51 J	-30002096.64	-30002096.38	-30002096.13	0.0088	0.0024
Neptune	-86854-09-29 16:03 J	-30001729.09	-30001728.83	-30001728.57	0.0088	0.0003
Neptune	-86853-10-01 05:01 J	-30001361.52	-30001361.29	-30001361.03	0.0088	0.0030
Saturn	-86852-01-15 03:35 J	-30001255.47	-30001255.35	-30001255.20	0.0274	0.0224
Neptune	-86852-10-03 18:13 J	-30000993.94	-30000993.74	-30000993.53	0.0088	0.0056
Saturn	-86851-01-26 20:08 J	-30000878.88	-30000878.66	-30000878.44	0.0272	0.0099
Neptune	-86851-10-06 06:27 J	-30000626.29	-30000626.23	-30000626.11	0.0088	0.0082
Saturn	-86850-02-07 09:49 J	-30000502.32	-30000502.09	-30000501.85	0.0271	0.0027
Saturn	-86849-02-18 22:47 J	-30000125.74	-30000125.55	-30000125.35	0.0271	0.0150
Saturn	-86848-03-01 12:27 J	-29999749.01	-29999748.98	-29999748.95	0.0271	0.0268
Mars	-86848-12-24 17:44 J	-29999450.93	-29999450.76	-29999450.58	0.1871	0.0745
Uranus	-86846-08-14 20:08 J	-29998852.72	-29998852.66	-29998852.57	0.0139	0.0132
Uranus	-86845-08-18 19:11 J	-29998482.82	-29998482.70	-29998482.58	0.0138	0.0122
Uranus	-86844-08-23 15:49 J	-29998112.97	-29998112.84	-29998112.66	0.0138	0.0112
Uranus	-86843-08-28 12:27 J	-29997743.15	-29997742.98	-29997742.80	0.0137	0.0100
Uranus	-86842-09-02 07:25 J	-29997373.38	-29997373.19	-29997372.98	0.0137	0.0089
Uranus	-86841-09-06 01:25 J	-29997003.66	-29997003.44	-29997003.23	0.0136	0.0077
Uranus	-86840-09-10 17:44 J	-29996633.98	-29996633.76	-29996633.52	0.0135	0.0066

Uranus	-86839-09-15 08:51 J	-29996264.36	-29996264.13	-29996263.88	0.0135	0.0054
Uranus	-86838-09-19 23:15 J	-29995894.78	-29995894.53	-29995894.28	0.0134	0.0042
Saturn	-86837-07-19 10:03 J	-29995591.25	-29995591.08	-29995590.89	0.0286	0.0198
Uranus	-86837-09-23 11:59 J	-29995525.25	-29995525.00	-29995524.74	0.0134	0.0030
Saturn	-86836-08-03 04:03 J	-29995211.59	-29995211.33	-29995211.08	0.0287	0.0041
Uranus	-86836-09-27 23:44 J	-29995155.77	-29995155.51	-29995155.25	0.0134	0.0019
Saturn	-86835-08-17 23:44 J	-29994831.73	-29994831.51	-29994831.27	0.0288	0.0122
Uranus	-86835-10-02 10:18 J	-29994786.32	-29994786.07	-29994785.80	0.0133	0.0008
Saturn	-86834-09-01 19:39 J	-29994451.75	-29994451.68	-29994451.61	0.0288	0.0276
Uranus	-86834-10-06 20:23 J	-29994416.91	-29994416.65	-29994416.39	0.0133	0.0005
Uranus	-86833-10-10 04:47 J	-29994047.55	-29994047.30	-29994047.04	0.0132	0.0016
Uranus	-86832-10-14 12:42 J	-29993678.21	-29993677.97	-29993677.71	0.0132	0.0028
Uranus	-86831-10-18 19:54 J	-29993308.91	-29993308.67	-29993308.42	0.0132	0.0038
Jupiter	-86830-09-25 19:54 J	-29992966.82	-29992966.67	-29992966.51	0.0516	0.0391
Uranus	-86830-10-23 02:23 J	-29992939.63	-29992939.40	-29992939.15	0.0132	0.0048
Uranus	-86829-10-26 07:54 J	-29992570.39	-29992570.17	-29992569.93	0.0131	0.0059
Uranus	-86828-10-30 12:56 J	-29992201.17	-29992200.96	-29992200.74	0.0131	0.0068
Uranus	-86827-11-03 17:15 J	-29991831.98	-29991831.78	-29991831.57	0.0131	0.0078
Uranus	-86826-11-07 20:37 J	-29991462.81	-29991462.64	-29991462.43	0.0131	0.0087
Uranus	-86825-11-10 23:30 J	-29991093.68	-29991093.52	-29991093.33	0.0131	0.0095
Jupiter	-86824-03-19 17:01 J	-29990964.92	-29990964.79	-29990964.65	0.0513	0.0416
Uranus	-86824-11-15 02:08 J	-29990724.55	-29990724.41	-29990724.24	0.0131	0.0103
Uranus	-86823-11-19 03:49 J	-29990355.45	-29990355.34	-29990355.18	0.0131	0.0111
Saturn	-86822-01-21 19:39 J	-29990291.86	-29990291.68	-29990291.47	0.0273	0.0155
Mars	-86822-06-18 18:42 J	-29990143.87	-29990143.72	-29990143.58	0.1659	0.1124
Uranus	-86822-11-23 05:44 J	-29989986.35	-29989986.26	-29989986.13	0.0131	0.0118
Saturn	-86821-02-02 10:32 J	-29989915.30	-29989915.06	-29989914.82	0.0272	0.0029
Uranus	-86821-11-26 07:25 J	-29989617.26	-29989617.19	-29989617.10	0.0131	0.0124
Saturn	-86820-02-12 23:44 J	-29989538.73	-29989538.51	-29989538.29	0.0272	0.0097
Uranus	-86820-11-30 08:23 J	-29989248.16	-29989248.15	-29989248.10	0.0131	0.0131

Saturn -86819-02-24 12:56 J -29989162.10 -29989161.96 -29989161.82 0.0271 0.0218
 Jupiter -86818-09-30 21:35 J -29988578.83 -29988578.60 -29988578.36 0.0518 0.0078
 Jupiter -86812-03-24 04:47 J -29986577.52 -29986577.30 -29986577.08 0.0510 0.0134
 Saturn -86808-07-13 05:01 J -29985005.37 -29985005.29 -29985005.19 0.0285 0.0265
 Saturn -86807-07-27 21:49 J -29984625.82 -29984625.59 -29984625.35 0.0287 0.0114
 Saturn -86806-08-11 18:27 J -29984245.98 -29984245.73 -29984245.48 0.0288 0.0048
 Jupiter -86806-10-05 20:37 J -29984190.85 -29984190.64 -29984190.43 0.0520 0.0235
 Saturn -86805-08-25 15:35 J -29983866.01 -29983865.85 -29983865.67 0.0288 0.0208
 Uranus -86802-02-04 13:11 J -29982973.00 -29982972.95 -29982972.87 0.0139 0.0134
 Uranus -86801-02-08 22:03 J -29982603.67 -29982603.58 -29982603.47 0.0139 0.0127
 Uranus -86800-02-12 07:25 J -29982234.30 -29982234.19 -29982234.04 0.0140 0.0119
 Jupiter -86800-03-28 14:37 J -29982190.11 -29982189.89 -29982189.67 0.0509 0.0144
 Uranus -86799-02-16 18:13 J -29981864.87 -29981864.74 -29981864.57 0.0141 0.0111
 Uranus -86798-02-21 05:59 J -29981495.41 -29981495.25 -29981495.06 0.0141 0.0101
 Uranus -86797-02-25 18:56 J -29981125.89 -29981125.71 -29981125.51 0.0142 0.0091
 Uranus -86796-03-01 08:51 J -29980756.32 -29980756.13 -29980755.91 0.0142 0.0080
 Uranus -86795-03-06 00:13 J -29980386.70 -29980386.49 -29980386.26 0.0143 0.0068
 Uranus -86794-03-10 16:32 J -29980017.03 -29980016.81 -29980016.57 0.0144 0.0056
 Saturn -86793-01-17 06:56 J -29979704.36 -29979704.21 -29979704.05 0.0273 0.0206
 Uranus -86793-03-14 10:18 J -29979647.30 -29979647.07 -29979646.82 0.0144 0.0043
 Saturn -86792-01-27 22:32 J -29979327.78 -29979327.56 -29979327.33 0.0272 0.0083
 Uranus -86792-03-19 05:15 J -29979277.52 -29979277.28 -29979277.03 0.0145 0.0030
 Saturn -86791-02-08 11:59 J -29978951.23 -29978951.00 -29978950.76 0.0271 0.0043
 Uranus -86791-03-24 01:39 J -29978907.67 -29978907.43 -29978907.18 0.0145 0.0015
 Saturn -86790-02-20 00:56 J -29978574.65 -29978574.46 -29978574.27 0.0271 0.0164
 Uranus -86790-03-28 23:15 J -29978537.78 -29978537.53 -29978537.28 0.0146 0.0003
 Mars -86790-06-28 22:03 J -29978445.60 -29978445.58 -29978445.55 0.1684 0.1665
 Uranus -86789-04-01 22:18 J -29978167.81 -29978167.57 -29978167.32 0.0146 0.0014
 Jupiter -86788-04-02 02:51 J -29977802.50 -29977802.38 -29977802.25 0.0507 0.0424
 Uranus -86788-04-06 22:47 J -29977797.80 -29977797.55 -29977797.31 0.0147 0.0029

Uranus	-86787-04-11 23:59 J	-29977427.73	-29977427.50	-29977427.25	0.0147	0.0044
Uranus	-86786-04-17 02:37 J	-29977057.62	-29977057.39	-29977057.16	0.0147	0.0059
Uranus	-86785-04-21 05:59 J	-29976687.46	-29976687.25	-29976687.02	0.0147	0.0073
Uranus	-86784-04-26 10:32 J	-29976317.25	-29976317.06	-29976316.84	0.0148	0.0088
Uranus	-86783-05-01 15:49 J	-29975947.01	-29975946.84	-29975946.64	0.0148	0.0101
Uranus	-86782-05-06 22:32 J	-29975576.72	-29975576.56	-29975576.39	0.0148	0.0113
Uranus	-86781-05-11 05:30 J	-29975206.40	-29975206.27	-29975206.13	0.0148	0.0125
Uranus	-86780-05-16 13:11 J	-29974836.04	-29974835.95	-29974835.85	0.0148	0.0136
Uranus	-86779-05-21 20:51 J	-29974465.64	-29974465.63	-29974465.58	0.0148	0.0147
Saturn	-86778-07-21 15:06 J	-29974040.06	-29974039.87	-29974039.67	0.0286	0.0179
Saturn	-86777-08-04 09:20 J	-29973660.36	-29973660.11	-29973659.85	0.0287	0.0022
Saturn	-86776-08-19 05:30 J	-29973280.49	-29973280.27	-29973280.04	0.0288	0.0139
Neptune	-86774-03-18 14:08 J	-29972704.04	-29972703.91	-29972703.73	0.0089	0.0071
Neptune	-86773-03-19 23:59 J	-29972336.70	-29972336.50	-29972336.27	0.0089	0.0045
Neptune	-86772-03-22 10:03 J	-29971969.32	-29971969.08	-29971968.82	0.0089	0.0019
Neptune	-86771-03-24 20:08 J	-29971601.91	-29971601.66	-29971601.41	0.0089	0.0007
Neptune	-86770-03-27 05:59 J	-29971234.48	-29971234.25	-29971234.01	0.0089	0.0033
Neptune	-86769-03-28 16:03 J	-29970867.01	-29970866.83	-29970866.64	0.0089	0.0059
Mars	-86769-12-27 16:18 J	-29970593.00	-29970592.82	-29970592.63	0.1865	0.0442
Neptune	-86768-03-31 01:39 J	-29970499.46	-29970499.43	-29970499.33	0.0089	0.0086
Saturn	-86764-01-11 04:47 J	-29969117.37	-29969117.30	-29969117.23	0.0274	0.0261
Saturn	-86763-01-22 21:49 J	-29968740.79	-29968740.59	-29968740.38	0.0273	0.0139
Pluto	-86763-06-24 01:39 J	-29968588.68	-29968588.43	-29968588.16	0.0067	0.0013
Uranus	-86763-08-10 06:56 J	-29968541.24	-29968541.21	-29968541.13	0.0140	0.0137
Saturn	-86762-02-03 12:13 J	-29968364.23	-29968363.99	-29968363.75	0.0272	0.0014
Uranus	-86762-08-15 06:42 J	-29968171.30	-29968171.22	-29968171.09	0.0139	0.0127
Saturn	-86761-02-15 00:56 J	-29967987.67	-29967987.46	-29967987.24	0.0271	0.0111
Uranus	-86761-08-19 05:44 J	-29967801.39	-29967801.26	-29967801.11	0.0139	0.0117
Saturn	-86760-02-25 13:25 J	-29967611.05	-29967610.94	-29967610.80	0.0271	0.0230
Uranus	-86760-08-24 03:20 J	-29967431.52	-29967431.36	-29967431.18	0.0138	0.0106

Uranus	-86759-08-28 23:30 J	-29967061.69	-29967061.52	-29967061.32	0.0137	0.0095
Uranus	-86758-09-02 18:42 J	-29966691.91	-29966691.72	-29966691.50	0.0137	0.0084
Uranus	-86757-09-06 12:42 J	-29966322.18	-29966321.97	-29966321.74	0.0136	0.0072
Uranus	-86756-09-11 05:01 J	-29965952.51	-29965952.29	-29965952.04	0.0136	0.0061
Uranus	-86755-09-15 20:23 J	-29965582.88	-29965582.65	-29965582.39	0.0135	0.0049
Uranus	-86754-09-20 10:32 J	-29965213.29	-29965213.06	-29965212.79	0.0135	0.0038
Uranus	-86753-09-23 23:44 J	-29964843.76	-29964843.51	-29964843.25	0.0134	0.0026
Uranus	-86752-09-28 11:44 J	-29964474.27	-29964474.01	-29964473.75	0.0134	0.0014
Uranus	-86751-10-02 22:32 J	-29964104.82	-29964104.56	-29964104.30	0.0133	0.0003
Uranus	-86750-10-07 08:37 J	-29963735.40	-29963735.14	-29963734.88	0.0133	0.0009
Saturn	-86749-07-14 06:56 J	-29963454.32	-29963454.21	-29963454.07	0.0285	0.0249
Uranus	-86749-10-10 17:30 J	-29963366.02	-29963365.77	-29963365.51	0.0133	0.0020
Saturn	-86748-07-28 23:59 J	-29963074.73	-29963074.50	-29963074.25	0.0287	0.0097
Uranus	-86748-10-15 01:25 J	-29962996.68	-29962996.44	-29962996.18	0.0132	0.0031
Saturn	-86747-08-12 20:37 J	-29962694.88	-29962694.64	-29962694.39	0.0288	0.0064
Jupiter	-86747-09-25 00:56 J	-29962651.59	-29962651.46	-29962651.32	0.0515	0.0415
Uranus	-86747-10-19 09:06 J	-29962627.37	-29962627.12	-29962626.88	0.0132	0.0041
Saturn	-86746-08-27 18:13 J	-29962314.89	-29962314.74	-29962314.57	0.0288	0.0223
Uranus	-86746-10-23 15:20 J	-29962258.08	-29962257.86	-29962257.61	0.0132	0.0052
Uranus	-86745-10-26 21:06 J	-29961888.84	-29961888.62	-29961888.39	0.0131	0.0062
Uranus	-86744-10-31 01:54 J	-29961519.61	-29961519.42	-29961519.19	0.0131	0.0072
Mars	-86743-06-21 04:47 J	-29961286.49	-29961286.30	-29961286.11	0.1664	0.0353
Uranus	-86743-11-04 06:27 J	-29961150.42	-29961150.23	-29961150.02	0.0131	0.0080
Uranus	-86742-11-08 09:49 J	-29960781.25	-29960781.09	-29960780.88	0.0131	0.0089
Jupiter	-86741-03-18 21:49 J	-29960649.70	-29960649.59	-29960649.48	0.0514	0.0449
Uranus	-86741-11-11 12:56 J	-29960412.12	-29960411.96	-29960411.78	0.0131	0.0097
Uranus	-86740-11-15 15:49 J	-29960042.99	-29960042.84	-29960042.69	0.0131	0.0104
Uranus	-86739-11-19 17:15 J	-29959673.88	-29959673.78	-29959673.62	0.0131	0.0112
Uranus	-86738-11-23 19:39 J	-29959304.78	-29959304.68	-29959304.57	0.0131	0.0118
Uranus	-86737-11-26 21:06 J	-29958935.69	-29958935.62	-29958935.54	0.0131	0.0125

Uranus	-86736-11-30 22:18 J	-29958566.58	-29958566.57	-29958566.53	0.0131	0.0131
Jupiter	-86735-09-30 00:42 J	-29958263.70	-29958263.47	-29958263.24	0.0517	0.0110
Saturn	-86734-01-18 08:37 J	-29958153.31	-29958153.14	-29958152.97	0.0273	0.0190
Saturn	-86733-01-29 23:44 J	-29957776.73	-29957776.51	-29957776.27	0.0272	0.0068
Saturn	-86732-02-09 13:11 J	-29957400.18	-29957399.95	-29957399.72	0.0271	0.0057
Saturn	-86731-02-21 01:25 J	-29957023.60	-29957023.44	-29957023.25	0.0271	0.0178
Jupiter	-86729-03-23 11:30 J	-29956262.24	-29956262.02	-29956261.80	0.0512	0.0162
Jupiter	-86723-10-04 23:30 J	-29953875.74	-29953875.52	-29953875.30	0.0519	0.0196
Uranus	-86719-01-31 19:39 J	-29952660.73	-29952660.68	-29952660.63	0.0138	0.0134
Saturn	-86719-07-22 17:44 J	-29952488.96	-29952488.76	-29952488.55	0.0286	0.0161
Uranus	-86718-02-05 03:20 J	-29952291.45	-29952291.36	-29952291.27	0.0139	0.0128
Saturn	-86718-08-06 12:27 J	-29952109.23	-29952108.98	-29952108.72	0.0287	0.0005
Uranus	-86717-02-09 11:30 J	-29951922.12	-29951922.02	-29951921.88	0.0139	0.0122
Jupiter	-86717-03-28 01:25 J	-29951874.66	-29951874.44	-29951874.22	0.0509	0.0124
Saturn	-86717-08-20 09:06 J	-29951729.33	-29951729.12	-29951728.90	0.0288	0.0155
Uranus	-86716-02-12 21:20 J	-29951552.74	-29951552.61	-29951552.46	0.0140	0.0113
Uranus	-86715-02-17 07:54 J	-29951183.32	-29951183.17	-29951182.99	0.0140	0.0105
Uranus	-86714-02-21 19:11 J	-29950813.86	-29950813.70	-29950813.50	0.0141	0.0096
Uranus	-86713-02-26 08:08 J	-29950444.34	-29950444.16	-29950443.95	0.0142	0.0085
Uranus	-86712-03-01 22:03 J	-29950074.78	-29950074.58	-29950074.36	0.0142	0.0074
Uranus	-86711-03-06 13:11 J	-29949705.17	-29949704.95	-29949704.72	0.0143	0.0062
Jupiter	-86711-10-10 02:23 J	-29949487.44	-29949487.40	-29949487.37	0.0522	0.0514
Uranus	-86710-03-11 05:30 J	-29949335.50	-29949335.27	-29949335.03	0.0144	0.0050
Uranus	-86709-03-14 23:01 J	-29948965.77	-29948965.54	-29948965.29	0.0144	0.0037
Uranus	-86708-03-19 17:59 J	-29948595.99	-29948595.75	-29948595.50	0.0145	0.0024
Uranus	-86707-03-24 14:23 J	-29948226.14	-29948225.90	-29948225.65	0.0145	0.0010
Uranus	-86706-03-29 11:59 J	-29947856.25	-29947856.00	-29947855.75	0.0146	0.0005
Saturn	-86705-01-13 06:13 J	-29947566.34	-29947566.24	-29947566.13	0.0274	0.0245
Jupiter	-86705-04-01 13:11 J	-29947487.09	-29947486.95	-29947486.81	0.0507	0.0400
Uranus	-86705-04-02 11:01 J	-29947486.29	-29947486.04	-29947485.79	0.0146	0.0019

Saturn -86704-01-23 23:15 J -29947189.74 -29947189.53 -29947189.32 0.0273 0.0123
 Uranus -86704-04-07 11:01 J -29947116.28 -29947116.04 -29947115.79 0.0146 0.0034
 Saturn -86703-02-04 13:11 J -29946813.19 -29946812.95 -29946812.72 0.0272 0.0004
 Uranus -86703-04-12 12:27 J -29946746.22 -29946745.98 -29946745.74 0.0147 0.0048
 Saturn -86702-02-16 01:25 J -29946436.65 -29946436.44 -29946436.23 0.0271 0.0124
 Uranus -86702-04-17 14:51 J -29946376.11 -29946375.88 -29946375.65 0.0147 0.0062
 Saturn -86701-02-27 13:25 J -29946060.03 -29946059.94 -29946059.82 0.0271 0.0242
 Uranus -86701-04-21 18:13 J -29946005.95 -29946005.74 -29946005.52 0.0147 0.0077
 Uranus -86700-04-26 22:47 J -29945635.75 -29945635.55 -29945635.35 0.0148 0.0090
 Uranus -86699-05-02 04:03 J -29945265.50 -29945265.33 -29945265.14 0.0148 0.0103
 Uranus -86698-05-07 10:18 J -29944895.22 -29944895.07 -29944894.91 0.0148 0.0115
 Uranus -86697-05-11 16:47 J -29944524.91 -29944524.80 -29944524.65 0.0148 0.0127
 Uranus -86696-05-17 00:56 J -29944154.55 -29944154.46 -29944154.37 0.0148 0.0137
 Uranus -86695-05-22 08:37 J -29943784.15 -29943784.14 -29943784.10 0.0148 0.0147
 Neptune -86692-09-23 16:03 J -29942563.99 -29942563.83 -29942563.63 0.0088 0.0064
 Neptune -86691-09-26 05:59 J -29942196.49 -29942196.25 -29942196.01 0.0088 0.0038
 Saturn -86690-07-16 07:39 J -29941903.32 -29941903.18 -29941903.02 0.0285 0.0232
 Neptune -86690-09-28 19:11 J -29941828.95 -29941828.70 -29941828.43 0.0088 0.0012
 Mars -86690-12-31 14:23 J -29941734.99 -29941734.90 -29941734.80 0.1859 0.1602
 Saturn -86689-07-30 01:11 J -29941523.70 -29941523.45 -29941523.21 0.0287 0.0079
 Neptune -86689-09-30 08:23 J -29941461.40 -29941461.15 -29941460.88 0.0088 0.0015
 Saturn -86688-08-13 21:49 J -29941143.84 -29941143.59 -29941143.35 0.0288 0.0080
 Neptune -86688-10-02 21:35 J -29941093.83 -29941093.60 -29941093.37 0.0088 0.0042
 Saturn -86687-08-28 19:11 J -29940763.83 -29940763.70 -29940763.55 0.0289 0.0237
 Neptune -86687-10-05 10:47 J -29940726.21 -29940726.05 -29940725.88 0.0088 0.0068
 Uranus -86680-08-05 17:44 J -29938229.77 -29938229.76 -29938229.72 0.0140 0.0140
 Uranus -86679-08-10 19:11 J -29937859.79 -29937859.70 -29937859.60 0.0140 0.0130
 Uranus -86678-08-15 18:42 J -29937489.83 -29937489.72 -29937489.57 0.0139 0.0121
 Pluto -86678-12-28 00:27 J -29937355.57 -29937355.48 -29937355.35 0.0078 0.0071
 Uranus -86677-08-19 17:44 J -29937119.90 -29937119.76 -29937119.59 0.0139 0.0111

Pluto -86677-12-29 00:13 J -29936988.52 -29936988.49 -29936988.42 0.0078 0.0076
 Uranus -86676-08-24 15:06 J -29936750.03 -29936749.87 -29936749.67 0.0138 0.0100
 Saturn -86675-01-19 08:51 J -29936602.31 -29936602.13 -29936601.94 0.0273 0.0174
 Uranus -86675-08-29 11:30 J -29936380.19 -29936380.02 -29936379.80 0.0137 0.0090
 Saturn -86674-01-31 00:13 J -29936225.73 -29936225.49 -29936225.26 0.0272 0.0051
 Uranus -86674-09-03 06:56 J -29936010.41 -29936010.21 -29936009.98 0.0137 0.0078
 Saturn -86673-02-11 13:11 J -29935849.18 -29935848.95 -29935848.72 0.0271 0.0071
 Uranus -86673-09-07 00:42 J -29935640.68 -29935640.47 -29935640.23 0.0136 0.0067
 Saturn -86672-02-22 01:25 J -29935472.60 -29935472.44 -29935472.26 0.0271 0.0190
 Uranus -86672-09-11 17:15 J -29935271.00 -29935270.78 -29935270.53 0.0136 0.0055
 Uranus -86671-09-16 08:51 J -29934901.37 -29934901.13 -29934900.88 0.0135 0.0043
 Uranus -86670-09-20 23:01 J -29934531.78 -29934531.54 -29934531.28 0.0135 0.0032
 Uranus -86669-09-24 12:13 J -29934162.24 -29934161.99 -29934161.73 0.0134 0.0020
 Uranus -86668-09-29 00:13 J -29933792.75 -29933792.49 -29933792.23 0.0134 0.0009
 Uranus -86667-10-03 11:15 J -29933423.29 -29933423.03 -29933422.77 0.0133 0.0003
 Uranus -86666-10-07 21:20 J -29933053.86 -29933053.61 -29933053.35 0.0133 0.0014
 Uranus -86665-10-11 06:13 J -29932684.49 -29932684.24 -29932683.98 0.0133 0.0025
 Mars -86664-06-23 15:49 J -29932429.03 -29932428.84 -29932428.65 0.1668 0.0434
 Jupiter -86664-09-24 05:01 J -29932336.41 -29932336.29 -29932336.18 0.0514 0.0448
 Uranus -86664-10-15 14:37 J -29932315.13 -29932314.89 -29932314.64 0.0132 0.0035
 Uranus -86663-10-19 21:49 J -29931945.82 -29931945.59 -29931945.33 0.0132 0.0046
 Uranus -86662-10-24 04:32 J -29931576.53 -29931576.31 -29931576.06 0.0132 0.0056
 Uranus -86661-10-27 10:32 J -29931207.28 -29931207.06 -29931206.84 0.0132 0.0065
 Saturn -86660-07-23 19:11 J -29930937.91 -29930937.70 -29930937.47 0.0286 0.0144
 Uranus -86660-10-31 15:20 J -29930838.06 -29930837.86 -29930837.64 0.0131 0.0075
 Saturn -86659-08-07 14:23 J -29930558.16 -29930557.90 -29930557.65 0.0288 0.0013
 Uranus -86659-11-04 19:25 J -29930468.87 -29930468.69 -29930468.47 0.0131 0.0083
 Jupiter -86658-03-19 08:51 J -29930334.22 -29930334.13 -29930334.04 0.0515 0.0469
 Saturn -86658-08-22 11:01 J -29930178.23 -29930178.04 -29930177.83 0.0288 0.0171
 Uranus -86658-11-08 23:15 J -29930099.70 -29930099.53 -29930099.33 0.0131 0.0091

Uranus	-86657-11-12 01:54 J	-29929730.56	-29929730.42	-29929730.23	0.0131	0.0100
Uranus	-86656-11-16 04:47 J	-29929361.43	-29929361.30	-29929361.13	0.0131	0.0107
Uranus	-86655-11-20 07:11 J	-29928992.31	-29928992.20	-29928992.06	0.0131	0.0113
Uranus	-86654-11-24 09:06 J	-29928623.21	-29928623.12	-29928623.01	0.0131	0.0120
Uranus	-86653-11-27 10:47 J	-29928254.11	-29928254.05	-29928253.97	0.0131	0.0126
Jupiter	-86652-09-29 05:59 J	-29927948.48	-29927948.25	-29927948.03	0.0516	0.0142
Uranus	-86652-12-01 12:13 J	-29927884.99	-29927884.99	-29927884.96	0.0131	0.0131
Saturn	-86646-01-14 06:56 J	-29926015.32	-29926015.21	-29926015.06	0.0274	0.0229
Jupiter	-86646-03-23 22:32 J	-29925946.77	-29925946.56	-29925946.34	0.0512	0.0181
Saturn	-86645-01-25 23:44 J	-29925638.73	-29925638.51	-29925638.29	0.0272	0.0107
Saturn	-86644-02-05 13:25 J	-29925262.18	-29925261.94	-29925261.70	0.0271	0.0016
Saturn	-86643-02-17 01:25 J	-29924885.64	-29924885.44	-29924885.23	0.0271	0.0138
Saturn	-86642-02-28 13:39 J	-29924509.01	-29924508.93	-29924508.84	0.0271	0.0253
Jupiter	-86640-10-04 08:08 J	-29923560.38	-29923560.16	-29923559.93	0.0519	0.0174
Uranus	-86636-01-28 03:06 J	-29922348.38	-29922348.37	-29922348.30	0.0137	0.0136
Uranus	-86635-02-01 10:32 J	-29921979.13	-29921979.06	-29921978.97	0.0138	0.0129
Uranus	-86634-02-05 18:13 J	-29921609.85	-29921609.74	-29921609.63	0.0139	0.0123
Jupiter	-86634-03-28 10:47 J	-29921559.27	-29921559.05	-29921558.82	0.0510	0.0100
Uranus	-86633-02-10 02:51 J	-29921240.51	-29921240.38	-29921240.24	0.0139	0.0116
Uranus	-86632-02-13 11:59 J	-29920871.14	-29920871.00	-29920870.83	0.0140	0.0108
Uranus	-86631-02-17 22:32 J	-29920501.72	-29920501.56	-29920501.38	0.0140	0.0099
Saturn	-86631-07-17 07:25 J	-29920352.35	-29920352.19	-29920352.02	0.0285	0.0215
Uranus	-86630-02-22 09:49 J	-29920132.26	-29920132.09	-29920131.88	0.0141	0.0090
Saturn	-86630-08-01 00:56 J	-29919972.70	-29919972.46	-29919972.21	0.0287	0.0063
Uranus	-86629-02-26 22:47 J	-29919762.75	-29919762.55	-29919762.34	0.0142	0.0079
Saturn	-86629-08-14 21:35 J	-29919592.83	-29919592.60	-29919592.35	0.0288	0.0096
Uranus	-86628-03-02 12:13 J	-29919393.19	-29919392.99	-29919392.76	0.0142	0.0068
Saturn	-86628-08-29 19:25 J	-29919212.82	-29919212.69	-29919212.57	0.0289	0.0250
Jupiter	-86628-10-09 09:35 J	-29919172.17	-29919172.10	-29919172.02	0.0521	0.0491
Uranus	-86627-03-07 03:20 J	-29919023.58	-29919023.36	-29919023.12	0.0143	0.0057

Uranus	-86626-03-11 19:25 J	-29918653.92	-29918653.69	-29918653.45	0.0144	0.0045
Uranus	-86625-03-15 12:56 J	-29918284.19	-29918283.96	-29918283.71	0.0144	0.0032
Uranus	-86624-03-20 07:54 J	-29917914.41	-29917914.17	-29917913.92	0.0145	0.0019
Uranus	-86623-03-25 04:18 J	-29917544.57	-29917544.32	-29917544.07	0.0145	0.0005
Uranus	-86622-03-30 01:39 J	-29917174.68	-29917174.43	-29917174.18	0.0146	0.0009
Jupiter	-86622-04-01 18:56 J	-29917171.86	-29917171.71	-29917171.54	0.0508	0.0371
Uranus	-86621-04-03 00:27 J	-29916804.72	-29916804.48	-29916804.23	0.0146	0.0024
Uranus	-86620-04-08 00:13 J	-29916434.73	-29916434.49	-29916434.24	0.0146	0.0038
Uranus	-86619-04-13 01:25 J	-29916064.67	-29916064.44	-29916064.20	0.0147	0.0052
Uranus	-86618-04-18 03:20 J	-29915694.58	-29915694.36	-29915694.13	0.0147	0.0066
Uranus	-86617-04-22 06:42 J	-29915324.43	-29915324.22	-29915324.00	0.0147	0.0079
Mars	-86617-06-16 06:42 J	-29915269.32	-29915269.22	-29915269.11	0.1650	0.1399
Saturn	-86616-01-20 09:06 J	-29915051.31	-29915051.12	-29915050.92	0.0273	0.0157
Uranus	-86616-04-27 10:47 J	-29914954.23	-29914954.05	-29914953.84	0.0148	0.0093
Saturn	-86615-02-01 00:27 J	-29914674.72	-29914674.48	-29914674.25	0.0272	0.0035
Uranus	-86615-05-02 15:49 J	-29914584.01	-29914583.84	-29914583.65	0.0148	0.0105
Saturn	-86614-02-12 13:11 J	-29914298.17	-29914297.95	-29914297.72	0.0271	0.0086
Uranus	-86614-05-07 21:35 J	-29914213.73	-29914213.60	-29914213.42	0.0148	0.0117
Saturn	-86613-02-24 01:11 J	-29913921.59	-29913921.45	-29913921.28	0.0270	0.0204
Uranus	-86613-05-12 04:32 J	-29913843.42	-29913843.31	-29913843.17	0.0148	0.0128
Uranus	-86612-05-17 11:44 J	-29913473.08	-29913473.01	-29913472.90	0.0148	0.0138
Uranus	-86611-05-22 19:54 J	-29913102.68	-29913102.67	-29913102.63	0.0147	0.0147
Neptune	-86610-03-17 21:35 J	-29912803.66	-29912803.60	-29912803.50	0.0089	0.0084
Neptune	-86609-03-19 07:54 J	-29912436.35	-29912436.17	-29912435.98	0.0089	0.0058
Neptune	-86608-03-21 17:44 J	-29912068.99	-29912068.76	-29912068.52	0.0089	0.0033
Neptune	-86607-03-24 03:35 J	-29911701.60	-29911701.35	-29911701.09	0.0089	0.0007
Neptune	-86606-03-26 13:39 J	-29911334.18	-29911333.93	-29911333.69	0.0089	0.0019
Neptune	-86605-03-27 23:30 J	-29910966.73	-29910966.52	-29910966.29	0.0089	0.0045
Neptune	-86604-03-30 09:35 J	-29910599.24	-29910599.10	-29910598.94	0.0089	0.0071
Saturn	-86602-07-11 05:59 J	-29909766.31	-29909766.25	-29909766.17	0.0285	0.0272

Saturn	-86601-07-24 20:51 J	-29909386.85	-29909386.63	-29909386.40	0.0287	0.0126
Saturn	-86600-08-08 16:03 J	-29909007.08	-29909006.83	-29909006.58	0.0288	0.0030
Saturn	-86599-08-23 12:56 J	-29908627.15	-29908626.96	-29908626.76	0.0288	0.0186
Uranus	-86596-08-06 03:35 J	-29907548.40	-29907548.35	-29907548.25	0.0140	0.0135
Uranus	-86595-08-11 05:15 J	-29907178.38	-29907178.28	-29907178.15	0.0140	0.0125
Uranus	-86594-08-16 05:15 J	-29906808.41	-29906808.28	-29906808.12	0.0139	0.0115
Uranus	-86593-08-20 04:32 J	-29906438.48	-29906438.31	-29906438.14	0.0139	0.0105
Uranus	-86592-08-25 01:54 J	-29906068.60	-29906068.42	-29906068.22	0.0138	0.0094
Uranus	-86591-08-29 22:18 J	-29905698.76	-29905698.57	-29905698.34	0.0137	0.0084
Uranus	-86590-09-03 17:44 J	-29905328.98	-29905328.76	-29905328.53	0.0137	0.0072
Uranus	-86589-09-07 11:44 J	-29904959.24	-29904959.01	-29904958.77	0.0136	0.0061
Uranus	-86588-09-12 04:03 J	-29904589.56	-29904589.33	-29904589.07	0.0136	0.0050
Saturn	-86587-01-15 08:08 J	-29904464.31	-29904464.16	-29904464.01	0.0274	0.0212
Uranus	-86587-09-16 19:39 J	-29904219.92	-29904219.68	-29904219.42	0.0135	0.0038
Saturn	-86586-01-27 00:13 J	-29904087.71	-29904087.49	-29904087.26	0.0272	0.0091
Uranus	-86586-09-21 10:03 J	-29903850.33	-29903850.08	-29903849.81	0.0135	0.0027
Saturn	-86585-02-07 13:54 J	-29903711.16	-29903710.92	-29903710.69	0.0271	0.0031
Mars	-86585-06-26 02:51 J	-29903571.51	-29903571.38	-29903571.25	0.1673	0.1248
Uranus	-86585-09-24 23:15 J	-29903480.78	-29903480.53	-29903480.27	0.0134	0.0016
Saturn	-86584-02-18 01:54 J	-29903334.61	-29903334.42	-29903334.22	0.0271	0.0151
Uranus	-86584-09-29 11:30 J	-29903111.27	-29903111.02	-29903110.75	0.0134	0.0005
Saturn	-86583-03-01 13:39 J	-29902957.96	-29902957.93	-29902957.87	0.0270	0.0265
Uranus	-86583-10-03 22:47 J	-29902741.80	-29902741.55	-29902741.29	0.0133	0.0007
Uranus	-86582-10-08 08:51 J	-29902372.38	-29902372.13	-29902371.87	0.0133	0.0018
Jupiter	-86581-09-23 13:25 J	-29902021.03	-29902020.94	-29902020.84	0.0514	0.0468
Uranus	-86581-10-11 18:13 J	-29902002.99	-29902002.74	-29902002.49	0.0133	0.0028
Uranus	-86580-10-16 02:23 J	-29901633.63	-29901633.40	-29901633.14	0.0132	0.0040
Uranus	-86579-10-20 10:03 J	-29901264.31	-29901264.08	-29901263.83	0.0132	0.0049
Uranus	-86578-10-24 16:47 J	-29900895.02	-29900894.80	-29900894.56	0.0132	0.0059
Uranus	-86577-10-27 22:32 J	-29900525.77	-29900525.56	-29900525.33	0.0132	0.0068

Uranus	-86576-11-01 03:35 J	-29900156.54	-29900156.35	-29900156.13	0.0131	0.0077
Jupiter	-86575-03-18 18:42 J	-29900018.79	-29900018.72	-29900018.66	0.0515	0.0491
Uranus	-86575-11-05 07:39 J	-29899787.35	-29899787.18	-29899786.96	0.0131	0.0086
Uranus	-86574-11-09 11:15 J	-29899418.18	-29899418.03	-29899417.83	0.0131	0.0094
Uranus	-86573-11-12 14:51 J	-29899049.03	-29899048.88	-29899048.71	0.0131	0.0100
Saturn	-86572-07-18 07:54 J	-29898801.35	-29898801.17	-29898800.98	0.0286	0.0198
Uranus	-86572-11-16 17:44 J	-29898679.90	-29898679.76	-29898679.61	0.0131	0.0107
Saturn	-86571-08-02 01:39 J	-29898421.68	-29898421.43	-29898421.18	0.0287	0.0045
Uranus	-86571-11-20 19:39 J	-29898310.78	-29898310.68	-29898310.53	0.0131	0.0115
Saturn	-86570-08-16 22:18 J	-29898041.79	-29898041.57	-29898041.33	0.0288	0.0112
Uranus	-86570-11-24 22:03 J	-29897941.67	-29897941.58	-29897941.47	0.0131	0.0120
Saturn	-86569-08-30 19:54 J	-29897661.76	-29897661.67	-29897661.56	0.0289	0.0264
Jupiter	-86569-09-28 14:37 J	-29897633.11	-29897632.89	-29897632.66	0.0516	0.0159
Uranus	-86569-11-27 23:59 J	-29897572.57	-29897572.50	-29897572.43	0.0131	0.0126
Uranus	-86568-12-02 01:39 J	-29897203.44	-29897203.43	-29897203.40	0.0131	0.0131
Mars	-86564-12-24 18:13 J	-29895719.92	-29895719.74	-29895719.56	0.1880	0.0566
Jupiter	-86563-03-23 03:20 J	-29895631.56	-29895631.36	-29895631.15	0.0513	0.0215
Saturn	-86558-01-10 14:23 J	-29893876.96	-29893876.90	-29893876.81	0.0275	0.0259
Saturn	-86557-01-22 09:20 J	-29893500.31	-29893500.11	-29893499.90	0.0273	0.0140
Jupiter	-86557-10-03 14:51 J	-29893245.11	-29893244.88	-29893244.66	0.0518	0.0148
Saturn	-86556-02-02 00:27 J	-29893123.71	-29893123.48	-29893123.24	0.0272	0.0020
Saturn	-86555-02-13 13:25 J	-29892747.16	-29892746.94	-29892746.72	0.0271	0.0101
Saturn	-86554-02-25 01:25 J	-29892370.57	-29892370.44	-29892370.29	0.0271	0.0217
Uranus	-86553-01-25 11:44 J	-29892036.04	-29892036.01	-29892035.96	0.0137	0.0135
Uranus	-86552-01-28 17:59 J	-29891666.82	-29891666.75	-29891666.67	0.0137	0.0130
Uranus	-86551-02-02 00:27 J	-29891297.56	-29891297.48	-29891297.35	0.0138	0.0124
Jupiter	-86551-03-27 15:49 J	-29891244.06	-29891243.84	-29891243.61	0.0511	0.0067
Uranus	-86550-02-06 08:08 J	-29890928.27	-29890928.16	-29890928.01	0.0139	0.0118
Uranus	-86549-02-10 16:32 J	-29890558.94	-29890558.81	-29890558.64	0.0139	0.0110
Uranus	-86548-02-14 01:54 J	-29890189.57	-29890189.42	-29890189.23	0.0140	0.0102

Uranus	-86547-02-18 12:42 J	-29889820.14	-29889819.97	-29889819.78	0.0140	0.0093
Uranus	-86546-02-22 23:59 J	-29889450.69	-29889450.50	-29889450.29	0.0141	0.0083
Uranus	-86545-02-27 12:42 J	-29889081.17	-29889080.97	-29889080.75	0.0142	0.0073
Jupiter	-86545-10-08 12:13 J	-29888857.09	-29888856.99	-29888856.86	0.0520	0.0451
Uranus	-86544-03-03 02:37 J	-29888711.61	-29888711.39	-29888711.16	0.0142	0.0062
Uranus	-86543-03-07 17:30 J	-29888341.99	-29888341.77	-29888341.53	0.0143	0.0051
Saturn	-86543-07-12 07:39 J	-29888215.28	-29888215.18	-29888215.06	0.0285	0.0255
Uranus	-86542-03-12 09:49 J	-29887972.32	-29887972.09	-29887971.85	0.0144	0.0039
Saturn	-86542-07-26 22:47 J	-29887835.77	-29887835.55	-29887835.31	0.0287	0.0109
Uranus	-86541-03-16 03:20 J	-29887602.59	-29887602.36	-29887602.10	0.0144	0.0026
Saturn	-86541-08-09 18:13 J	-29887455.99	-29887455.74	-29887455.49	0.0288	0.0047
Uranus	-86540-03-20 22:18 J	-29887232.81	-29887232.57	-29887232.32	0.0145	0.0013
Saturn	-86540-08-24 14:51 J	-29887076.05	-29887075.88	-29887075.69	0.0289	0.0203
Uranus	-86539-03-25 18:42 J	-29886862.97	-29886862.72	-29886862.47	0.0145	0.0002
Jupiter	-86539-04-01 05:44 J	-29886856.42	-29886856.26	-29886856.09	0.0508	0.0350
Uranus	-86538-03-30 16:03 J	-29886493.08	-29886492.83	-29886492.58	0.0146	0.0015
Mars	-86538-06-19 15:35 J	-29886412.02	-29886411.85	-29886411.67	0.1654	0.0669
Uranus	-86537-04-03 14:37 J	-29886123.13	-29886122.89	-29886122.64	0.0146	0.0029
Uranus	-86536-04-08 14:23 J	-29885753.13	-29885752.90	-29885752.65	0.0146	0.0043
Uranus	-86535-04-13 15:06 J	-29885383.08	-29885382.87	-29885382.62	0.0147	0.0057
Uranus	-86534-04-18 17:01 J	-29885012.99	-29885012.79	-29885012.55	0.0147	0.0071
Uranus	-86533-04-22 20:23 J	-29884642.84	-29884642.65	-29884642.43	0.0147	0.0083
Uranus	-86532-04-28 00:13 J	-29884272.66	-29884272.49	-29884272.28	0.0148	0.0096
Uranus	-86531-05-03 05:15 J	-29883902.43	-29883902.28	-29883902.09	0.0148	0.0108
Uranus	-86530-05-08 11:15 J	-29883532.17	-29883532.03	-29883531.87	0.0148	0.0119
Uranus	-86529-05-12 18:13 J	-29883161.86	-29883161.74	-29883161.62	0.0148	0.0129
Saturn	-86528-01-16 09:20 J	-29882913.26	-29882913.11	-29882912.93	0.0274	0.0196
Uranus	-86528-05-18 01:25 J	-29882791.51	-29882791.44	-29882791.34	0.0148	0.0139
Neptune	-86528-09-22 20:51 J	-29882663.72	-29882663.63	-29882663.47	0.0088	0.0078
Saturn	-86527-01-28 01:54 J	-29882536.65	-29882536.42	-29882536.19	0.0272	0.0074

Uranus -86527-05-23 09:20 J -29882421.11 -29882421.11 -29882421.08 0.0147 0.0147
 Neptune -86527-09-25 10:32 J -29882296.25 -29882296.06 -29882295.82 0.0088 0.0051
 Saturn -86526-02-08 15:20 J -29882160.10 -29882159.86 -29882159.63 0.0271 0.0047
 Neptune -86526-09-28 00:13 J -29881928.74 -29881928.49 -29881928.23 0.0088 0.0025
 Saturn -86525-02-20 03:06 J -29881783.55 -29881783.37 -29881783.17 0.0271 0.0166
 Neptune -86525-09-29 13:25 J -29881561.20 -29881560.94 -29881560.67 0.0088 0.0003
 Neptune -86524-10-02 02:23 J -29881193.63 -29881193.40 -29881193.13 0.0088 0.0029
 Neptune -86523-10-04 15:20 J -29880826.05 -29880825.86 -29880825.63 0.0088 0.0055
 Neptune -86522-10-07 04:18 J -29880458.40 -29880458.32 -29880458.19 0.0088 0.0080
 Pluto -86517-06-24 22:47 J -29878735.81 -29878735.55 -29878735.28 0.0067 0.0007
 Saturn -86513-07-19 09:35 J -29877250.29 -29877250.10 -29877249.90 0.0286 0.0179
 Uranus -86513-08-01 14:08 J -29877236.95 -29877236.91 -29877236.83 0.0141 0.0137
 Saturn -86512-08-03 03:35 J -29876870.60 -29876870.35 -29876870.10 0.0287 0.0027
 Uranus -86512-08-06 16:18 J -29876866.90 -29876866.82 -29876866.69 0.0140 0.0129
 Uranus -86511-08-11 17:44 J -29876496.88 -29876496.76 -29876496.61 0.0140 0.0119
 Saturn -86511-08-18 00:27 J -29876490.70 -29876490.48 -29876490.25 0.0288 0.0129
 Uranus -86510-08-16 17:44 J -29876126.91 -29876126.76 -29876126.58 0.0139 0.0109
 Saturn -86510-09-01 21:49 J -29876110.64 -29876110.59 -29876110.52 0.0289 0.0279
 Uranus -86509-08-20 16:47 J -29875756.97 -29875756.80 -29875756.60 0.0139 0.0099
 Uranus -86508-08-25 14:08 J -29875387.09 -29875386.91 -29875386.69 0.0138 0.0088
 Uranus -86507-08-30 10:32 J -29875017.25 -29875017.06 -29875016.82 0.0137 0.0078
 Uranus -86506-09-04 05:59 J -29874647.47 -29874647.25 -29874647.01 0.0137 0.0066
 Uranus -86505-09-07 23:59 J -29874277.74 -29874277.50 -29874277.26 0.0136 0.0055
 Uranus -86504-09-12 16:18 J -29873908.06 -29873907.82 -29873907.56 0.0136 0.0044
 Uranus -86503-09-17 07:54 J -29873538.41 -29873538.17 -29873537.91 0.0135 0.0033
 Uranus -86502-09-21 22:18 J -29873168.82 -29873168.57 -29873168.31 0.0135 0.0021
 Uranus -86501-09-25 11:44 J -29872799.27 -29872799.01 -29872798.75 0.0134 0.0010
 Uranus -86500-09-29 23:59 J -29872429.76 -29872429.50 -29872429.24 0.0134 0.0002
 Saturn -86499-01-11 15:20 J -29872325.96 -29872325.86 -29872325.74 0.0275 0.0242
 Uranus -86499-10-04 11:15 J -29872060.28 -29872060.03 -29872059.77 0.0133 0.0013

Saturn -86498-01-23 10:03 J -29871949.28 -29871949.08 -29871948.86 0.0273 0.0124
 Jupiter -86498-09-23 21:06 J -29871705.69 -29871705.62 -29871705.55 0.0513 0.0488
 Uranus -86498-10-08 21:35 J -29871690.85 -29871690.60 -29871690.34 0.0133 0.0023
 Saturn -86497-02-04 01:25 J -29871572.68 -29871572.44 -29871572.20 0.0272 0.0003
 Uranus -86497-10-12 06:42 J -29871321.46 -29871321.22 -29871320.96 0.0133 0.0034
 Saturn -86496-02-14 14:23 J -29871196.11 -29871195.90 -29871195.68 0.0271 0.0117
 Uranus -86496-10-16 15:20 J -29870952.09 -29870951.86 -29870951.61 0.0132 0.0044
 Saturn -86495-02-26 02:51 J -29870819.50 -29870819.38 -29870819.26 0.0271 0.0230
 Uranus -86495-10-20 22:47 J -29870582.77 -29870582.55 -29870582.30 0.0132 0.0053
 Uranus -86494-10-25 05:15 J -29870213.49 -29870213.28 -29870213.04 0.0132 0.0063
 Uranus -86493-10-28 11:15 J -29869844.24 -29869844.03 -29869843.81 0.0132 0.0071
 Uranus -86492-11-01 16:18 J -29869475.02 -29869474.82 -29869474.61 0.0132 0.0080
 Uranus -86491-11-05 20:37 J -29869105.82 -29869105.64 -29869105.45 0.0131 0.0088
 Uranus -86490-11-10 00:13 J -29868736.65 -29868736.49 -29868736.30 0.0131 0.0096
 Uranus -86489-11-13 03:20 J -29868367.50 -29868367.36 -29868367.19 0.0131 0.0103
 Uranus -86488-11-17 06:13 J -29867998.36 -29867998.24 -29867998.08 0.0131 0.0109
 Uranus -86487-11-21 08:51 J -29867629.24 -29867629.13 -29867629.00 0.0131 0.0115
 Jupiter -86486-09-28 17:15 J -29867318.00 -29867317.78 -29867317.56 0.0515 0.0197
 Uranus -86486-11-25 10:32 J -29867260.13 -29867260.06 -29867259.94 0.0131 0.0122
 Uranus -86485-11-28 12:27 J -29866891.02 -29866890.98 -29866890.89 0.0131 0.0127
 Mars -86485-12-27 18:13 J -29866861.92 -29866861.74 -29866861.56 0.1874 0.0671
 Saturn -86484-07-13 11:44 J -29866664.14 -29866664.01 -29866663.86 0.0285 0.0236
 Uranus -86484-12-02 14:37 J -29866521.90 -29866521.89 -29866521.86 0.0131 0.0131
 Saturn -86483-07-28 03:06 J -29866284.61 -29866284.37 -29866284.12 0.0287 0.0089
 Saturn -86482-08-11 22:32 J -29865904.81 -29865904.56 -29865904.31 0.0288 0.0066
 Saturn -86481-08-25 19:11 J -29865524.85 -29865524.70 -29865524.52 0.0289 0.0219
 Jupiter -86480-03-22 12:42 J -29865316.17 -29865315.97 -29865315.77 0.0514 0.0241
 Jupiter -86474-10-03 17:15 J -29862930.01 -29862929.78 -29862929.54 0.0517 0.0109
 Uranus -86470-01-21 19:39 J -29861723.69 -29861723.68 -29861723.63 0.0136 0.0135
 Saturn -86469-01-18 11:44 J -29861362.18 -29861362.01 -29861361.82 0.0274 0.0178

Uranus	-86469-01-26 01:25 J	-29861354.51	-29861354.44	-29861354.36	0.0137	0.0130
Saturn	-86468-01-29 04:18 J	-29860985.55	-29860985.32	-29860985.09	0.0272	0.0057
Uranus	-86468-01-29 07:39 J	-29860985.28	-29860985.18	-29860985.08	0.0137	0.0125 *
Jupiter	-86468-03-27 02:37 J	-29860928.62	-29860928.39	-29860928.16	0.0511	0.0046
Uranus	-86467-02-02 13:54 J	-29860616.02	-29860615.92	-29860615.78	0.0138	0.0119
Saturn	-86467-02-09 17:44 J	-29860608.99	-29860608.76	-29860608.53	0.0271	0.0063
Uranus	-86466-02-06 21:35 J	-29860246.73	-29860246.60	-29860246.45	0.0139	0.0112
Saturn	-86466-02-21 05:44 J	-29860232.44	-29860232.26	-29860232.08	0.0271	0.0180
Uranus	-86465-02-11 05:59 J	-29859877.40	-29859877.25	-29859877.07	0.0139	0.0105
Uranus	-86464-02-14 15:35 J	-29859508.02	-29859507.85	-29859507.66	0.0140	0.0096
Uranus	-86463-02-19 01:54 J	-29859138.60	-29859138.42	-29859138.22	0.0140	0.0087
Uranus	-86462-02-23 13:39 J	-29858769.14	-29858768.93	-29858768.72	0.0141	0.0077
Jupiter	-86462-10-08 19:25 J	-29858541.83	-29858541.69	-29858541.55	0.0520	0.0423
Uranus	-86461-02-28 01:54 J	-29858399.62	-29858399.42	-29858399.18	0.0142	0.0068
Uranus	-86460-03-03 15:49 J	-29858030.06	-29858029.84	-29858029.60	0.0142	0.0056
Uranus	-86459-03-08 06:56 J	-29857660.44	-29857660.21	-29857659.97	0.0143	0.0045
Mars	-86459-06-22 01:39 J	-29857554.62	-29857554.43	-29857554.23	0.1658	0.0101
Uranus	-86458-03-12 23:15 J	-29857290.77	-29857290.53	-29857290.28	0.0143	0.0033
Uranus	-86457-03-16 17:01 J	-29856921.03	-29856920.79	-29856920.54	0.0144	0.0020
Uranus	-86456-03-21 11:59 J	-29856551.25	-29856551.00	-29856550.75	0.0145	0.0007
Jupiter	-86456-03-31 14:51 J	-29856541.06	-29856540.88	-29856540.70	0.0509	0.0323
Uranus	-86455-03-26 08:08 J	-29856181.41	-29856181.16	-29856180.91	0.0145	0.0006
Uranus	-86454-03-31 05:30 J	-29855811.52	-29855811.27	-29855811.02	0.0146	0.0020
Saturn	-86454-07-21 13:54 J	-29855699.13	-29855698.92	-29855698.71	0.0286	0.0160
Uranus	-86453-04-04 04:03 J	-29855441.57	-29855441.33	-29855441.08	0.0146	0.0033
Saturn	-86453-08-04 07:54 J	-29855319.43	-29855319.17	-29855318.92	0.0287	0.0009
Uranus	-86452-04-09 03:20 J	-29855071.59	-29855071.36	-29855071.11	0.0146	0.0047
Saturn	-86452-08-19 04:32 J	-29854939.52	-29854939.31	-29854939.09	0.0288	0.0147
Uranus	-86451-04-14 04:32 J	-29854701.54	-29854701.31	-29854701.08	0.0147	0.0060
Uranus	-86450-04-19 06:13 J	-29854331.45	-29854331.24	-29854331.02	0.0147	0.0073

Uranus -86449-04-23 09:20 J -29853961.31 -29853961.11 -29853960.90 0.0147 0.0086
 Uranus -86448-04-28 13:11 J -29853591.13 -29853590.95 -29853590.76 0.0147 0.0098
 Uranus -86447-05-03 17:44 J -29853220.91 -29853220.76 -29853220.57 0.0148 0.0110
 Uranus -86446-05-08 23:30 J -29852850.64 -29852850.52 -29852850.35 0.0148 0.0121
 Neptune -86445-03-18 15:49 J -29852535.98 -29852535.84 -29852535.68 0.0089 0.0071
 Uranus -86445-05-13 06:13 J -29852480.34 -29852480.24 -29852480.10 0.0148 0.0131
 Neptune -86444-03-21 01:25 J -29852168.64 -29852168.44 -29852168.21 0.0089 0.0046
 Uranus -86444-05-18 13:25 J -29852110.00 -29852109.94 -29852109.84 0.0148 0.0140
 Neptune -86443-03-23 11:30 J -29851801.26 -29851801.02 -29851800.77 0.0089 0.0020
 Uranus -86443-05-23 21:35 J -29851739.60 -29851739.60 -29851739.58 0.0147 0.0147
 Neptune -86442-03-25 21:35 J -29851433.85 -29851433.60 -29851433.35 0.0089 0.0006
 Neptune -86441-03-27 07:11 J -29851066.42 -29851066.20 -29851065.95 0.0089 0.0032
 Saturn -86440-01-12 17:44 J -29850774.89 -29850774.76 -29850774.62 0.0275 0.0225
 Neptune -86440-03-29 17:30 J -29850698.95 -29850698.77 -29850698.57 0.0089 0.0058
 Saturn -86439-01-24 12:27 J -29850398.19 -29850397.98 -29850397.75 0.0274 0.0106
 Neptune -86439-04-01 03:49 J -29850331.42 -29850331.34 -29850331.25 0.0089 0.0083
 Saturn -86438-02-05 03:49 J -29850021.58 -29850021.34 -29850021.10 0.0272 0.0015
 Saturn -86437-02-16 16:47 J -29849645.00 -29849644.80 -29849644.58 0.0271 0.0133
 Saturn -86436-02-27 05:30 J -29849268.36 -29849268.27 -29849268.16 0.0271 0.0245
 Pluto -86432-12-28 23:15 J -29847502.53 -29847502.53 -29847502.52 0.0078 0.0078
 Pluto -86431-12-30 22:32 J -29847135.65 -29847135.56 -29847135.42 0.0078 0.0069
 Uranus -86430-07-28 21:20 J -29846925.63 -29846925.61 -29846925.54 0.0142 0.0140
 Uranus -86429-08-02 00:56 J -29846555.54 -29846555.46 -29846555.36 0.0141 0.0131
 Uranus -86428-08-07 03:06 J -29846185.49 -29846185.37 -29846185.23 0.0140 0.0123
 Uranus -86427-08-12 04:32 J -29845815.46 -29845815.31 -29845815.15 0.0140 0.0113
 Uranus -86426-08-17 04:18 J -29845445.48 -29845445.32 -29845445.13 0.0139 0.0103
 Saturn -86425-07-14 17:59 J -29845112.91 -29845112.75 -29845112.58 0.0285 0.0216
 Uranus -86425-08-21 03:06 J -29845075.55 -29845075.37 -29845075.17 0.0139 0.0093
 Saturn -86424-07-29 09:20 J -29844733.35 -29844733.11 -29844732.86 0.0287 0.0069
 Uranus -86424-08-26 00:42 J -29844705.67 -29844705.47 -29844705.25 0.0138 0.0082

Saturn	-86423-08-13 05:01 J	-29844353.54	-29844353.29	-29844353.05	0.0288	0.0085
Uranus	-86423-08-30 21:06 J	-29844335.83	-29844335.62	-29844335.39	0.0137	0.0071
Saturn	-86422-08-28 01:39 J	-29843973.56	-29843973.43	-29843973.27	0.0289	0.0237
Uranus	-86422-09-04 16:18 J	-29843966.06	-29843965.82	-29843965.59	0.0137	0.0060
Uranus	-86421-09-08 09:49 J	-29843596.32	-29843596.09	-29843595.83	0.0136	0.0050
Uranus	-86420-09-13 02:51 J	-29843226.63	-29843226.38	-29843226.13	0.0136	0.0038
Uranus	-86419-09-17 18:13 J	-29842856.98	-29842856.74	-29842856.47	0.0135	0.0028
Uranus	-86418-09-22 09:06 J	-29842487.38	-29842487.12	-29842486.86	0.0135	0.0016
Uranus	-86417-09-25 22:18 J	-29842117.83	-29842117.57	-29842117.31	0.0134	0.0005
Uranus	-86416-09-30 10:47 J	-29841748.30	-29841748.05	-29841747.78	0.0134	0.0007
Uranus	-86415-10-04 22:18 J	-29841378.82	-29841378.57	-29841378.31	0.0133	0.0017
Uranus	-86414-10-09 08:37 J	-29841009.39	-29841009.14	-29841008.88	0.0133	0.0027
Uranus	-86413-10-12 17:59 J	-29840639.99	-29840639.75	-29840639.49	0.0133	0.0037
Uranus	-86412-10-17 02:23 J	-29840270.63	-29840270.40	-29840270.14	0.0132	0.0048
Uranus	-86411-10-21 10:03 J	-29839901.31	-29839901.08	-29839900.84	0.0132	0.0057
Saturn	-86410-01-19 15:49 J	-29839811.02	-29839810.84	-29839810.64	0.0274	0.0160
Uranus	-86410-10-25 16:18 J	-29839532.02	-29839531.82	-29839531.58	0.0132	0.0066
Saturn	-86409-01-31 08:23 J	-29839434.38	-29839434.15	-29839433.91	0.0272	0.0039
Uranus	-86409-10-28 22:32 J	-29839162.77	-29839162.56	-29839162.35	0.0132	0.0074
Saturn	-86408-02-10 21:49 J	-29839057.81	-29839057.59	-29839057.36	0.0271	0.0081
Uranus	-86408-11-02 03:35 J	-29838793.54	-29838793.35	-29838793.15	0.0132	0.0082
Saturn	-86407-02-22 09:49 J	-29838681.25	-29838681.09	-29838680.92	0.0271	0.0196
Uranus	-86407-11-06 08:08 J	-29838424.34	-29838424.16	-29838423.98	0.0131	0.0090
Uranus	-86406-11-10 11:15 J	-29838055.17	-29838055.03	-29838054.83	0.0131	0.0098
Mars	-86406-12-31 17:15 J	-29838003.79	-29838003.78	-29838003.78	0.1868	0.1865
Uranus	-86405-11-13 14:51 J	-29837686.02	-29837685.88	-29837685.71	0.0131	0.0104
Uranus	-86404-11-17 17:59 J	-29837316.87	-29837316.75	-29837316.60	0.0131	0.0110
Jupiter	-86403-09-27 22:03 J	-29837002.79	-29837002.58	-29837002.36	0.0515	0.0227
Uranus	-86403-11-21 20:23 J	-29836947.75	-29836947.65	-29836947.52	0.0131	0.0116
Uranus	-86402-11-25 22:47 J	-29836578.63	-29836578.55	-29836578.45	0.0131	0.0122

Uranus	-86401-11-29 00:42 J	-29836209.52	-29836209.47	-29836209.39	0.0131	0.0127
Uranus	-86400-12-03 02:37 J	-29835840.40	-29835840.39	-29835840.36	0.0131	0.0131
Jupiter	-86397-03-21 20:51 J	-29835000.82	-29835000.63	-29835000.43	0.0514	0.0268
Saturn	-86396-07-08 08:37 J	-29834527.18	-29834527.14	-29834527.09	0.0284	0.0278
Saturn	-86395-07-22 21:35 J	-29834147.82	-29834147.60	-29834147.37	0.0286	0.0139
Saturn	-86394-08-06 15:35 J	-29833768.10	-29833767.85	-29833767.59	0.0287	0.0014
Saturn	-86393-08-20 12:13 J	-29833388.19	-29833387.99	-29833387.78	0.0288	0.0166
Jupiter	-86391-10-03 00:27 J	-29832614.71	-29832614.48	-29832614.24	0.0517	0.0085
Uranus	-86387-01-18 03:06 J	-29831411.38	-29831411.37	-29831411.32	0.0136	0.0135
Uranus	-86386-01-22 07:54 J	-29831042.23	-29831042.17	-29831042.09	0.0136	0.0130
Uranus	-86385-01-26 12:56 J	-29830673.03	-29830672.96	-29830672.84	0.0137	0.0126
Jupiter	-86385-03-26 04:32 J	-29830613.54	-29830613.31	-29830613.08	0.0512	0.0009
Uranus	-86384-01-29 19:25 J	-29830303.80	-29830303.69	-29830303.56	0.0137	0.0120
Uranus	-86383-02-03 01:39 J	-29829934.54	-29829934.43	-29829934.27	0.0138	0.0114
Uranus	-86382-02-07 09:20 J	-29829565.25	-29829565.11	-29829564.94	0.0139	0.0107
Saturn	-86381-01-14 21:20 J	-29829223.76	-29829223.61	-29829223.45	0.0275	0.0207
Uranus	-86381-02-11 17:44 J	-29829195.91	-29829195.76	-29829195.57	0.0139	0.0099
Saturn	-86380-01-25 16:03 J	-29828847.05	-29828846.83	-29828846.60	0.0274	0.0087
Uranus	-86380-02-15 03:06 J	-29828826.54	-29828826.37	-29828826.17	0.0140	0.0091
Mars	-86380-06-24 11:15 J	-29828697.20	-29828697.03	-29828696.86	0.1662	0.0868
Saturn	-86379-02-06 07:25 J	-29828470.42	-29828470.19	-29828469.95	0.0272	0.0033
Uranus	-86379-02-19 13:39 J	-29828457.12	-29828456.93	-29828456.72	0.0140	0.0082
Jupiter	-86379-10-08 00:27 J	-29828226.63	-29828226.48	-29828226.32	0.0519	0.0391
Saturn	-86378-02-17 20:51 J	-29828093.83	-29828093.63	-29828093.43	0.0271	0.0150
Uranus	-86378-02-24 00:56 J	-29828087.66	-29828087.46	-29828087.23	0.0141	0.0072
Uranus	-86377-02-28 13:39 J	-29827718.14	-29827717.93	-29827717.69	0.0142	0.0062
Saturn	-86377-02-29 09:35 J	-29827717.15	-29827717.10	-29827717.03	0.0271	0.0260
Uranus	-86376-03-04 03:35 J	-29827348.57	-29827348.35	-29827348.11	0.0142	0.0051
Uranus	-86375-03-08 18:42 J	-29826978.95	-29826978.72	-29826978.48	0.0143	0.0039
Uranus	-86374-03-13 11:15 J	-29826609.27	-29826609.03	-29826608.79	0.0143	0.0027

Uranus -86373-03-17 05:01 J -29826239.54 -29826239.29 -29826239.04 0.0144 0.0014
 Jupiter -86373-03-30 16:03 J -29826226.03 -29826225.83 -29826225.64 0.0510 0.0278
 Uranus -86372-03-21 23:44 J -29825869.76 -29825869.51 -29825869.26 0.0144 0.0002
 Uranus -86371-03-26 19:39 J -29825499.92 -29825499.68 -29825499.42 0.0145 0.0012
 Uranus -86370-03-31 16:47 J -29825130.04 -29825129.80 -29825129.54 0.0146 0.0026
 Uranus -86369-04-04 15:35 J -29824760.09 -29824759.85 -29824759.61 0.0146 0.0038
 Uranus -86368-04-09 14:51 J -29824390.11 -29824389.88 -29824389.64 0.0146 0.0052
 Uranus -86367-04-14 15:35 J -29824020.06 -29824019.85 -29824019.61 0.0147 0.0065
 Uranus -86366-04-19 17:30 J -29823649.97 -29823649.77 -29823649.55 0.0147 0.0077
 Saturn -86366-07-17 03:20 J -29823561.54 -29823561.36 -29823561.18 0.0285 0.0195
 Uranus -86365-04-23 20:23 J -29823279.83 -29823279.65 -29823279.43 0.0147 0.0090
 Saturn -86365-07-30 18:56 J -29823181.96 -29823181.71 -29823181.46 0.0287 0.0048
 Uranus -86364-04-29 00:27 J -29822909.66 -29822909.48 -29822909.29 0.0147 0.0101
 Saturn -86364-08-14 14:23 J -29822802.13 -29822801.90 -29822801.66 0.0288 0.0106
 Uranus -86363-05-04 05:30 J -29822539.43 -29822539.27 -29822539.10 0.0148 0.0112
 Saturn -86363-08-29 11:30 J -29822422.13 -29822422.02 -29822421.90 0.0289 0.0255
 Neptune -86363-09-24 16:18 J -29822395.98 -29822395.82 -29822395.62 0.0088 0.0064
 Uranus -86362-05-09 11:01 J -29822169.16 -29822169.04 -29822168.88 0.0148 0.0123
 Neptune -86362-09-27 05:44 J -29822028.48 -29822028.26 -29822028.00 0.0088 0.0038
 Uranus -86361-05-13 17:59 J -29821798.85 -29821798.75 -29821798.63 0.0148 0.0132
 Neptune -86361-09-28 19:25 J -29821660.95 -29821660.69 -29821660.43 0.0088 0.0011
 Uranus -86360-05-19 01:11 J -29821428.51 -29821428.45 -29821428.35 0.0148 0.0141
 Neptune -86360-10-01 08:23 J -29821293.40 -29821293.15 -29821292.88 0.0088 0.0016
 Neptune -86359-10-03 21:35 J -29820925.82 -29820925.60 -29820925.35 0.0088 0.0041
 Mars -86359-12-21 10:47 J -29820847.11 -29820847.05 -29820847.00 0.1895 0.1802
 Neptune -86358-10-06 10:03 J -29820558.22 -29820558.08 -29820557.88 0.0088 0.0068
 Saturn -86352-01-09 01:11 J -29818636.52 -29818636.45 -29818636.36 0.0275 0.0258
 Saturn -86351-01-20 21:49 J -29818259.79 -29818259.59 -29818259.38 0.0274 0.0141
 Saturn -86350-02-01 14:08 J -29817883.15 -29817882.91 -29817882.67 0.0272 0.0021
 Saturn -86349-02-13 03:35 J -29817506.57 -29817506.35 -29817506.12 0.0271 0.0098

Saturn	-86348-02-23 15:49 J	-29817129.98	-29817129.84	-29817129.68	0.0271	0.0212
Uranus	-86347-07-24 05:01 J	-29816614.30	-29816614.29	-29816614.26	0.0142	0.0142
Uranus	-86346-07-29 09:06 J	-29816244.19	-29816244.12	-29816244.03	0.0142	0.0134
Uranus	-86345-08-02 11:59 J	-29815874.09	-29815874.00	-29815873.86	0.0141	0.0126
Uranus	-86344-08-07 14:37 J	-29815504.03	-29815503.89	-29815503.74	0.0140	0.0117
Uranus	-86343-08-12 15:49 J	-29815134.00	-29815133.84	-29815133.66	0.0140	0.0107
Uranus	-86342-08-17 15:20 J	-29814764.03	-29814763.86	-29814763.65	0.0139	0.0098
Uranus	-86341-08-21 14:23 J	-29814394.09	-29814393.90	-29814393.69	0.0139	0.0087
Uranus	-86340-08-26 11:44 J	-29814024.21	-29814024.01	-29814023.78	0.0138	0.0076
Uranus	-86339-08-31 08:08 J	-29813654.38	-29813654.16	-29813653.92	0.0137	0.0065
Uranus	-86338-09-05 03:20 J	-29813284.60	-29813284.36	-29813284.12	0.0137	0.0054
Saturn	-86337-07-09 18:56 J	-29812975.81	-29812975.71	-29812975.60	0.0284	0.0257
Uranus	-86337-09-08 21:06 J	-29812914.86	-29812914.62	-29812914.36	0.0136	0.0044
Saturn	-86336-07-24 08:08 J	-29812596.39	-29812596.16	-29812595.93	0.0286	0.0117
Uranus	-86336-09-13 14:08 J	-29812545.16	-29812544.91	-29812544.66	0.0136	0.0032
Saturn	-86335-08-08 02:08 J	-29812216.66	-29812216.41	-29812216.16	0.0287	0.0034
Uranus	-86335-09-18 05:44 J	-29812175.51	-29812175.26	-29812174.99	0.0135	0.0022
Saturn	-86334-08-22 22:32 J	-29811836.74	-29811836.56	-29811836.36	0.0288	0.0186
Uranus	-86334-09-22 20:08 J	-29811805.91	-29811805.66	-29811805.39	0.0135	0.0011
Mars	-86333-06-17 05:44 J	-29811537.42	-29811537.26	-29811537.10	0.1645	0.0937
Uranus	-86333-09-26 09:49 J	-29811436.35	-29811436.09	-29811435.83	0.0134	0.0002
Uranus	-86332-09-30 22:18 J	-29811066.82	-29811066.57	-29811066.30	0.0134	0.0012
Uranus	-86331-10-05 09:35 J	-29810697.34	-29810697.10	-29810696.83	0.0133	0.0023
Uranus	-86330-10-09 20:08 J	-29810327.91	-29810327.66	-29810327.40	0.0133	0.0032
Uranus	-86329-10-13 05:30 J	-29809958.51	-29809958.27	-29809958.02	0.0133	0.0042
Uranus	-86328-10-17 13:54 J	-29809589.15	-29809588.92	-29809588.67	0.0132	0.0051
Uranus	-86327-10-21 21:20 J	-29809219.83	-29809219.61	-29809219.37	0.0132	0.0061
Uranus	-86326-10-26 03:49 J	-29808850.55	-29808850.34	-29808850.11	0.0132	0.0069
Uranus	-86325-10-29 09:49 J	-29808481.29	-29808481.09	-29808480.88	0.0132	0.0077
Uranus	-86324-11-02 15:06 J	-29808112.06	-29808111.87	-29808111.68	0.0131	0.0085

Uranus	-86323-11-06 19:11 J	-29807742.87	-29807742.70	-29807742.51	0.0131	0.0092
Saturn	-86322-01-16 02:23 J	-29807672.56	-29807672.40	-29807672.22	0.0275	0.0188
Uranus	-86322-11-10 23:15 J	-29807373.69	-29807373.53	-29807373.36	0.0131	0.0099
Saturn	-86321-01-27 21:20 J	-29807295.84	-29807295.61	-29807295.38	0.0274	0.0068
Uranus	-86321-11-14 02:23 J	-29807004.52	-29807004.40	-29807004.23	0.0131	0.0106
Saturn	-86320-02-07 12:56 J	-29806919.20	-29806918.96	-29806918.73	0.0272	0.0051
Jupiter	-86320-09-27 03:06 J	-29806687.57	-29806687.37	-29806687.16	0.0514	0.0258
Uranus	-86320-11-18 05:30 J	-29806635.38	-29806635.27	-29806635.12	0.0131	0.0112
Saturn	-86319-02-19 02:23 J	-29806542.59	-29806542.40	-29806542.22	0.0271	0.0167
Uranus	-86319-11-22 08:23 J	-29806266.25	-29806266.15	-29806266.03	0.0131	0.0117
Uranus	-86318-11-26 10:32 J	-29805897.13	-29805897.06	-29805896.96	0.0131	0.0123
Uranus	-86317-11-29 12:27 J	-29805528.02	-29805527.98	-29805527.90	0.0131	0.0127
Uranus	-86316-12-03 14:23 J	-29805158.91	-29805158.90	-29805158.86	0.0131	0.0131
Jupiter	-86314-03-21 20:08 J	-29804685.84	-29804685.66	-29804685.48	0.0515	0.0320
Jupiter	-86308-10-01 22:18 J	-29802299.80	-29802299.57	-29802299.33	0.0516	0.0034
Saturn	-86307-07-18 15:35 J	-29802010.04	-29802009.85	-29802009.64	0.0285	0.0174
Saturn	-86306-08-02 07:54 J	-29801630.43	-29801630.17	-29801629.92	0.0287	0.0026
Saturn	-86305-08-16 03:20 J	-29801250.58	-29801250.36	-29801250.13	0.0288	0.0127
Uranus	-86304-01-14 10:47 J	-29801099.06	-29801099.05	-29801099.00	0.0135	0.0134
Saturn	-86304-08-31 00:27 J	-29800870.55	-29800870.48	-29800870.40	0.0289	0.0274
Uranus	-86303-01-18 14:37 J	-29800729.93	-29800729.89	-29800729.80	0.0136	0.0131
Uranus	-86302-01-22 19:25 J	-29800360.76	-29800360.69	-29800360.58	0.0136	0.0126
Jupiter	-86302-03-26 09:49 J	-29800298.32	-29800298.09	-29800297.86	0.0513	0.0034
Uranus	-86301-01-27 00:42 J	-29799991.57	-29799991.47	-29799991.34	0.0137	0.0121
Uranus	-86300-01-30 06:27 J	-29799622.34	-29799622.23	-29799622.08	0.0137	0.0115
Uranus	-86299-02-03 13:25 J	-29799253.09	-29799252.94	-29799252.78	0.0138	0.0108
Uranus	-86298-02-07 20:37 J	-29798883.79	-29798883.64	-29798883.46	0.0139	0.0102
Uranus	-86297-02-12 05:01 J	-29798514.46	-29798514.29	-29798514.10	0.0139	0.0094
Uranus	-86296-02-15 14:23 J	-29798145.08	-29798144.90	-29798144.70	0.0140	0.0085
Jupiter	-86296-10-06 21:35 J	-29797911.78	-29797911.60	-29797911.42	0.0518	0.0336

Uranus -86295-02-20 00:27 J -29797775.67 -29797775.48 -29797775.25 0.0140 0.0077
 Uranus -86294-02-24 12:13 J -29797406.20 -29797405.99 -29797405.77 0.0141 0.0066
 Saturn -86293-01-11 08:37 J -29797085.25 -29797085.14 -29797085.02 0.0275 0.0239
 Uranus -86293-02-29 00:56 J -29797036.68 -29797036.46 -29797036.23 0.0142 0.0056
 Saturn -86292-01-22 04:47 J -29796708.51 -29796708.30 -29796708.08 0.0274 0.0122
 Uranus -86292-03-04 14:37 J -29796667.12 -29796666.89 -29796666.65 0.0142 0.0045
 Saturn -86291-02-02 21:06 J -29796331.86 -29796331.62 -29796331.38 0.0272 0.0002
 Uranus -86291-03-09 05:44 J -29796297.49 -29796297.26 -29796297.01 0.0143 0.0034
 Saturn -86290-02-14 10:32 J -29795955.27 -29795955.06 -29795954.84 0.0271 0.0116
 Uranus -86290-03-13 22:03 J -29795927.82 -29795927.58 -29795927.33 0.0143 0.0022
 Jupiter -86290-03-30 23:30 J -29795910.72 -29795910.52 -29795910.32 0.0510 0.0249
 Saturn -86289-02-25 23:15 J -29795578.65 -29795578.53 -29795578.40 0.0271 0.0228
 Uranus -86289-03-17 15:49 J -29795558.09 -29795557.84 -29795557.59 0.0144 0.0009
 Uranus -86288-03-22 10:18 J -29795188.31 -29795188.07 -29795187.82 0.0144 0.0005
 Uranus -86287-03-27 06:13 J -29794818.48 -29794818.24 -29794817.99 0.0145 0.0017
 Uranus -86286-04-01 03:20 J -29794448.60 -29794448.36 -29794448.12 0.0145 0.0030
 Uranus -86285-04-05 01:25 J -29794078.67 -29794078.44 -29794078.19 0.0146 0.0043
 Uranus -86284-04-10 00:42 J -29793708.69 -29793708.47 -29793708.23 0.0146 0.0056
 Uranus -86283-04-15 01:25 J -29793338.65 -29793338.44 -29793338.21 0.0147 0.0068
 Uranus -86282-04-20 03:06 J -29792968.57 -29792968.37 -29792968.15 0.0147 0.0080
 Neptune -86281-03-18 00:56 J -29792635.52 -29792635.46 -29792635.36 0.0089 0.0084
 Uranus -86281-04-24 05:44 J -29792598.44 -29792598.26 -29792598.04 0.0147 0.0092
 Neptune -86280-03-20 11:01 J -29792268.22 -29792268.04 -29792267.85 0.0089 0.0059
 Uranus -86280-04-29 09:49 J -29792228.26 -29792228.09 -29792227.90 0.0147 0.0103
 Mars -86280-12-24 15:06 J -29791989.05 -29791988.87 -29791988.68 0.1889 0.0436
 Neptune -86279-03-22 20:37 J -29791900.86 -29791900.64 -29791900.39 0.0089 0.0033
 Uranus -86279-05-04 15:06 J -29791858.03 -29791857.87 -29791857.71 0.0147 0.0114
 Neptune -86278-03-25 06:56 J -29791533.46 -29791533.21 -29791532.96 0.0089 0.0007
 Uranus -86278-05-09 20:37 J -29791487.76 -29791487.64 -29791487.49 0.0147 0.0124
 Saturn -86278-07-12 08:08 J -29791424.29 -29791424.16 -29791424.01 0.0284 0.0236

Neptune -86277-03-26 17:01 J -29791166.04 -29791165.79 -29791165.55 0.0089 0.0019
 Uranus -86277-05-14 03:20 J -29791117.46 -29791117.36 -29791117.24 0.0148 0.0133
 Saturn -86277-07-25 21:35 J -29791044.84 -29791044.60 -29791044.36 0.0286 0.0094
 Neptune -86276-03-29 02:37 J -29790798.59 -29790798.39 -29790798.15 0.0089 0.0045
 Uranus -86276-05-19 10:32 J -29790747.12 -29790747.06 -29790746.97 0.0147 0.0141
 Saturn -86276-08-09 15:35 J -29790665.09 -29790664.85 -29790664.60 0.0287 0.0057
 Neptune -86275-03-31 12:42 J -29790431.11 -29790430.97 -29790430.80 0.0089 0.0070
 Saturn -86275-08-24 12:13 J -29790285.16 -29790284.99 -29790284.81 0.0288 0.0207
 Pluto -86271-06-27 00:56 J -29788882.70 -29788882.46 -29788882.18 0.0067 0.0015
 Saturn -86263-01-17 09:06 J -29786121.31 -29786121.12 -29786120.94 0.0275 0.0170
 Uranus -86263-07-24 13:39 J -29785932.99 -29785932.93 -29785932.84 0.0142 0.0137
 Saturn -86262-01-29 03:49 J -29785744.58 -29785744.34 -29785744.11 0.0274 0.0050
 Uranus -86262-07-29 17:44 J -29785562.85 -29785562.76 -29785562.64 0.0142 0.0129
 Saturn -86261-02-09 19:11 J -29785367.93 -29785367.70 -29785367.47 0.0272 0.0070
 Uranus -86261-08-02 21:20 J -29785192.74 -29785192.61 -29785192.47 0.0141 0.0120
 Saturn -86260-02-20 08:51 J -29784991.30 -29784991.13 -29784990.96 0.0272 0.0184
 Uranus -86260-08-07 23:15 J -29784822.67 -29784822.53 -29784822.35 0.0141 0.0112
 Uranus -86259-08-13 00:27 J -29784452.64 -29784452.48 -29784452.29 0.0140 0.0102
 Uranus -86258-08-18 00:27 J -29784082.67 -29784082.48 -29784082.28 0.0139 0.0091
 Uranus -86257-08-21 22:47 J -29783712.74 -29783712.55 -29783712.31 0.0139 0.0082
 Uranus -86256-08-26 20:51 J -29783342.86 -29783342.63 -29783342.41 0.0138 0.0070
 Uranus -86255-08-31 17:15 J -29782973.02 -29782972.78 -29782972.54 0.0137 0.0060
 Mars -86254-06-20 13:11 J -29782680.14 -29782679.95 -29782679.75 0.1648 0.0220
 Uranus -86254-09-05 11:59 J -29782603.24 -29782603.00 -29782602.75 0.0137 0.0049
 Uranus -86253-09-09 05:59 J -29782233.49 -29782233.25 -29782232.98 0.0136 0.0039
 Uranus -86252-09-13 23:15 J -29781863.79 -29781863.53 -29781863.27 0.0136 0.0027
 Uranus -86251-09-18 14:51 J -29781494.13 -29781493.88 -29781493.61 0.0135 0.0016
 Uranus -86250-09-23 05:44 J -29781124.52 -29781124.26 -29781124.00 0.0135 0.0005
 Uranus -86249-09-26 19:25 J -29780754.95 -29780754.69 -29780754.43 0.0134 0.0006
 Saturn -86248-07-20 05:30 J -29780458.47 -29780458.27 -29780458.04 0.0285 0.0153

Uranus -86248-10-01 07:54 J -29780385.42 -29780385.17 -29780384.91 0.0134 0.0016
 Saturn -86247-08-03 22:18 J -29780078.82 -29780078.57 -29780078.32 0.0287 0.0003
 Uranus -86247-10-05 19:25 J -29780015.94 -29780015.69 -29780015.43 0.0133 0.0026
 Saturn -86246-08-18 17:44 J -29779698.97 -29779698.76 -29779698.53 0.0288 0.0149
 Uranus -86246-10-10 05:44 J -29779646.50 -29779646.26 -29779646.00 0.0133 0.0036
 Uranus -86245-10-13 15:20 J -29779277.10 -29779276.86 -29779276.61 0.0133 0.0046
 Uranus -86244-10-17 23:30 J -29778907.74 -29778907.52 -29778907.27 0.0132 0.0056
 Uranus -86243-10-22 07:11 J -29778538.42 -29778538.20 -29778537.97 0.0132 0.0064
 Uranus -86242-10-26 13:39 J -29778169.13 -29778168.93 -29778168.70 0.0132 0.0072
 Uranus -86241-10-29 19:39 J -29777799.87 -29777799.68 -29777799.46 0.0132 0.0080
 Uranus -86240-11-03 00:42 J -29777430.64 -29777430.47 -29777430.26 0.0131 0.0088
 Uranus -86239-11-07 05:30 J -29777061.43 -29777061.27 -29777061.08 0.0131 0.0095
 Uranus -86238-11-11 09:20 J -29776692.25 -29776692.11 -29776691.93 0.0131 0.0102
 Jupiter -86237-09-25 23:01 J -29776372.72 -29776372.54 -29776372.35 0.0513 0.0311
 Uranus -86237-11-14 13:11 J -29776323.08 -29776322.95 -29776322.79 0.0131 0.0108
 Uranus -86236-11-18 16:18 J -29775953.93 -29775953.82 -29775953.68 0.0131 0.0113
 Uranus -86235-11-22 18:56 J -29775584.80 -29775584.71 -29775584.59 0.0131 0.0118
 Saturn -86234-01-12 17:01 J -29775533.93 -29775533.79 -29775533.64 0.0275 0.0220
 Uranus -86234-11-26 21:06 J -29775215.68 -29775215.62 -29775215.51 0.0131 0.0124
 Saturn -86233-01-24 12:56 J -29775157.18 -29775156.96 -29775156.74 0.0273 0.0102
 Uranus -86233-11-29 23:15 J -29774846.57 -29774846.53 -29774846.44 0.0131 0.0127
 Saturn -86232-02-04 05:01 J -29774780.53 -29774780.29 -29774780.05 0.0272 0.0017
 Uranus -86232-12-04 01:11 J -29774477.46 -29774477.45 -29774477.41 0.0131 0.0131
 Saturn -86231-02-15 18:27 J -29774403.93 -29774403.73 -29774403.51 0.0271 0.0134
 Jupiter -86231-03-21 02:08 J -29774370.58 -29774370.41 -29774370.25 0.0515 0.0351
 Saturn -86230-02-27 07:25 J -29774027.29 -29774027.19 -29774027.09 0.0271 0.0244
 Jupiter -86225-09-30 22:18 J -29771984.81 -29771984.57 -29771984.33 0.0516 0.0012
 Uranus -86221-01-11 19:11 J -29770786.74 -29770786.70 -29770786.67 0.0135 0.0133
 Uranus -86220-01-14 22:03 J -29770417.62 -29770417.58 -29770417.50 0.0135 0.0130
 Uranus -86219-01-19 02:23 J -29770048.48 -29770048.40 -29770048.31 0.0136 0.0126

Jupiter -86219-03-25 15:35 J -29769983.08 -29769982.85 -29769982.62 0.0513 0.0069
 Saturn -86219-07-13 23:30 J -29769872.67 -29769872.52 -29769872.34 0.0284 0.0213
 Uranus -86218-01-23 06:27 J -29769679.32 -29769679.23 -29769679.10 0.0136 0.0122
 Saturn -86218-07-28 13:25 J -29769493.19 -29769492.94 -29769492.70 0.0286 0.0070
 Uranus -86217-01-27 11:44 J -29769310.13 -29769310.01 -29769309.88 0.0137 0.0116
 Saturn -86217-08-11 07:39 J -29769113.42 -29769113.18 -29769112.94 0.0287 0.0080
 Uranus -86216-01-30 17:15 J -29768940.91 -29768940.78 -29768940.62 0.0137 0.0110
 Saturn -86216-08-26 04:18 J -29768733.47 -29768733.32 -29768733.16 0.0288 0.0229
 Uranus -86215-02-03 23:30 J -29768571.66 -29768571.52 -29768571.34 0.0138 0.0104
 Uranus -86214-02-08 06:56 J -29768202.37 -29768202.21 -29768202.01 0.0138 0.0097
 Uranus -86213-02-12 15:35 J -29767833.03 -29767832.85 -29767832.65 0.0139 0.0088
 Jupiter -86213-10-06 00:42 J -29767596.67 -29767596.47 -29767596.28 0.0518 0.0299
 Uranus -86212-02-16 00:42 J -29767463.66 -29767463.47 -29767463.26 0.0140 0.0080
 Uranus -86211-02-20 11:01 J -29767094.24 -29767094.04 -29767093.82 0.0140 0.0071
 Uranus -86210-02-24 22:18 J -29766724.78 -29766724.57 -29766724.34 0.0141 0.0061
 Uranus -86209-02-29 10:47 J -29766355.26 -29766355.05 -29766354.80 0.0142 0.0051
 Uranus -86208-03-05 00:56 J -29765985.69 -29765985.46 -29765985.22 0.0142 0.0039
 Uranus -86207-03-09 15:49 J -29765616.08 -29765615.84 -29765615.59 0.0143 0.0028
 Jupiter -86207-03-29 23:44 J -29765595.72 -29765595.51 -29765595.30 0.0510 0.0200
 Uranus -86206-03-14 08:08 J -29765246.41 -29765246.16 -29765245.91 0.0143 0.0016
 Saturn -86205-01-07 17:44 J -29764946.81 -29764946.76 -29764946.70 0.0277 0.0268
 Uranus -86205-03-18 01:39 J -29764876.68 -29764876.43 -29764876.19 0.0144 0.0004
 Saturn -86204-01-18 16:32 J -29764570.00 -29764569.81 -29764569.61 0.0275 0.0151
 Uranus -86204-03-22 19:54 J -29764506.92 -29764506.67 -29764506.42 0.0144 0.0009
 Saturn -86203-01-30 11:01 J -29764193.28 -29764193.04 -29764192.80 0.0274 0.0031
 Uranus -86203-03-27 15:35 J -29764137.09 -29764136.85 -29764136.60 0.0145 0.0022
 Saturn -86202-02-11 02:08 J -29763816.63 -29763816.41 -29763816.18 0.0272 0.0087
 Uranus -86202-04-01 12:27 J -29763767.21 -29763766.98 -29763766.73 0.0145 0.0035
 Saturn -86201-02-22 15:49 J -29763440.00 -29763439.84 -29763439.68 0.0272 0.0201
 Uranus -86201-04-05 10:32 J -29763397.29 -29763397.06 -29763396.81 0.0146 0.0047

Mars -86201-12-27 18:13 J -29763130.91 -29763130.74 -29763130.57 0.1882 0.0871
 Uranus -86200-04-10 09:49 J -29763027.31 -29763027.09 -29763026.85 0.0146 0.0059
 Uranus -86199-04-15 10:18 J -29762657.27 -29762657.07 -29762656.84 0.0147 0.0072
 Neptune -86199-09-23 23:01 J -29762495.66 -29762495.54 -29762495.39 0.0088 0.0075
 Uranus -86198-04-20 12:13 J -29762287.20 -29762286.99 -29762286.79 0.0147 0.0083
 Neptune -86198-09-26 12:27 J -29762128.18 -29762127.98 -29762127.74 0.0088 0.0050
 Uranus -86197-04-24 14:37 J -29761917.06 -29761916.89 -29761916.68 0.0147 0.0096
 Neptune -86197-09-28 02:08 J -29761760.65 -29761760.41 -29761760.14 0.0088 0.0023
 Uranus -86196-04-29 18:42 J -29761546.89 -29761546.72 -29761546.54 0.0147 0.0106
 Neptune -86196-09-30 15:49 J -29761393.11 -29761392.84 -29761392.58 0.0088 0.0003
 Jupiter -86195-04-03 10:18 J -29761208.16 -29761208.07 -29761207.99 0.0508 0.0469
 Uranus -86195-05-04 23:30 J -29761176.66 -29761176.52 -29761176.35 0.0147 0.0116
 Neptune -86195-10-03 04:47 J -29761025.55 -29761025.30 -29761025.05 0.0088 0.0029
 Uranus -86194-05-10 05:15 J -29760806.39 -29760806.28 -29760806.13 0.0147 0.0126
 Neptune -86194-10-05 17:30 J -29760657.96 -29760657.77 -29760657.55 0.0088 0.0055
 Uranus -86193-05-14 11:59 J -29760436.10 -29760436.00 -29760435.89 0.0147 0.0134
 Neptune -86193-10-07 06:13 J -29760290.32 -29760290.24 -29760290.11 0.0088 0.0081
 Uranus -86192-05-19 18:56 J -29760065.76 -29760065.71 -29760065.62 0.0147 0.0142
 Saturn -86190-07-08 09:35 J -29759286.16 -29759286.10 -29759286.00 0.0283 0.0268
 Saturn -86189-07-21 21:35 J -29758906.83 -29758906.60 -29758906.38 0.0285 0.0130
 Saturn -86188-08-05 14:23 J -29758527.15 -29758526.90 -29758526.65 0.0287 0.0019
 Saturn -86187-08-20 10:18 J -29758147.27 -29758147.07 -29758146.87 0.0288 0.0170
 Pluto -86186-12-31 01:11 J -29757649.53 -29757649.45 -29757649.31 0.0078 0.0070
 Pluto -86184-01-01 01:25 J -29757282.45 -29757282.44 -29757282.39 0.0078 0.0077
 Uranus -86180-07-19 17:01 J -29755621.83 -29755621.79 -29755621.71 0.0143 0.0139
 Uranus -86179-07-24 22:32 J -29755251.65 -29755251.56 -29755251.46 0.0142 0.0132
 Uranus -86178-07-30 02:37 J -29754881.50 -29754881.39 -29754881.25 0.0142 0.0124
 Uranus -86177-08-03 05:59 J -29754511.38 -29754511.25 -29754511.08 0.0141 0.0115
 Uranus -86176-08-08 08:23 J -29754141.31 -29754141.15 -29754140.97 0.0141 0.0106
 Saturn -86175-01-14 01:25 J -29753982.59 -29753982.44 -29753982.26 0.0275 0.0202

Mars -86175-06-22 23:15 J -29753822.72 -29753822.53 -29753822.35 0.1652 0.0544
 Uranus -86175-08-13 09:20 J -29753771.28 -29753771.11 -29753770.90 0.0140 0.0096
 Saturn -86174-01-25 21:20 J -29753605.83 -29753605.61 -29753605.38 0.0273 0.0083
 Uranus -86174-08-18 09:06 J -29753401.31 -29753401.12 -29753400.90 0.0139 0.0086
 Saturn -86173-02-06 13:25 J -29753229.18 -29753228.94 -29753228.71 0.0272 0.0036
 Uranus -86173-08-22 07:54 J -29753031.37 -29753031.17 -29753030.93 0.0139 0.0076
 Saturn -86172-02-17 02:51 J -29752852.57 -29752852.38 -29752852.18 0.0271 0.0151
 Uranus -86172-08-27 05:44 J -29752661.48 -29752661.26 -29752661.02 0.0138 0.0065
 Saturn -86171-02-28 15:35 J -29752475.91 -29752475.85 -29752475.78 0.0271 0.0259
 Uranus -86171-09-01 01:54 J -29752291.64 -29752291.42 -29752291.16 0.0138 0.0055
 Uranus -86170-09-05 21:35 J -29751921.85 -29751921.60 -29751921.35 0.0137 0.0043
 Uranus -86169-09-09 15:49 J -29751552.09 -29751551.84 -29751551.58 0.0136 0.0032
 Uranus -86168-09-14 08:51 J -29751182.39 -29751182.13 -29751181.87 0.0136 0.0021
 Uranus -86167-09-19 00:56 J -29750812.72 -29750812.46 -29750812.20 0.0135 0.0011
 Uranus -86166-09-23 15:35 J -29750443.11 -29750442.85 -29750442.59 0.0135 0.0001
 Uranus -86165-09-27 05:30 J -29750073.53 -29750073.27 -29750073.01 0.0134 0.0011
 Uranus -86164-10-01 18:13 J -29749704.00 -29749703.74 -29749703.48 0.0134 0.0021
 Uranus -86163-10-06 05:30 J -29749334.51 -29749334.27 -29749334.01 0.0133 0.0031
 Uranus -86162-10-10 16:03 J -29748965.07 -29748964.83 -29748964.58 0.0133 0.0041
 Uranus -86161-10-14 01:25 J -29748595.67 -29748595.44 -29748595.19 0.0133 0.0050
 Saturn -86160-07-15 16:03 J -29748321.01 -29748320.83 -29748320.64 0.0284 0.0191
 Uranus -86160-10-18 09:49 J -29748226.31 -29748226.09 -29748225.85 0.0132 0.0059
 Saturn -86159-07-30 06:13 J -29747941.49 -29747941.24 -29747940.99 0.0286 0.0047
 Uranus -86159-10-22 17:15 J -29747856.98 -29747856.78 -29747856.54 0.0132 0.0068
 Saturn -86158-08-14 00:27 J -29747561.71 -29747561.48 -29747561.24 0.0287 0.0103
 Uranus -86158-10-27 00:13 J -29747487.69 -29747487.49 -29747487.27 0.0132 0.0075
 Saturn -86157-08-27 21:06 J -29747181.74 -29747181.62 -29747181.49 0.0288 0.0249
 Uranus -86157-10-30 06:13 J -29747118.42 -29747118.24 -29747118.03 0.0132 0.0083
 Uranus -86156-11-03 11:30 J -29746749.19 -29746749.02 -29746748.82 0.0132 0.0091
 Uranus -86155-11-07 16:32 J -29746379.98 -29746379.81 -29746379.64 0.0131 0.0097

Jupiter -86154-09-26 00:56 J -29746057.63 -29746057.46 -29746057.28 0.0513 0.0348
 Uranus -86154-11-11 20:23 J -29746010.79 -29746010.65 -29746010.48 0.0131 0.0104
 Uranus -86153-11-15 00:13 J -29745641.61 -29745641.49 -29745641.34 0.0131 0.0109
 Uranus -86152-11-19 03:35 J -29745272.46 -29745272.35 -29745272.22 0.0131 0.0114
 Uranus -86151-11-23 06:13 J -29744903.33 -29744903.24 -29744903.12 0.0131 0.0119
 Uranus -86150-11-27 08:51 J -29744534.20 -29744534.13 -29744534.04 0.0131 0.0124
 Uranus -86149-11-30 10:32 J -29744165.10 -29744165.06 -29744164.98 0.0131 0.0128
 Jupiter -86148-03-20 03:06 J -29744055.51 -29744055.37 -29744055.22 0.0515 0.0398
 Uranus -86148-12-04 12:13 J -29743796.00 -29743795.99 -29743795.94 0.0131 0.0131
 Saturn -86146-01-09 01:54 J -29743395.51 -29743395.42 -29743395.32 0.0276 0.0251
 Saturn -86145-01-21 00:13 J -29743018.69 -29743018.49 -29743018.27 0.0275 0.0133
 Saturn -86144-01-31 18:13 J -29742641.97 -29742641.74 -29742641.50 0.0273 0.0014
 Saturn -86143-02-12 09:06 J -29742265.33 -29742265.12 -29742264.90 0.0272 0.0105
 Saturn -86142-02-23 22:47 J -29741888.69 -29741888.55 -29741888.40 0.0272 0.0217
 Jupiter -86142-10-01 00:42 J -29741669.71 -29741669.47 -29741669.23 0.0515 0.0050
 Uranus -86138-01-08 03:49 J -29740474.37 -29740474.34 -29740474.30 0.0134 0.0132
 Uranus -86137-01-12 06:42 J -29740105.27 -29740105.22 -29740105.14 0.0135 0.0130
 Uranus -86136-01-15 10:03 J -29739736.15 -29739736.08 -29739735.98 0.0135 0.0126
 Jupiter -86136-03-24 14:23 J -29739668.12 -29739667.90 -29739667.67 0.0513 0.0121
 Uranus -86135-01-19 13:54 J -29739367.02 -29739366.92 -29739366.80 0.0136 0.0122
 Uranus -86134-01-23 17:59 J -29738997.85 -29738997.75 -29738997.60 0.0136 0.0118
 Uranus -86133-01-27 23:01 J -29738628.66 -29738628.54 -29738628.37 0.0137 0.0112
 Uranus -86132-01-31 04:47 J -29738259.44 -29738259.30 -29738259.12 0.0137 0.0106
 Uranus -86131-02-04 11:44 J -29737890.18 -29737890.01 -29737889.84 0.0138 0.0098
 Saturn -86131-07-10 00:27 J -29737734.59 -29737734.48 -29737734.35 0.0284 0.0247
 Uranus -86130-02-08 18:42 J -29737520.89 -29737520.72 -29737520.52 0.0138 0.0091
 Saturn -86130-07-24 12:42 J -29737355.20 -29737354.97 -29737354.73 0.0286 0.0108
 Jupiter -86130-10-05 20:23 J -29737281.86 -29737281.65 -29737281.44 0.0517 0.0244
 Uranus -86129-02-13 02:51 J -29737151.56 -29737151.38 -29737151.17 0.0139 0.0083
 Saturn -86129-08-07 06:13 J -29736975.49 -29736975.24 -29736974.99 0.0287 0.0041

Uranus -86128-02-16 12:13 J -29736782.19 -29736781.99 -29736781.77 0.0140 0.0075
 Mars -86128-06-15 21:49 J -29736662.72 -29736662.59 -29736662.46 0.1636 0.1188
 Saturn -86128-08-22 02:37 J -29736595.57 -29736595.39 -29736595.20 0.0288 0.0191
 Uranus -86127-02-20 22:18 J -29736412.77 -29736412.57 -29736412.34 0.0140 0.0066
 Uranus -86126-02-25 10:03 J -29736043.30 -29736043.08 -29736042.85 0.0141 0.0055
 Uranus -86125-02-29 22:32 J -29735673.78 -29735673.56 -29735673.32 0.0141 0.0045
 Uranus -86124-03-05 12:27 J -29735304.22 -29735303.98 -29735303.74 0.0142 0.0033
 Jupiter -86124-03-29 02:37 J -29735280.61 -29735280.39 -29735280.17 0.0512 0.0160
 Uranus -86123-03-10 03:06 J -29734934.61 -29734934.37 -29734934.12 0.0143 0.0023
 Uranus -86122-03-14 19:11 J -29734564.94 -29734564.70 -29734564.45 0.0143 0.0010
 Uranus -86121-03-18 12:27 J -29734195.23 -29734194.98 -29734194.74 0.0144 0.0003
 Uranus -86120-03-23 06:27 J -29733825.47 -29733825.23 -29733824.98 0.0144 0.0015
 Uranus -86119-03-28 02:08 J -29733455.65 -29733455.41 -29733455.16 0.0145 0.0027
 Uranus -86118-04-01 22:47 J -29733085.79 -29733085.55 -29733085.31 0.0145 0.0039
 Uranus -86117-04-05 20:51 J -29732715.86 -29732715.63 -29732715.39 0.0146 0.0051
 Saturn -86116-01-15 10:47 J -29732431.22 -29732431.05 -29732430.87 0.0275 0.0183
 Neptune -86116-03-19 21:06 J -29732367.77 -29732367.62 -29732367.46 0.0089 0.0071
 Uranus -86116-04-10 19:39 J -29732345.89 -29732345.68 -29732345.44 0.0146 0.0064
 Saturn -86115-01-27 05:59 J -29732054.48 -29732054.25 -29732054.02 0.0273 0.0065
 Neptune -86115-03-22 06:42 J -29732000.43 -29732000.22 -29731999.99 0.0089 0.0045
 Uranus -86115-04-15 20:23 J -29731975.86 -29731975.65 -29731975.43 0.0147 0.0075
 Saturn -86114-02-07 21:35 J -29731677.83 -29731677.60 -29731677.37 0.0272 0.0053
 Neptune -86114-03-24 16:18 J -29731633.05 -29731632.82 -29731632.56 0.0089 0.0020
 Uranus -86114-04-20 21:35 J -29731605.78 -29731605.60 -29731605.38 0.0147 0.0087
 Saturn -86113-02-19 10:47 J -29731301.23 -29731301.05 -29731300.86 0.0271 0.0167
 Neptune -86113-03-26 02:37 J -29731265.64 -29731265.39 -29731265.14 0.0089 0.0006
 Uranus -86113-04-25 00:42 J -29731235.66 -29731235.47 -29731235.28 0.0147 0.0097
 Neptune -86112-03-28 12:42 J -29730898.21 -29730897.97 -29730897.73 0.0089 0.0031
 Jupiter -86112-04-02 15:20 J -29730892.96 -29730892.86 -29730892.73 0.0509 0.0438
 Uranus -86112-04-30 04:03 J -29730865.48 -29730865.33 -29730865.14 0.0147 0.0109

Neptune -86111-03-30 22:32 J -29730530.74 -29730530.56 -29730530.35 0.0089 0.0057
 Uranus -86111-05-05 09:20 J -29730495.26 -29730495.11 -29730494.96 0.0147 0.0118
 Neptune -86110-04-02 08:23 J -29730163.21 -29730163.15 -29730163.03 0.0089 0.0083
 Uranus -86110-05-10 14:37 J -29730125.01 -29730124.89 -29730124.75 0.0147 0.0127
 Uranus -86109-05-14 21:06 J -29729754.71 -29729754.62 -29729754.51 0.0147 0.0135
 Uranus -86108-05-20 04:03 J -29729384.39 -29729384.33 -29729384.25 0.0147 0.0142
 Saturn -86101-07-17 08:08 J -29726769.36 -29726769.16 -29726768.95 0.0285 0.0169
 Saturn -86100-07-31 22:47 J -29726389.80 -29726389.55 -29726389.29 0.0286 0.0025
 Saturn -86099-08-15 17:15 J -29726010.00 -29726009.78 -29726009.54 0.0287 0.0126
 Saturn -86098-08-30 13:54 J -29725630.00 -29725629.92 -29725629.82 0.0288 0.0269
 Uranus -86097-07-14 18:27 J -29725310.76 -29725310.73 -29725310.66 0.0144 0.0141
 Mars -86096-06-25 07:54 J -29724965.29 -29724965.17 -29724965.05 0.1656 0.1303
 Uranus -86096-07-20 00:42 J -29724940.55 -29724940.47 -29724940.37 0.0143 0.0134
 Uranus -86095-07-25 05:44 J -29724570.36 -29724570.26 -29724570.12 0.0142 0.0127
 Uranus -86094-07-30 09:49 J -29724200.21 -29724200.09 -29724199.93 0.0142 0.0119
 Uranus -86093-08-03 13:25 J -29723830.09 -29723829.94 -29723829.77 0.0141 0.0110
 Uranus -86092-08-08 15:20 J -29723460.02 -29723459.86 -29723459.66 0.0141 0.0101
 Uranus -86091-08-13 16:47 J -29723090.00 -29723089.80 -29723089.60 0.0140 0.0090
 Uranus -86090-08-18 16:18 J -29722720.02 -29722719.82 -29722719.59 0.0139 0.0081
 Uranus -86089-08-22 15:35 J -29722350.07 -29722349.85 -29722349.62 0.0139 0.0070
 Uranus -86088-08-27 13:11 J -29721980.18 -29721979.95 -29721979.71 0.0138 0.0059
 Saturn -86087-01-10 09:49 J -29721844.20 -29721844.09 -29721843.95 0.0276 0.0233
 Uranus -86087-09-01 09:49 J -29721610.33 -29721610.09 -29721609.84 0.0138 0.0049
 Saturn -86086-01-22 07:39 J -29721467.39 -29721467.18 -29721466.96 0.0274 0.0115
 Uranus -86086-09-06 05:01 J -29721240.53 -29721240.29 -29721240.03 0.0137 0.0038
 Saturn -86085-02-03 01:11 J -29721090.69 -29721090.45 -29721090.22 0.0273 0.0005
 Uranus -86085-09-09 23:44 J -29720870.76 -29720870.51 -29720870.25 0.0136 0.0027
 Saturn -86084-02-13 15:35 J -29720714.06 -29720713.85 -29720713.63 0.0272 0.0121
 Uranus -86084-09-14 17:01 J -29720501.05 -29720500.79 -29720500.53 0.0136 0.0016
 Saturn -86083-02-25 04:47 J -29720337.40 -29720337.30 -29720337.16 0.0271 0.0232

Uranus	-86083-09-19 09:06 J	-29720131.38	-29720131.12	-29720130.86	0.0135	0.0005
Uranus	-86082-09-23 23:59 J	-29719761.76	-29719761.50	-29719761.24	0.0135	0.0005
Uranus	-86081-09-27 13:54 J	-29719392.17	-29719391.92	-29719391.66	0.0134	0.0016
Uranus	-86080-10-02 02:23 J	-29719022.65	-29719022.40	-29719022.14	0.0134	0.0026
Uranus	-86079-10-06 13:54 J	-29718653.16	-29718652.92	-29718652.66	0.0134	0.0036
Uranus	-86078-10-11 00:27 J	-29718283.72	-29718283.48	-29718283.23	0.0133	0.0045
Uranus	-86077-10-14 09:49 J	-29717914.31	-29717914.09	-29717913.84	0.0133	0.0054
Uranus	-86076-10-18 18:27 J	-29717544.94	-29717544.73	-29717544.49	0.0133	0.0063
Uranus	-86075-10-23 02:08 J	-29717175.61	-29717175.41	-29717175.18	0.0132	0.0071
Mars	-86075-12-21 04:32 J	-29717116.38	-29717116.31	-29717116.23	0.1904	0.1739
Uranus	-86074-10-27 09:06 J	-29716806.31	-29716806.12	-29716805.90	0.0132	0.0078
Uranus	-86073-10-30 15:20 J	-29716437.04	-29716436.86	-29716436.65	0.0132	0.0086
Saturn	-86072-07-11 14:08 J	-29716183.06	-29716182.91	-29716182.76	0.0284	0.0227
Uranus	-86072-11-03 20:51 J	-29716067.80	-29716067.63	-29716067.44	0.0132	0.0093
Saturn	-86071-07-26 03:06 J	-29715803.61	-29715803.37	-29715803.13	0.0286	0.0087
Jupiter	-86071-09-24 22:18 J	-29715742.71	-29715742.57	-29715742.41	0.0512	0.0393
Uranus	-86071-11-08 01:39 J	-29715698.57	-29715698.43	-29715698.24	0.0131	0.0100
Saturn	-86070-08-09 20:51 J	-29715423.87	-29715423.63	-29715423.38	0.0287	0.0062
Uranus	-86070-11-12 05:59 J	-29715329.38	-29715329.25	-29715329.07	0.0131	0.0106
Saturn	-86069-08-23 17:44 J	-29715043.93	-29715043.76	-29715043.58	0.0288	0.0210
Uranus	-86069-11-15 10:18 J	-29714960.19	-29714960.07	-29714959.92	0.0131	0.0111
Uranus	-86068-11-19 13:39 J	-29714591.04	-29714590.93	-29714590.80	0.0131	0.0116
Uranus	-86067-11-23 16:18 J	-29714221.90	-29714221.82	-29714221.70	0.0131	0.0120
Uranus	-86066-11-27 19:11 J	-29713852.78	-29713852.70	-29713852.61	0.0131	0.0124
Jupiter	-86065-03-19 04:32 J	-29713740.41	-29713740.31	-29713740.18	0.0517	0.0441
Uranus	-86065-11-30 20:51 J	-29713483.67	-29713483.63	-29713483.55	0.0131	0.0128
Uranus	-86064-12-04 22:47 J	-29713114.58	-29713114.55	-29713114.50	0.0132	0.0130
Jupiter	-86059-09-29 20:23 J	-29711354.88	-29711354.65	-29711354.42	0.0514	0.0101
Saturn	-86057-01-17 18:27 J	-29710879.90	-29710879.73	-29710879.53	0.0275	0.0166
Saturn	-86056-01-28 13:25 J	-29710503.17	-29710502.94	-29710502.70	0.0273	0.0048

Uranus	-86055-01-04 12:13 J	-29710162.01	-29710161.99	-29710161.92	0.0134	0.0132
Saturn	-86055-02-09 04:32 J	-29710126.54	-29710126.31	-29710126.08	0.0272	0.0070
Uranus	-86054-01-08 15:06 J	-29709792.91	-29709792.87	-29709792.78	0.0134	0.0129
Saturn	-86054-02-20 17:30 J	-29709749.94	-29709749.77	-29709749.59	0.0271	0.0183
Uranus	-86053-01-12 18:13 J	-29709423.81	-29709423.74	-29709423.64	0.0135	0.0126
Jupiter	-86053-03-23 19:11 J	-29709352.91	-29709352.70	-29709352.48	0.0515	0.0154
Uranus	-86052-01-15 21:35 J	-29709054.69	-29709054.60	-29709054.48	0.0135	0.0122
Uranus	-86051-01-20 01:11 J	-29708685.55	-29708685.45	-29708685.30	0.0136	0.0118
Uranus	-86050-01-24 05:59 J	-29708316.37	-29708316.25	-29708316.10	0.0136	0.0112
Uranus	-86049-01-28 10:47 J	-29707947.18	-29707947.05	-29707946.88	0.0137	0.0107
Mars	-86049-06-18 04:32 J	-29707805.49	-29707805.31	-29707805.12	0.1640	0.0486
Uranus	-86048-01-31 16:32 J	-29707577.96	-29707577.81	-29707577.62	0.0137	0.0101
Uranus	-86047-02-04 23:15 J	-29707208.70	-29707208.53	-29707208.34	0.0138	0.0093
Jupiter	-86047-10-04 18:56 J	-29706966.92	-29706966.71	-29706966.48	0.0516	0.0197
Uranus	-86046-02-09 06:42 J	-29706839.40	-29706839.22	-29706839.02	0.0138	0.0086
Uranus	-86045-02-13 15:06 J	-29706470.07	-29706469.87	-29706469.66	0.0139	0.0077
Uranus	-86044-02-17 00:13 J	-29706100.70	-29706100.49	-29706100.27	0.0140	0.0069
Uranus	-86043-02-21 10:32 J	-29705731.27	-29705731.06	-29705730.83	0.0140	0.0059
Saturn	-86043-07-05 12:42 J	-29705596.99	-29705596.97	-29705596.93	0.0283	0.0280
Uranus	-86042-02-25 22:18 J	-29705361.80	-29705361.57	-29705361.34	0.0141	0.0049
Saturn	-86042-07-19 22:03 J	-29705217.79	-29705217.58	-29705217.36	0.0285	0.0148
Uranus	-86041-03-01 10:32 J	-29704992.29	-29704992.06	-29704991.81	0.0141	0.0039
Jupiter	-86041-03-28 08:51 J	-29704965.35	-29704965.13	-29704964.91	0.0512	0.0128
Saturn	-86041-08-02 13:25 J	-29704838.20	-29704837.94	-29704837.69	0.0287	0.0003
Uranus	-86040-03-06 00:13 J	-29704622.73	-29704622.49	-29704622.24	0.0142	0.0028
Saturn	-86040-08-17 08:23 J	-29704458.36	-29704458.15	-29704457.92	0.0288	0.0146
Uranus	-86039-03-10 14:51 J	-29704253.12	-29704252.88	-29704252.63	0.0143	0.0017
Saturn	-86039-09-01 05:01 J	-29704078.29	-29704078.29	-29704078.26	0.0288	0.0288
Uranus	-86038-03-15 06:42 J	-29703883.46	-29703883.22	-29703882.97	0.0143	0.0005
Uranus	-86037-03-18 23:44 J	-29703513.75	-29703513.51	-29703513.26	0.0144	0.0008

Uranus -86036-03-23 17:59 J -29703144.00 -29703143.75 -29703143.50 0.0144 0.0019
 Uranus -86035-03-28 13:25 J -29702774.18 -29702773.94 -29702773.70 0.0145 0.0031
 Neptune -86035-09-23 05:59 J -29702595.26 -29702595.25 -29702595.17 0.0088 0.0088
 Jupiter -86035-10-09 20:51 J -29702578.67 -29702578.63 -29702578.56 0.0519 0.0505
 Uranus -86034-04-02 09:49 J -29702404.32 -29702404.09 -29702403.84 0.0145 0.0044
 Neptune -86034-09-25 19:54 J -29702227.83 -29702227.67 -29702227.45 0.0088 0.0062
 Uranus -86033-04-06 07:54 J -29702034.40 -29702034.17 -29702033.94 0.0146 0.0055
 Neptune -86033-09-27 10:03 J -29701860.31 -29701860.08 -29701859.82 0.0088 0.0035
 Uranus -86032-04-11 06:42 J -29701664.44 -29701664.22 -29701663.99 0.0146 0.0067
 Neptune -86032-09-29 23:44 J -29701492.77 -29701492.51 -29701492.25 0.0088 0.0009
 Uranus -86031-04-16 07:11 J -29701294.41 -29701294.20 -29701293.98 0.0146 0.0079
 Neptune -86031-10-02 12:42 J -29701125.21 -29701124.97 -29701124.70 0.0088 0.0018
 Uranus -86030-04-21 08:23 J -29700924.34 -29700924.15 -29700923.94 0.0147 0.0090
 Neptune -86030-10-05 02:08 J -29700757.63 -29700757.41 -29700757.17 0.0088 0.0043
 Jupiter -86029-04-01 18:56 J -29700577.85 -29700577.71 -29700577.56 0.0509 0.0396
 Uranus -86029-04-25 11:01 J -29700554.21 -29700554.04 -29700553.84 0.0147 0.0101
 Neptune -86029-10-06 14:37 J -29700390.03 -29700389.89 -29700389.70 0.0088 0.0069
 Saturn -86028-01-11 17:44 J -29700292.90 -29700292.76 -29700292.61 0.0276 0.0216
 Uranus -86028-04-30 15:06 J -29700184.04 -29700183.87 -29700183.71 0.0147 0.0111
 Saturn -86027-01-23 14:37 J -29699916.12 -29699915.89 -29699915.67 0.0274 0.0099
 Uranus -86027-05-05 19:11 J -29699813.82 -29699813.70 -29699813.53 0.0147 0.0121
 Saturn -86026-02-04 07:11 J -29699539.43 -29699539.20 -29699538.96 0.0273 0.0021
 Uranus -86026-05-11 00:42 J -29699443.57 -29699443.47 -29699443.33 0.0147 0.0129
 Saturn -86025-02-15 21:20 J -29699162.81 -29699162.61 -29699162.40 0.0272 0.0136
 Uranus -86025-05-15 07:11 J -29699073.29 -29699073.20 -29699073.10 0.0147 0.0136
 Pluto -86025-06-28 02:37 J -29699029.63 -29699029.39 -29699029.13 0.0067 0.0022
 Saturn -86024-02-26 10:18 J -29698786.16 -29698786.07 -29698785.96 0.0271 0.0244
 Uranus -86024-05-20 13:39 J -29698702.97 -29698702.93 -29698702.84 0.0147 0.0143
 Uranus -86023-05-25 21:20 J -29698332.61 -29698332.61 -29698332.59 0.0147 0.0147
 Uranus -86014-07-10 21:06 J -29694999.64 -29694999.62 -29694999.57 0.0144 0.0142

Saturn	-86013-07-13 00:56 J	-29694631.62	-29694631.46	-29694631.28	0.0284	0.0208
Uranus	-86013-07-15 03:20 J	-29694629.41	-29694629.36	-29694629.25	0.0143	0.0137
Uranus	-86012-07-20 09:49 J	-29694259.19	-29694259.09	-29694258.97	0.0143	0.0129
Saturn	-86012-07-27 14:51 J	-29694252.13	-29694251.88	-29694251.64	0.0286	0.0067
Uranus	-86011-07-25 14:37 J	-29693889.01	-29693888.89	-29693888.74	0.0142	0.0122
Saturn	-86011-08-11 09:20 J	-29693872.35	-29693872.11	-29693871.87	0.0287	0.0081
Uranus	-86010-07-30 18:56 J	-29693518.86	-29693518.71	-29693518.54	0.0142	0.0113
Saturn	-86010-08-26 06:42 J	-29693492.37	-29693492.22	-29693492.06	0.0288	0.0228
Uranus	-86009-08-03 22:03 J	-29693148.74	-29693148.58	-29693148.39	0.0141	0.0104
Uranus	-86008-08-09 00:13 J	-29692778.67	-29692778.49	-29692778.28	0.0141	0.0095
Uranus	-86007-08-14 01:11 J	-29692408.64	-29692408.45	-29692408.22	0.0140	0.0085
Uranus	-86006-08-19 01:25 J	-29692038.66	-29692038.44	-29692038.21	0.0139	0.0075
Uranus	-86005-08-23 00:27 J	-29691668.71	-29691668.48	-29691668.24	0.0139	0.0064
Uranus	-86004-08-27 22:18 J	-29691298.81	-29691298.57	-29691298.33	0.0138	0.0054
Uranus	-86003-09-01 18:56 J	-29690928.96	-29690928.71	-29690928.46	0.0138	0.0043
Uranus	-86002-09-06 14:23 J	-29690559.15	-29690558.90	-29690558.64	0.0137	0.0032
Uranus	-86001-09-10 09:06 J	-29690189.38	-29690189.12	-29690188.86	0.0136	0.0021

86TH MILLENNIUM BCE

This is a list of transits of Earth in the 86th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Uranus	-86000-09-15 02:08 J	-29689819.66	-29689819.41	-29689819.14	0.0136	0.0011		
Saturn	-85999-01-07 02:37 J	-29689705.45	-29689705.39	-29689705.30	0.0276	0.0263		

Uranus	-85999-09-19 18:27 J	-29689449.99	-29689449.73	-29689449.46	0.0135	0.0002
Saturn	-85998-01-19 01:39 J	-29689328.63	-29689328.43	-29689328.23	0.0274	0.0148
Uranus	-85998-09-24 09:20 J	-29689080.36	-29689080.11	-29689079.84	0.0135	0.0011
Saturn	-85997-01-30 19:39 J	-29688951.92	-29688951.68	-29688951.45	0.0273	0.0031
Uranus	-85997-09-27 23:30 J	-29688710.78	-29688710.52	-29688710.26	0.0134	0.0021
Saturn	-85996-02-10 10:03 J	-29688575.30	-29688575.08	-29688574.85	0.0272	0.0085
Uranus	-85996-10-02 11:44 J	-29688341.25	-29688341.01	-29688340.74	0.0134	0.0031
Mars	-85996-12-24 09:35 J	-29688258.29	-29688258.10	-29688257.91	0.1897	0.0342
Saturn	-85995-02-21 22:47 J	-29688198.70	-29688198.55	-29688198.38	0.0271	0.0197
Uranus	-85995-10-06 23:30 J	-29687971.76	-29687971.52	-29687971.27	0.0134	0.0040
Uranus	-85994-10-11 09:49 J	-29687602.32	-29687602.09	-29687601.84	0.0133	0.0049
Uranus	-85993-10-14 19:25 J	-29687232.91	-29687232.69	-29687232.44	0.0133	0.0058
Uranus	-85992-10-19 04:03 J	-29686863.54	-29686863.33	-29686863.10	0.0133	0.0066
Uranus	-85991-10-23 11:44 J	-29686494.20	-29686494.01	-29686493.78	0.0132	0.0075
Uranus	-85990-10-27 19:11 J	-29686124.90	-29686124.70	-29686124.49	0.0132	0.0081
Uranus	-85989-10-31 01:11 J	-29685755.62	-29685755.45	-29685755.24	0.0132	0.0089
Jupiter	-85988-09-23 22:03 J	-29685427.69	-29685427.58	-29685427.45	0.0511	0.0434
Uranus	-85988-11-04 06:42 J	-29685386.37	-29685386.22	-29685386.02	0.0132	0.0096
Uranus	-85987-11-08 11:59 J	-29685017.14	-29685017.00	-29685016.82	0.0132	0.0102
Uranus	-85986-11-12 16:18 J	-29684647.94	-29684647.82	-29684647.65	0.0131	0.0108
Uranus	-85985-11-15 20:23 J	-29684278.76	-29684278.65	-29684278.50	0.0131	0.0113
Saturn	-85984-07-06 23:59 J	-29684045.59	-29684045.50	-29684045.40	0.0283	0.0262
Uranus	-85984-11-19 23:59 J	-29683909.61	-29683909.50	-29683909.38	0.0131	0.0117
Saturn	-85983-07-21 09:49 J	-29683666.31	-29683666.09	-29683665.86	0.0285	0.0128
Uranus	-85983-11-24 02:51 J	-29683540.47	-29683540.38	-29683540.27	0.0131	0.0121
Jupiter	-85982-03-19 11:59 J	-29683425.09	-29683425.00	-29683424.90	0.0517	0.0469
Saturn	-85982-08-05 01:39 J	-29683286.68	-29683286.43	-29683286.18	0.0287	0.0018
Uranus	-85982-11-28 05:01 J	-29683171.35	-29683171.29	-29683171.19	0.0131	0.0125
Saturn	-85981-08-18 21:06 J	-29682906.82	-29682906.62	-29682906.40	0.0288	0.0165
Uranus	-85981-12-01 06:56 J	-29682802.25	-29682802.21	-29682802.12	0.0131	0.0128

Uranus	-85980-12-05 08:51 J	-29682433.15	-29682433.13	-29682433.07	0.0132	0.0130
Uranus	-85979-12-09 10:47 J	-29682064.05	-29682064.05	-29682064.02	0.0132	0.0132
Jupiter	-85976-09-28 22:32 J	-29681039.79	-29681039.56	-29681039.33	0.0514	0.0138
Uranus	-85974-12-28 19:11 J	-29680218.71	-29680218.70	-29680218.67	0.0133	0.0132
Uranus	-85973-12-31 21:20 J	-29679849.64	-29679849.61	-29679849.55	0.0133	0.0131
Uranus	-85971-01-04 23:30 J	-29679480.56	-29679480.52	-29679480.43	0.0134	0.0129
Uranus	-85970-01-09 02:37 J	-29679111.47	-29679111.39	-29679111.30	0.0134	0.0126
Jupiter	-85970-03-24 00:27 J	-29679037.69	-29679037.48	-29679037.27	0.0515	0.0189
Mars	-85970-06-21 11:30 J	-29678948.21	-29678948.02	-29678947.83	0.1643	0.0226
Uranus	-85969-01-13 05:44 J	-29678742.36	-29678742.26	-29678742.16	0.0135	0.0122
Saturn	-85969-01-13 23:44 J	-29678741.67	-29678741.51	-29678741.34	0.0275	0.0199
Uranus	-85968-01-16 08:37 J	-29678373.23	-29678373.14	-29678373.00	0.0135	0.0118
Saturn	-85968-01-24 19:54 J	-29678364.90	-29678364.67	-29678364.44	0.0274	0.0082
Uranus	-85967-01-20 12:56 J	-29678004.09	-29678003.96	-29678003.82	0.0136	0.0113
Saturn	-85967-02-05 11:59 J	-29677988.23	-29677988.00	-29677987.76	0.0273	0.0036
Uranus	-85966-01-24 17:15 J	-29677634.92	-29677634.78	-29677634.62	0.0136	0.0108
Saturn	-85966-02-17 01:39 J	-29677611.63	-29677611.43	-29677611.23	0.0272	0.0150
Uranus	-85965-01-28 22:03 J	-29677265.72	-29677265.58	-29677265.40	0.0137	0.0102
Saturn	-85965-02-28 14:08 J	-29677234.98	-29677234.91	-29677234.83	0.0271	0.0256
Uranus	-85964-02-01 04:03 J	-29676896.50	-29676896.33	-29676896.14	0.0137	0.0095
Jupiter	-85964-10-03 23:15 J	-29676651.76	-29676651.53	-29676651.31	0.0516	0.0164
Uranus	-85963-02-05 10:32 J	-29676527.23	-29676527.06	-29676526.86	0.0138	0.0088
Uranus	-85962-02-09 18:13 J	-29676157.93	-29676157.74	-29676157.53	0.0138	0.0080
Uranus	-85961-02-14 02:23 J	-29675788.60	-29675788.40	-29675788.18	0.0139	0.0072
Uranus	-85960-02-17 12:13 J	-29675419.21	-29675418.99	-29675418.77	0.0140	0.0063
Uranus	-85959-02-21 22:32 J	-29675049.78	-29675049.56	-29675049.33	0.0140	0.0053
Uranus	-85958-02-26 10:03 J	-29674680.31	-29674680.08	-29674679.84	0.0141	0.0043
Jupiter	-85958-03-28 12:13 J	-29674650.21	-29674649.99	-29674649.76	0.0512	0.0088
Uranus	-85957-03-01 22:47 J	-29674310.79	-29674310.55	-29674310.31	0.0141	0.0033
Uranus	-85956-03-06 11:59 J	-29673941.23	-29673941.00	-29673940.75	0.0142	0.0022

Uranus	-85955-03-11 02:51 J	-29673571.62	-29673571.38	-29673571.13	0.0143	0.0010
Uranus	-85954-03-15 18:42 J	-29673201.97	-29673201.72	-29673201.47	0.0143	0.0002
Saturn	-85954-07-15 08:51 J	-29673080.31	-29673080.13	-29673079.94	0.0284	0.0190
Uranus	-85953-03-19 11:30 J	-29672832.26	-29672832.02	-29672831.77	0.0144	0.0013
Saturn	-85953-07-28 23:15 J	-29672700.78	-29672700.53	-29672700.28	0.0286	0.0049
Neptune	-85952-03-19 08:23 J	-29672467.22	-29672467.15	-29672467.03	0.0089	0.0082
Uranus	-85952-03-24 05:44 J	-29672462.50	-29672462.26	-29672462.01	0.0144	0.0025
Saturn	-85952-08-12 18:13 J	-29672320.97	-29672320.74	-29672320.49	0.0288	0.0100
Jupiter	-85952-10-08 20:51 J	-29672263.73	-29672263.63	-29672263.52	0.0518	0.0463
Neptune	-85951-03-21 17:59 J	-29672099.92	-29672099.75	-29672099.54	0.0089	0.0057
Uranus	-85951-03-29 00:56 J	-29672092.69	-29672092.46	-29672092.21	0.0145	0.0037
Saturn	-85951-08-27 16:03 J	-29671940.95	-29671940.83	-29671940.69	0.0289	0.0244
Neptune	-85950-03-24 04:03 J	-29671732.57	-29671732.33	-29671732.10	0.0089	0.0032
Uranus	-85950-04-02 21:35 J	-29671722.83	-29671722.60	-29671722.36	0.0145	0.0048
Neptune	-85949-03-25 13:39 J	-29671365.18	-29671364.93	-29671364.68	0.0089	0.0006
Uranus	-85949-04-06 19:25 J	-29671352.91	-29671352.69	-29671352.46	0.0146	0.0060
Neptune	-85948-03-27 23:30 J	-29670997.76	-29670997.52	-29670997.27	0.0089	0.0019
Uranus	-85948-04-11 18:27 J	-29670982.94	-29670982.73	-29670982.51	0.0146	0.0072
Neptune	-85947-03-30 09:06 J	-29670630.32	-29670630.12	-29670629.88	0.0089	0.0045
Uranus	-85947-04-16 18:56 J	-29670612.92	-29670612.71	-29670612.50	0.0146	0.0083
Neptune	-85946-04-01 19:25 J	-29670262.83	-29670262.69	-29670262.52	0.0089	0.0071
Jupiter	-85946-04-01 22:47 J	-29670262.71	-29670262.55	-29670262.39	0.0511	0.0362 *
Uranus	-85946-04-21 20:08 J	-29670242.84	-29670242.66	-29670242.46	0.0147	0.0094
Uranus	-85945-04-25 22:32 J	-29669872.72	-29669872.56	-29669872.36	0.0147	0.0104
Uranus	-85944-05-01 02:23 J	-29669502.55	-29669502.40	-29669502.23	0.0147	0.0113
Uranus	-85943-05-06 06:42 J	-29669132.34	-29669132.22	-29669132.06	0.0147	0.0122
Uranus	-85942-05-11 11:59 J	-29668762.11	-29668762.00	-29668761.87	0.0147	0.0130
Uranus	-85941-05-15 17:59 J	-29668391.83	-29668391.75	-29668391.65	0.0147	0.0137
Saturn	-85940-01-08 08:51 J	-29668154.23	-29668154.13	-29668154.01	0.0276	0.0245
Uranus	-85940-05-21 00:27 J	-29668021.53	-29668021.48	-29668021.40	0.0147	0.0142

Pluto -85939-01-01 04:47 J -29667796.44 -29667796.30 -29667796.10 0.0078 0.0058
 Saturn -85939-01-20 06:56 J -29667777.41 -29667777.21 -29667776.99 0.0274 0.0131
 Uranus -85939-05-26 07:39 J -29667651.18 -29667651.18 -29667651.16 0.0147 0.0147
 Saturn -85938-02-01 00:27 J -29667400.72 -29667400.48 -29667400.24 0.0273 0.0015
 Saturn -85937-02-12 14:23 J -29667024.11 -29667023.90 -29667023.67 0.0271 0.0101
 Saturn -85936-02-23 02:51 J -29666647.52 -29666647.38 -29666647.22 0.0270 0.0209
 Uranus -85931-07-05 23:01 J -29664688.55 -29664688.54 -29664688.49 0.0145 0.0144
 Uranus -85930-07-11 06:13 J -29664318.29 -29664318.24 -29664318.15 0.0144 0.0138
 Uranus -85929-07-15 12:42 J -29663948.05 -29663947.97 -29663947.85 0.0143 0.0132
 Uranus -85928-07-20 18:42 J -29663577.83 -29663577.72 -29663577.58 0.0143 0.0124
 Uranus -85927-07-25 23:30 J -29663207.65 -29663207.52 -29663207.35 0.0142 0.0116
 Uranus -85926-07-31 03:20 J -29662837.51 -29662837.36 -29662837.17 0.0142 0.0108
 Saturn -85925-07-08 07:39 J -29662494.31 -29662494.18 -29662494.06 0.0284 0.0244
 Uranus -85925-08-04 06:42 J -29662467.40 -29662467.22 -29662467.02 0.0141 0.0098
 Saturn -85924-07-22 18:13 J -29662114.97 -29662114.74 -29662114.50 0.0286 0.0109
 Uranus -85924-08-09 08:51 J -29662097.33 -29662097.13 -29662096.92 0.0141 0.0089
 Mars -85923-06-14 14:37 J -29661787.98 -29661787.89 -29661787.80 0.1628 0.1422
 Saturn -85923-08-06 10:32 J -29661735.31 -29661735.06 -29661734.81 0.0287 0.0036
 Uranus -85923-08-14 09:35 J -29661727.31 -29661727.10 -29661726.87 0.0140 0.0079
 Uranus -85922-08-19 09:49 J -29661357.32 -29661357.09 -29661356.86 0.0139 0.0069
 Saturn -85922-08-21 06:42 J -29661355.41 -29661355.22 -29661355.02 0.0288 0.0182
 Uranus -85921-08-23 08:37 J -29660987.37 -29660987.14 -29660986.89 0.0139 0.0059
 Uranus -85920-08-28 06:13 J -29660617.47 -29660617.24 -29660616.98 0.0138 0.0048
 Uranus -85919-09-02 03:06 J -29660247.61 -29660247.37 -29660247.11 0.0137 0.0037
 Uranus -85918-09-06 22:47 J -29659877.80 -29659877.55 -29659877.29 0.0137 0.0026
 Uranus -85917-09-10 17:30 J -29659508.03 -29659507.77 -29659507.51 0.0136 0.0015
 Mars -85917-12-27 13:39 J -29659400.09 -29659399.93 -29659399.77 0.1891 0.1007
 Uranus -85916-09-15 10:47 J -29659138.31 -29659138.05 -29659137.79 0.0136 0.0005
 Uranus -85915-09-20 02:51 J -29658768.64 -29658768.38 -29658768.12 0.0135 0.0006
 Uranus -85914-09-24 17:44 J -29658399.01 -29658398.76 -29658398.49 0.0135 0.0016

Uranus	-85913-09-28 07:54 J	-29658029.43	-29658029.17	-29658028.92	0.0134	0.0026
Uranus	-85912-10-02 20:08 J	-29657659.91	-29657659.66	-29657659.40	0.0134	0.0035
Uranus	-85911-10-07 07:39 J	-29657290.41	-29657290.18	-29657289.92	0.0134	0.0045
Saturn	-85910-01-15 04:32 J	-29657190.48	-29657190.31	-29657190.12	0.0275	0.0183
Uranus	-85910-10-11 18:13 J	-29656920.96	-29656920.74	-29656920.49	0.0133	0.0054
Saturn	-85909-01-26 23:59 J	-29656813.72	-29656813.50	-29656813.26	0.0273	0.0067
Uranus	-85909-10-15 03:49 J	-29656551.55	-29656551.34	-29656551.09	0.0133	0.0062
Saturn	-85908-02-06 15:35 J	-29656437.09	-29656436.85	-29656436.62	0.0272	0.0051
Uranus	-85908-10-19 12:42 J	-29656182.18	-29656181.97	-29656181.74	0.0133	0.0070
Saturn	-85907-02-18 04:18 J	-29656060.50	-29656060.32	-29656060.12	0.0271	0.0163
Uranus	-85907-10-23 20:37 J	-29655812.83	-29655812.64	-29655812.42	0.0132	0.0078
Saturn	-85906-03-01 16:18 J	-29655683.84	-29655683.82	-29655683.77	0.0271	0.0268
Uranus	-85906-10-28 03:35 J	-29655443.52	-29655443.35	-29655443.13	0.0132	0.0086
Jupiter	-85905-09-23 03:49 J	-29655112.44	-29655112.34	-29655112.24	0.0511	0.0460
Uranus	-85905-10-31 10:18 J	-29655074.23	-29655074.07	-29655073.87	0.0132	0.0092
Uranus	-85904-11-04 16:03 J	-29654704.99	-29654704.83	-29654704.65	0.0132	0.0098
Uranus	-85903-11-08 21:20 J	-29654335.75	-29654335.61	-29654335.44	0.0132	0.0104
Uranus	-85902-11-13 01:54 J	-29653966.55	-29653966.42	-29653966.27	0.0131	0.0109
Uranus	-85901-11-16 05:44 J	-29653597.37	-29653597.26	-29653597.12	0.0131	0.0114
Uranus	-85900-11-20 09:06 J	-29653228.22	-29653228.12	-29653228.00	0.0131	0.0118
Jupiter	-85899-03-18 17:01 J	-29653109.84	-29653109.79	-29653109.73	0.0518	0.0502
Uranus	-85899-11-24 11:59 J	-29652859.08	-29652859.00	-29652858.89	0.0131	0.0122
Uranus	-85898-11-28 14:23 J	-29652489.96	-29652489.90	-29652489.81	0.0131	0.0125
Uranus	-85897-12-01 16:47 J	-29652120.86	-29652120.80	-29652120.73	0.0132	0.0127
Uranus	-85896-12-05 18:42 J	-29651751.77	-29651751.72	-29651751.68	0.0132	0.0129
Saturn	-85895-07-16 14:23 J	-29651529.10	-29651528.90	-29651528.70	0.0285	0.0173
Uranus	-85895-12-09 19:54 J	-29651382.67	-29651382.67	-29651382.61	0.0132	0.0131
Saturn	-85894-07-31 05:15 J	-29651149.54	-29651149.28	-29651149.03	0.0286	0.0032
Uranus	-85894-12-13 22:03 J	-29651013.58	-29651013.58	-29651013.56	0.0132	0.0132
Saturn	-85893-08-14 00:42 J	-29650769.69	-29650769.47	-29650769.23	0.0288	0.0116

Jupiter -85893-09-28 01:39 J -29650724.66 -29650724.43 -29650724.21 0.0513 0.0167
 Uranus -85893-12-16 23:44 J -29650644.51 -29650644.51 -29650644.50 0.0132 0.0132
 Saturn -85892-08-28 22:47 J -29650389.65 -29650389.55 -29650389.43 0.0289 0.0259
 Uranus -85892-12-21 01:11 J -29650275.45 -29650275.45 -29650275.42 0.0132 0.0132
 Mars -85891-06-23 19:54 J -29650090.83 -29650090.67 -29650090.51 0.1647 0.0972
 Uranus -85891-12-25 02:51 J -29649906.39 -29649906.38 -29649906.32 0.0133 0.0132
 Uranus -85890-12-29 05:01 J -29649537.32 -29649537.29 -29649537.22 0.0133 0.0130
 Uranus -85888-01-01 07:11 J -29649168.24 -29649168.20 -29649168.11 0.0133 0.0129
 Uranus -85887-01-05 10:03 J -29648799.16 -29648799.08 -29648798.99 0.0134 0.0125
 Jupiter -85887-03-23 04:03 J -29648722.54 -29648722.33 -29648722.13 0.0516 0.0224
 Uranus -85886-01-09 12:27 J -29648430.06 -29648429.98 -29648429.86 0.0134 0.0122
 Uranus -85885-01-13 15:35 J -29648060.96 -29648060.85 -29648060.73 0.0135 0.0118
 Uranus -85884-01-16 18:42 J -29647691.83 -29647691.72 -29647691.57 0.0135 0.0114
 Uranus -85883-01-20 22:32 J -29647322.69 -29647322.56 -29647322.40 0.0136 0.0109
 Uranus -85882-01-25 03:20 J -29646953.51 -29646953.36 -29646953.19 0.0136 0.0103
 Saturn -85881-01-10 13:11 J -29646603.07 -29646602.95 -29646602.81 0.0276 0.0229
 Uranus -85881-01-29 08:37 J -29646584.31 -29646584.14 -29646583.97 0.0137 0.0097
 Jupiter -85881-10-03 00:42 J -29646336.70 -29646336.47 -29646336.24 0.0515 0.0128
 Saturn -85880-01-21 10:32 J -29646226.27 -29646226.06 -29646225.84 0.0274 0.0115
 Uranus -85880-02-01 14:23 J -29646215.08 -29646214.90 -29646214.71 0.0137 0.0090
 Saturn -85879-02-02 03:35 J -29645849.59 -29645849.35 -29645849.11 0.0272 0.0002
 Uranus -85879-02-05 21:06 J -29645845.81 -29645845.62 -29645845.42 0.0138 0.0083
 Uranus -85878-02-10 04:47 J -29645476.51 -29645476.30 -29645476.09 0.0138 0.0075
 Saturn -85878-02-13 17:15 J -29645472.99 -29645472.78 -29645472.56 0.0271 0.0114
 Uranus -85877-02-14 13:11 J -29645107.16 -29645106.95 -29645106.73 0.0139 0.0066
 Saturn -85877-02-25 05:15 J -29645096.41 -29645096.28 -29645096.14 0.0270 0.0221
 Uranus -85876-02-17 22:32 J -29644737.77 -29644737.56 -29644737.33 0.0140 0.0057
 Uranus -85875-02-22 09:06 J -29644368.35 -29644368.12 -29644367.88 0.0140 0.0048
 Jupiter -85875-03-27 17:59 J -29644334.98 -29644334.75 -29644334.52 0.0514 0.0059
 Uranus -85874-02-26 20:37 J -29643998.87 -29643998.64 -29643998.40 0.0141 0.0038

Uranus -85873-03-02 09:06 J -29643629.36 -29643629.12 -29643628.88 0.0141 0.0027
 Uranus -85872-03-06 22:32 J -29643259.80 -29643259.56 -29643259.31 0.0142 0.0016
 Uranus -85871-03-11 13:11 J -29642890.19 -29642889.95 -29642889.70 0.0143 0.0006
 Uranus -85870-03-16 05:01 J -29642520.54 -29642520.29 -29642520.04 0.0143 0.0007
 Neptune -85870-09-25 03:49 J -29642327.46 -29642327.34 -29642327.16 0.0088 0.0073
 Uranus -85869-03-19 22:03 J -29642150.83 -29642150.58 -29642150.34 0.0144 0.0018
 Neptune -85869-09-26 17:59 J -29641959.96 -29641959.75 -29641959.51 0.0088 0.0046
 Jupiter -85869-10-07 22:32 J -29641948.69 -29641948.56 -29641948.42 0.0517 0.0423
 Uranus -85868-03-24 15:49 J -29641781.07 -29641780.84 -29641780.58 0.0144 0.0031
 Neptune -85868-09-29 07:39 J -29641592.43 -29641592.18 -29641591.91 0.0088 0.0021
 Uranus -85867-03-29 11:15 J -29641411.26 -29641411.03 -29641410.78 0.0145 0.0042
 Neptune -85867-10-01 21:20 J -29641224.87 -29641224.61 -29641224.34 0.0088 0.0006
 Uranus -85866-04-03 07:54 J -29641041.39 -29641041.17 -29641040.93 0.0145 0.0053
 Saturn -85866-07-10 11:44 J -29640943.14 -29640943.01 -29640942.84 0.0284 0.0228
 Neptune -85866-10-04 10:32 J -29640857.29 -29640857.06 -29640856.80 0.0088 0.0031
 Uranus -85865-04-07 05:44 J -29640671.47 -29640671.26 -29640671.03 0.0146 0.0065
 Saturn -85865-07-23 23:30 J -29640563.76 -29640563.52 -29640563.28 0.0286 0.0092
 Neptune -85865-10-05 23:59 J -29640489.69 -29640489.50 -29640489.29 0.0088 0.0057
 Uranus -85864-04-12 04:47 J -29640301.50 -29640301.30 -29640301.07 0.0146 0.0076
 Saturn -85864-08-07 16:32 J -29640184.06 -29640183.81 -29640183.56 0.0287 0.0053
 Neptune -85864-10-08 12:13 J -29640122.05 -29640121.99 -29640121.87 0.0088 0.0083
 Jupiter -85863-04-01 08:23 J -29639947.32 -29639947.15 -29639946.98 0.0511 0.0338
 Uranus -85863-04-17 05:30 J -29639931.47 -29639931.27 -29639931.06 0.0146 0.0087
 Saturn -85863-08-22 12:56 J -29639804.13 -29639803.96 -29639803.77 0.0288 0.0198
 Uranus -85862-04-22 06:42 J -29639561.40 -29639561.22 -29639561.02 0.0147 0.0097
 Uranus -85861-04-26 09:06 J -29639191.27 -29639191.12 -29639190.93 0.0147 0.0107
 Uranus -85860-05-01 12:28 J -29638821.11 -29638820.98 -29638820.80 0.0147 0.0116
 Uranus -85859-05-06 17:01 J -29638450.91 -29638450.79 -29638450.64 0.0147 0.0124
 Uranus -85858-05-11 22:04 J -29638080.68 -29638080.58 -29638080.45 0.0147 0.0132
 Uranus -85857-05-16 04:04 J -29637710.41 -29637710.33 -29637710.23 0.0147 0.0138

Uranus	-85856-05-21 10:47 J	-29637340.11	-29637340.05	-29637339.99	0.0147	0.0143
Uranus	-85855-05-26 17:30 J	-29636969.77	-29636969.77	-29636969.74	0.0147	0.0147
Saturn	-85851-01-16 08:08 J	-29635639.34	-29635639.16	-29635638.96	0.0275	0.0167
Saturn	-85850-01-28 03:06 J	-29635262.60	-29635262.37	-29635262.13	0.0273	0.0051
Saturn	-85849-02-08 17:44 J	-29634885.98	-29634885.76	-29634885.52	0.0272	0.0065
Saturn	-85848-02-19 06:13 J	-29634509.41	-29634509.24	-29634509.05	0.0271	0.0175
Uranus	-85848-07-01 01:25 J	-29634377.45	-29634377.44	-29634377.41	0.0145	0.0144
Uranus	-85847-07-06 08:37 J	-29634007.19	-29634007.14	-29634007.05	0.0145	0.0140
Uranus	-85846-07-11 15:35 J	-29633636.92	-29633636.85	-29633636.73	0.0144	0.0134
Uranus	-85845-07-15 22:18 J	-29633266.68	-29633266.57	-29633266.44	0.0143	0.0127
Mars	-85844-06-16 21:49 J	-29632930.77	-29632930.59	-29632930.42	0.1631	0.0739
Uranus	-85844-07-21 04:04 J	-29632896.46	-29632896.33	-29632896.18	0.0143	0.0119
Uranus	-85843-07-26 08:23 J	-29632526.29	-29632526.15	-29632525.97	0.0142	0.0112
Uranus	-85842-07-31 12:42 J	-29632156.14	-29632155.97	-29632155.78	0.0142	0.0102
Uranus	-85841-08-04 15:35 J	-29631786.03	-29631785.85	-29631785.64	0.0141	0.0093
Uranus	-85840-08-09 17:16 J	-29631415.97	-29631415.78	-29631415.55	0.0141	0.0084
Uranus	-85839-08-14 18:42 J	-29631045.94	-29631045.72	-29631045.49	0.0140	0.0073
Uranus	-85838-08-19 18:28 J	-29630675.95	-29630675.73	-29630675.48	0.0139	0.0064
Uranus	-85837-08-23 17:30 J	-29630306.00	-29630305.77	-29630305.51	0.0139	0.0053
Saturn	-85836-07-17 16:32 J	-29629978.01	-29629977.81	-29629977.59	0.0285	0.0157
Uranus	-85836-08-28 15:20 J	-29629936.10	-29629935.86	-29629935.60	0.0138	0.0042
Saturn	-85835-08-01 07:40 J	-29629598.43	-29629598.18	-29629597.92	0.0287	0.0015
Uranus	-85835-09-02 12:28 J	-29629566.23	-29629565.98	-29629565.72	0.0137	0.0031
Saturn	-85834-08-16 03:49 J	-29629218.56	-29629218.34	-29629218.11	0.0288	0.0131
Uranus	-85834-09-07 08:08 J	-29629196.42	-29629196.16	-29629195.90	0.0137	0.0020
Saturn	-85833-08-30 02:08 J	-29628838.48	-29628838.41	-29628838.31	0.0289	0.0272
Uranus	-85833-09-11 02:52 J	-29628826.64	-29628826.38	-29628826.12	0.0136	0.0010
Uranus	-85832-09-15 19:54 J	-29628456.93	-29628456.67	-29628456.41	0.0136	0.0001
Uranus	-85831-09-20 11:59 J	-29628087.26	-29628087.00	-29628086.73	0.0135	0.0011
Uranus	-85830-09-25 02:52 J	-29627717.63	-29627717.38	-29627717.12	0.0135	0.0021

Uranus	-85829-09-28 16:47 J	-29627348.06	-29627347.80	-29627347.55	0.0134	0.0031
Uranus	-85828-10-03 05:01 J	-29626978.53	-29626978.29	-29626978.03	0.0134	0.0040
Uranus	-85827-10-07 17:01 J	-29626609.03	-29626608.79	-29626608.55	0.0134	0.0049
Uranus	-85826-10-12 03:35 J	-29626239.58	-29626239.35	-29626239.12	0.0133	0.0057
Uranus	-85825-10-15 13:11 J	-29625870.16	-29625869.95	-29625869.72	0.0133	0.0066
Uranus	-85824-10-19 21:49 J	-29625500.79	-29625500.59	-29625500.37	0.0133	0.0074
Uranus	-85823-10-24 05:44 J	-29625131.44	-29625131.26	-29625131.04	0.0132	0.0082
Saturn	-85822-01-11 16:04 J	-29625051.97	-29625051.83	-29625051.67	0.0276	0.0212
Jupiter	-85822-09-23 08:08 J	-29624797.22	-29624797.16	-29624797.08	0.0510	0.0484
Uranus	-85822-10-28 13:11 J	-29624762.13	-29624761.95	-29624761.74	0.0132	0.0088
Saturn	-85821-01-23 13:11 J	-29624675.18	-29624674.95	-29624674.73	0.0274	0.0098
Uranus	-85821-10-31 19:25 J	-29624392.84	-29624392.69	-29624392.49	0.0132	0.0095
Saturn	-85820-02-03 05:30 J	-29624298.51	-29624298.27	-29624298.04	0.0272	0.0017
Uranus	-85820-11-05 01:25 J	-29624023.59	-29624023.44	-29624023.26	0.0132	0.0101
Saturn	-85819-02-14 18:42 J	-29623921.92	-29623921.72	-29623921.51	0.0271	0.0128
Uranus	-85819-11-09 06:56 J	-29623654.35	-29623654.21	-29623654.05	0.0132	0.0106
Saturn	-85818-02-26 06:13 J	-29623545.34	-29623545.24	-29623545.11	0.0270	0.0233
Uranus	-85818-11-13 11:30 J	-29623285.15	-29623285.02	-29623284.88	0.0131	0.0111
Uranus	-85817-11-16 15:06 J	-29622915.97	-29622915.87	-29622915.73	0.0131	0.0115
Uranus	-85816-11-20 17:59 J	-29622546.82	-29622546.75	-29622546.61	0.0131	0.0120
Uranus	-85815-11-24 21:06 J	-29622177.69	-29622177.62	-29622177.50	0.0131	0.0123
Uranus	-85814-11-28 23:59 J	-29621808.57	-29621808.50	-29621808.42	0.0131	0.0125
Uranus	-85813-12-02 01:40 J	-29621439.47	-29621439.43	-29621439.34	0.0132	0.0128
Uranus	-85812-12-06 03:49 J	-29621070.38	-29621070.34	-29621070.28	0.0132	0.0129
Uranus	-85811-12-10 05:59 J	-29620701.28	-29620701.25	-29620701.21	0.0132	0.0130
Jupiter	-85810-09-28 05:01 J	-29620409.51	-29620409.29	-29620409.07	0.0512	0.0200
Uranus	-85810-12-14 07:11 J	-29620332.21	-29620332.20	-29620332.15	0.0132	0.0131
Uranus	-85809-12-17 08:52 J	-29619963.13	-29619963.13	-29619963.07	0.0132	0.0132
Uranus	-85808-12-21 10:47 J	-29619594.07	-29619594.05	-29619593.99	0.0132	0.0131
Saturn	-85807-07-11 14:37 J	-29619392.05	-29619391.89	-29619391.72	0.0284	0.0211

Uranus	-85807-12-25 13:11 J	-29619225.00	-29619224.95	-29619224.90	0.0133	0.0129
Saturn	-85806-07-26 02:37 J	-29619012.63	-29619012.39	-29619012.14	0.0286	0.0075
Uranus	-85806-12-29 15:06 J	-29618855.94	-29618855.87	-29618855.80	0.0133	0.0127
Saturn	-85805-08-08 20:23 J	-29618632.90	-29618632.65	-29618632.41	0.0288	0.0070
Uranus	-85804-01-01 16:47 J	-29618486.86	-29618486.80	-29618486.70	0.0133	0.0125
Jupiter	-85804-03-22 13:54 J	-29618407.11	-29618406.92	-29618406.71	0.0517	0.0246
Saturn	-85804-08-23 17:16 J	-29618252.94	-29618252.78	-29618252.61	0.0289	0.0213
Uranus	-85803-01-05 19:25 J	-29618117.78	-29618117.69	-29618117.59	0.0134	0.0122
Uranus	-85802-01-09 22:04 J	-29617748.69	-29617748.58	-29617748.46	0.0134	0.0119
Uranus	-85801-01-14 00:28 J	-29617379.59	-29617379.48	-29617379.33	0.0135	0.0115
Uranus	-85800-01-17 04:04 J	-29617010.46	-29617010.33	-29617010.17	0.0135	0.0110
Uranus	-85799-01-21 07:54 J	-29616641.31	-29616641.17	-29616641.00	0.0136	0.0105
Uranus	-85798-01-25 12:28 J	-29616272.13	-29616271.98	-29616271.79	0.0136	0.0099
Jupiter	-85798-10-03 05:16 J	-29616021.51	-29616021.28	-29616021.05	0.0514	0.0097
Uranus	-85797-01-29 17:30 J	-29615902.93	-29615902.77	-29615902.57	0.0137	0.0093
Uranus	-85796-02-01 23:44 J	-29615533.69	-29615533.51	-29615533.31	0.0137	0.0086
Uranus	-85795-02-06 06:13 J	-29615164.43	-29615164.24	-29615164.02	0.0138	0.0078
Uranus	-85794-02-10 14:23 J	-29614795.11	-29614794.90	-29614794.69	0.0138	0.0070
Saturn	-85793-01-06 10:47 J	-29614465.11	-29614465.05	-29614464.97	0.0276	0.0263
Uranus	-85793-02-14 22:32 J	-29614425.77	-29614425.56	-29614425.33	0.0139	0.0061
Saturn	-85792-01-17 10:32 J	-29614088.26	-29614088.06	-29614087.86	0.0274	0.0151
Uranus	-85792-02-18 08:08 J	-29614056.38	-29614056.16	-29614055.92	0.0140	0.0052
Jupiter	-85792-03-27 04:18 J	-29614019.55	-29614019.32	-29614019.10	0.0514	0.0039
Saturn	-85791-01-29 04:47 J	-29613711.53	-29613711.30	-29613711.06	0.0273	0.0036
Uranus	-85791-02-22 18:28 J	-29613686.95	-29613686.73	-29613686.48	0.0140	0.0042
Mars	-85791-12-20 18:42 J	-29613385.79	-29613385.72	-29613385.64	0.1912	0.1738
Saturn	-85790-02-09 18:56 J	-29613334.93	-29613334.71	-29613334.47	0.0272	0.0079
Uranus	-85790-02-27 05:59 J	-29613317.49	-29613317.25	-29613317.01	0.0141	0.0032
Saturn	-85789-02-21 07:11 J	-29612958.37	-29612958.20	-29612958.03	0.0271	0.0187
Uranus	-85789-03-02 18:13 J	-29612947.98	-29612947.74	-29612947.49	0.0141	0.0022

Uranus -85788-03-07 07:54 J -29612578.42 -29612578.17 -29612577.92 0.0142 0.0010
 Uranus -85787-03-11 22:18 J -29612208.82 -29612208.57 -29612208.32 0.0143 0.0001
 Neptune -85787-03-21 05:59 J -29612199.38 -29612199.25 -29612199.06 0.0089 0.0068
 Uranus -85786-03-16 14:08 J -29611839.16 -29611838.91 -29611838.66 0.0143 0.0012
 Neptune -85786-03-23 15:35 J -29611832.05 -29611831.85 -29611831.60 0.0089 0.0044
 Jupiter -85786-10-08 06:42 J -29611633.37 -29611633.22 -29611633.07 0.0517 0.0400
 Uranus -85785-03-20 06:42 J -29611469.45 -29611469.22 -29611468.97 0.0144 0.0024
 Neptune -85785-03-25 01:54 J -29611464.67 -29611464.42 -29611464.17 0.0089 0.0017
 Uranus -85784-03-25 01:11 J -29611099.69 -29611099.45 -29611099.21 0.0144 0.0035
 Neptune -85784-03-27 11:30 J -29611097.27 -29611097.02 -29611096.76 0.0089 0.0008
 Uranus -85783-03-29 20:08 J -29610729.88 -29610729.66 -29610729.41 0.0145 0.0047
 Neptune -85783-03-29 21:06 J -29610729.84 -29610729.62 -29610729.37 0.0089 0.0034 *
 Neptune -85782-04-01 07:11 J -29610362.38 -29610362.20 -29610362.00 0.0089 0.0058
 Uranus -85782-04-03 17:01 J -29610360.01 -29610359.79 -29610359.56 0.0145 0.0058
 Neptune -85781-04-02 17:01 J -29609994.85 -29609994.79 -29609994.68 0.0089 0.0084
 Uranus -85781-04-07 15:06 J -29609990.09 -29609989.87 -29609989.65 0.0146 0.0069
 Jupiter -85780-03-31 16:47 J -29609631.97 -29609631.80 -29609631.61 0.0512 0.0313
 Uranus -85780-04-12 14:08 J -29609620.11 -29609619.91 -29609619.69 0.0146 0.0080
 Pluto -85780-06-28 15:35 J -29609542.96 -29609542.85 -29609542.69 0.0067 0.0057
 Uranus -85779-04-17 14:23 J -29609250.08 -29609249.90 -29609249.69 0.0146 0.0091
 Pluto -85779-06-30 08:08 J -29609176.37 -29609176.16 -29609175.95 0.0067 0.0040
 Uranus -85778-04-22 15:49 J -29608880.01 -29608879.84 -29608879.65 0.0147 0.0101
 Saturn -85778-07-05 07:40 J -29608806.24 -29608806.18 -29608806.10 0.0283 0.0270
 Uranus -85777-04-26 18:13 J -29608509.89 -29608509.74 -29608509.56 0.0147 0.0110
 Saturn -85777-07-18 16:47 J -29608427.01 -29608426.80 -29608426.57 0.0285 0.0141
 Uranus -85776-05-01 21:49 J -29608139.74 -29608139.59 -29608139.44 0.0147 0.0118
 Saturn -85776-08-02 08:23 J -29608047.41 -29608047.15 -29608046.90 0.0287 0.0005
 Uranus -85775-05-07 01:54 J -29607769.53 -29607769.42 -29607769.28 0.0147 0.0126
 Saturn -85775-08-17 04:32 J -29607667.53 -29607667.31 -29607667.09 0.0288 0.0146
 Uranus -85774-05-12 06:56 J -29607399.31 -29607399.21 -29607399.09 0.0147 0.0133

Saturn	-85774-09-01 03:06 J	-29607287.40	-29607287.37	-29607287.31	0.0289	0.0285
Uranus	-85773-05-16 12:42 J	-29607029.04	-29607028.97	-29607028.87	0.0147	0.0139
Uranus	-85772-05-21 18:56 J	-29606658.74	-29606658.71	-29606658.63	0.0147	0.0144
Uranus	-85771-05-27 02:08 J	-29606288.41	-29606288.41	-29606288.39	0.0147	0.0147
Mars	-85765-06-19 04:04 J	-29604073.53	-29604073.33	-29604073.14	0.1635	0.0051
Uranus	-85765-06-26 01:54 J	-29604066.42	-29604066.42	-29604066.39	0.0145	0.0145
Uranus	-85764-07-01 09:49 J	-29603696.13	-29603696.09	-29603696.01	0.0145	0.0141
Saturn	-85763-01-12 17:16 J	-29603500.94	-29603500.78	-29603500.60	0.0276	0.0196
Uranus	-85763-07-06 17:01 J	-29603325.86	-29603325.79	-29603325.68	0.0145	0.0136
Saturn	-85762-01-24 14:23 J	-29603124.13	-29603123.90	-29603123.68	0.0274	0.0082
Uranus	-85762-07-12 00:13 J	-29602955.59	-29602955.49	-29602955.37	0.0144	0.0129
Saturn	-85761-02-05 06:28 J	-29602747.47	-29602747.23	-29602747.00	0.0272	0.0032
Uranus	-85761-07-16 06:13 J	-29602585.36	-29602585.24	-29602585.09	0.0144	0.0123
Saturn	-85760-02-15 19:25 J	-29602370.89	-29602370.69	-29602370.48	0.0271	0.0141
Uranus	-85760-07-21 11:30 J	-29602215.15	-29602215.02	-29602214.84	0.0143	0.0115
Saturn	-85759-02-27 06:42 J	-29601994.31	-29601994.22	-29601994.11	0.0270	0.0245
Uranus	-85759-07-26 16:18 J	-29601844.98	-29601844.82	-29601844.63	0.0142	0.0106
Uranus	-85758-07-31 20:37 J	-29601474.83	-29601474.64	-29601474.45	0.0142	0.0097
Uranus	-85757-08-04 23:30 J	-29601104.72	-29601104.52	-29601104.31	0.0141	0.0088
Uranus	-85756-08-10 01:25 J	-29600734.65	-29600734.44	-29600734.22	0.0141	0.0078
Uranus	-85755-08-15 02:08 J	-29600364.62	-29600364.41	-29600364.16	0.0140	0.0068
Uranus	-85754-08-20 02:23 J	-29599994.63	-29599994.40	-29599994.15	0.0139	0.0058
Uranus	-85753-08-24 01:40 J	-29599624.67	-29599624.43	-29599624.18	0.0139	0.0047
Uranus	-85752-08-28 23:16 J	-29599254.78	-29599254.53	-29599254.27	0.0138	0.0036
Uranus	-85751-09-02 20:08 J	-29598884.91	-29598884.66	-29598884.39	0.0137	0.0026
Uranus	-85750-09-07 15:49 J	-29598515.09	-29598514.84	-29598514.57	0.0137	0.0015
Uranus	-85749-09-11 10:18 J	-29598145.33	-29598145.07	-29598144.80	0.0136	0.0005
Saturn	-85748-07-12 15:20 J	-29597841.03	-29597840.86	-29597840.67	0.0284	0.0195
Uranus	-85748-09-16 03:35 J	-29597775.61	-29597775.35	-29597775.09	0.0136	0.0006
Saturn	-85747-07-27 03:49 J	-29597461.59	-29597461.34	-29597461.09	0.0286	0.0058

Uranus	-85747-09-20 19:40 J	-29597405.94	-29597405.68	-29597405.42	0.0135	0.0017
Saturn	-85746-08-10 21:35 J	-29597081.84	-29597081.60	-29597081.35	0.0288	0.0086
Uranus	-85746-09-25 10:32 J	-29597036.32	-29597036.06	-29597035.81	0.0135	0.0026
Saturn	-85745-08-24 18:56 J	-29596701.86	-29596701.71	-29596701.55	0.0289	0.0227
Uranus	-85745-09-29 00:13 J	-29596666.74	-29596666.49	-29596666.24	0.0134	0.0036
Uranus	-85744-10-03 12:28 J	-29596297.21	-29596296.98	-29596296.72	0.0134	0.0045
Uranus	-85743-10-08 00:13 J	-29595927.71	-29595927.49	-29595927.24	0.0134	0.0054
Uranus	-85742-10-12 10:47 J	-29595558.26	-29595558.05	-29595557.80	0.0133	0.0063
Uranus	-85741-10-15 20:37 J	-29595188.84	-29595188.64	-29595188.40	0.0133	0.0070
Uranus	-85740-10-20 05:30 J	-29594819.46	-29594819.27	-29594819.04	0.0133	0.0078
Uranus	-85739-10-24 13:54 J	-29594450.10	-29594449.92	-29594449.71	0.0132	0.0085
Uranus	-85738-10-28 21:20 J	-29594080.79	-29594080.61	-29594080.42	0.0132	0.0091
Uranus	-85737-11-01 04:04 J	-29593711.49	-29593711.33	-29593711.15	0.0132	0.0097
Uranus	-85736-11-05 09:49 J	-29593342.24	-29593342.09	-29593341.92	0.0132	0.0103
Uranus	-85735-11-09 15:20 J	-29592973.00	-29592972.86	-29592972.72	0.0132	0.0108
Saturn	-85734-01-07 12:42 J	-29592914.06	-29592913.97	-29592913.85	0.0276	0.0247
Uranus	-85734-11-13 19:25 J	-29592603.81	-29592603.69	-29592603.55	0.0131	0.0113
Saturn	-85733-01-19 11:44 J	-29592537.20	-29592537.01	-29592536.79	0.0274	0.0136
Uranus	-85733-11-16 23:16 J	-29592234.63	-29592234.53	-29592234.40	0.0131	0.0117
Saturn	-85732-01-30 05:44 J	-29592160.49	-29592160.26	-29592160.02	0.0273	0.0021
Uranus	-85732-11-21 02:37 J	-29591865.48	-29591865.39	-29591865.28	0.0131	0.0120
Saturn	-85731-02-10 19:54 J	-29591783.89	-29591783.67	-29591783.44	0.0271	0.0092
Uranus	-85731-11-25 05:44 J	-29591496.34	-29591496.26	-29591496.17	0.0131	0.0123
Saturn	-85730-02-22 07:25 J	-29591407.33	-29591407.19	-29591407.01	0.0270	0.0200
Uranus	-85730-11-29 07:40 J	-29591127.23	-29591127.18	-29591127.08	0.0131	0.0126
Uranus	-85729-12-02 10:04 J	-29590758.12	-29590758.08	-29590758.00	0.0131	0.0128
Uranus	-85728-12-06 12:13 J	-29590389.03	-29590388.99	-29590388.93	0.0132	0.0129
Jupiter	-85727-09-27 13:11 J	-29590094.16	-29590093.95	-29590093.73	0.0512	0.0219
Uranus	-85727-12-10 13:54 J	-29590019.94	-29590019.92	-29590019.85	0.0132	0.0130
Uranus	-85726-12-14 15:49 J	-29589650.86	-29589650.84	-29589650.78	0.0132	0.0130

Uranus	-85725-12-17 17:44 J	-29589281.79	-29589281.76	-29589281.70	0.0132	0.0130
Uranus	-85724-12-21 19:40 J	-29588912.72	-29588912.68	-29588912.61	0.0132	0.0129
Uranus	-85723-12-25 21:49 J	-29588543.65	-29588543.59	-29588543.51	0.0133	0.0127
Uranus	-85722-12-29 23:16 J	-29588174.59	-29588174.53	-29588174.43	0.0133	0.0125
Jupiter	-85721-03-21 23:30 J	-29588091.72	-29588091.52	-29588091.33	0.0517	0.0267
Uranus	-85720-01-02 01:25 J	-29587805.52	-29587805.44	-29587805.33	0.0133	0.0123
Uranus	-85719-01-06 03:49 J	-29587436.44	-29587436.34	-29587436.22	0.0134	0.0119
Saturn	-85719-07-06 07:11 J	-29587255.31	-29587255.20	-29587255.09	0.0283	0.0254
Uranus	-85718-01-10 06:28 J	-29587067.34	-29587067.23	-29587067.10	0.0134	0.0116
Saturn	-85718-07-20 16:32 J	-29586876.03	-29586875.81	-29586875.58	0.0285	0.0125
Uranus	-85717-01-14 09:20 J	-29586698.24	-29586698.11	-29586697.96	0.0135	0.0111
Saturn	-85717-08-03 08:23 J	-29586496.40	-29586496.15	-29586495.89	0.0287	0.0017
Uranus	-85716-01-17 12:42 J	-29586329.11	-29586328.97	-29586328.81	0.0135	0.0106
Saturn	-85716-08-18 04:47 J	-29586116.50	-29586116.30	-29586116.08	0.0288	0.0160
Uranus	-85715-01-21 16:18 J	-29585959.96	-29585959.82	-29585959.64	0.0136	0.0101
Jupiter	-85715-10-02 13:40 J	-29585706.17	-29585705.93	-29585705.70	0.0514	0.0080
Uranus	-85714-01-25 21:20 J	-29585590.78	-29585590.61	-29585590.43	0.0136	0.0095
Uranus	-85713-01-30 02:08 J	-29585221.59	-29585221.41	-29585221.21	0.0137	0.0088
Uranus	-85712-02-02 07:54 J	-29584852.35	-29584852.17	-29584851.95	0.0137	0.0082
Mars	-85712-12-24 01:11 J	-29584527.64	-29584527.45	-29584527.26	0.1906	0.0300
Uranus	-85711-02-06 15:06 J	-29584483.07	-29584482.87	-29584482.66	0.0138	0.0073
Uranus	-85710-02-10 22:47 J	-29584113.76	-29584113.55	-29584113.33	0.0138	0.0065
Uranus	-85709-02-15 06:56 J	-29583744.42	-29583744.21	-29583743.97	0.0139	0.0056
Jupiter	-85709-03-26 08:52 J	-29583704.36	-29583704.13	-29583703.90	0.0515	0.0007
Uranus	-85708-02-18 16:32 J	-29583375.03	-29583374.81	-29583374.57	0.0140	0.0046
Uranus	-85707-02-23 02:52 J	-29583005.62	-29583005.38	-29583005.14	0.0140	0.0036
Uranus	-85706-02-27 13:54 J	-29582636.15	-29582635.92	-29582635.67	0.0141	0.0027
Neptune	-85706-09-24 12:42 J	-29582427.02	-29582426.97	-29582426.85	0.0088	0.0084
Uranus	-85705-03-03 02:23 J	-29582266.65	-29582266.40	-29582266.16	0.0141	0.0016
Neptune	-85705-09-26 02:52 J	-29582059.56	-29582059.38	-29582059.16	0.0088	0.0057

Saturn -85704-01-13 17:44 J -29581949.93 -29581949.76 -29581949.57 0.0276 0.0180
 Uranus -85704-03-07 15:49 J -29581897.09 -29581896.84 -29581896.60 0.0142 0.0005
 Neptune -85704-09-28 16:47 J -29581692.04 -29581691.80 -29581691.55 0.0088 0.0032
 Saturn -85703-01-25 14:37 J -29581573.12 -29581572.89 -29581572.66 0.0274 0.0066
 Uranus -85703-03-12 06:13 J -29581527.49 -29581527.24 -29581526.99 0.0143 0.0006
 Neptune -85703-10-01 06:28 J -29581324.49 -29581324.23 -29581323.96 0.0088 0.0006
 Jupiter -85703-10-07 13:11 J -29581318.11 -29581317.95 -29581317.79 0.0516 0.0375
 Saturn -85702-02-06 06:28 J -29581196.46 -29581196.23 -29581195.99 0.0272 0.0047
 Uranus -85702-03-16 21:49 J -29581157.83 -29581157.59 -29581157.34 0.0143 0.0017
 Neptune -85702-10-03 19:54 J -29580956.91 -29580956.67 -29580956.40 0.0088 0.0020
 Saturn -85701-02-17 19:11 J -29580819.88 -29580819.70 -29580819.49 0.0271 0.0155
 Uranus -85701-03-20 14:37 J -29580788.13 -29580787.89 -29580787.64 0.0144 0.0028
 Neptune -85701-10-05 09:06 J -29580589.33 -29580589.12 -29580588.88 0.0088 0.0046
 Saturn -85700-02-28 06:56 J -29580443.29 -29580443.21 -29580443.14 0.0270 0.0255
 Uranus -85700-03-25 08:52 J -29580418.37 -29580418.13 -29580417.89 0.0144 0.0040
 Neptune -85700-10-07 22:32 J -29580221.71 -29580221.56 -29580221.40 0.0088 0.0071
 Uranus -85699-03-30 04:04 J -29580048.56 -29580048.33 -29580048.09 0.0145 0.0051
 Uranus -85698-04-04 00:42 J -29579678.69 -29579678.47 -29579678.24 0.0145 0.0062
 Jupiter -85697-03-30 22:18 J -29579316.76 -29579316.57 -29579316.38 0.0513 0.0283
 Uranus -85697-04-07 22:18 J -29579308.77 -29579308.57 -29579308.34 0.0146 0.0074
 Uranus -85696-04-12 21:35 J -29578938.79 -29578938.60 -29578938.39 0.0146 0.0084
 Uranus -85695-04-17 21:35 J -29578568.77 -29578568.60 -29578568.39 0.0146 0.0095
 Uranus -85694-04-22 22:47 J -29578198.71 -29578198.55 -29578198.35 0.0147 0.0104
 Pluto -85693-01-03 13:11 J -29577943.18 -29577942.95 -29577942.72 0.0078 0.0031
 Uranus -85693-04-27 01:11 J -29577828.59 -29577828.45 -29577828.27 0.0147 0.0113
 Uranus -85692-05-02 04:47 J -29577458.44 -29577458.30 -29577458.15 0.0147 0.0121
 Uranus -85691-05-07 08:23 J -29577088.25 -29577088.15 -29577088.00 0.0147 0.0129
 Uranus -85690-05-12 13:25 J -29576718.02 -29576717.94 -29576717.82 0.0147 0.0134
 Uranus -85689-05-16 19:25 J -29576347.76 -29576347.69 -29576347.60 0.0147 0.0139
 Saturn -85689-07-13 16:04 J -29576290.02 -29576289.83 -29576289.62 0.0284 0.0179

Uranus	-85688-05-22 01:54 J	-29575977.47	-29575977.42	-29575977.37	0.0147	0.0144
Saturn	-85688-07-28 04:32 J	-29575910.56	-29575910.31	-29575910.06	0.0286	0.0042
Uranus	-85687-05-27 08:37 J	-29575607.14	-29575607.14	-29575607.11	0.0147	0.0147
Saturn	-85687-08-11 22:47 J	-29575530.79	-29575530.55	-29575530.32	0.0288	0.0101
Mars	-85686-06-22 09:49 J	-29575216.26	-29575216.09	-29575215.91	0.1638	0.0658
Saturn	-85686-08-26 20:08 J	-29575150.79	-29575150.66	-29575150.51	0.0289	0.0241
Uranus	-85682-06-22 00:56 J	-29573755.46	-29573755.46	-29573755.44	0.0146	0.0146
Uranus	-85681-06-26 08:52 J	-29573385.16	-29573385.13	-29573385.06	0.0145	0.0143
Uranus	-85680-07-01 16:32 J	-29573014.87	-29573014.81	-29573014.71	0.0145	0.0138
Uranus	-85679-07-07 00:13 J	-29572644.58	-29572644.49	-29572644.37	0.0145	0.0132
Uranus	-85678-07-12 07:25 J	-29572274.31	-29572274.19	-29572274.06	0.0144	0.0125
Uranus	-85677-07-16 13:25 J	-29571904.08	-29571903.94	-29571903.78	0.0144	0.0118
Uranus	-85676-07-21 18:42 J	-29571533.86	-29571533.72	-29571533.53	0.0143	0.0110
Saturn	-85675-01-08 13:54 J	-29571363.04	-29571362.92	-29571362.78	0.0276	0.0231
Uranus	-85675-07-26 23:30 J	-29571163.69	-29571163.52	-29571163.32	0.0142	0.0101
Saturn	-85674-01-20 12:42 J	-29570986.17	-29570985.97	-29570985.74	0.0274	0.0119
Uranus	-85674-08-01 03:35 J	-29570793.54	-29570793.35	-29570793.14	0.0142	0.0092
Saturn	-85673-02-01 06:42 J	-29570609.46	-29570609.22	-29570608.98	0.0273	0.0006
Uranus	-85673-08-05 06:42 J	-29570423.43	-29570423.22	-29570423.00	0.0141	0.0083
Saturn	-85672-02-11 20:37 J	-29570232.86	-29570232.64	-29570232.42	0.0271	0.0106
Uranus	-85672-08-10 08:37 J	-29570053.35	-29570053.14	-29570052.90	0.0141	0.0073
Saturn	-85671-02-23 08:08 J	-29569856.30	-29569856.16	-29569856.00	0.0270	0.0211
Uranus	-85671-08-15 10:04 J	-29569683.31	-29569683.08	-29569682.84	0.0140	0.0062
Uranus	-85670-08-20 10:18 J	-29569313.31	-29569313.07	-29569312.82	0.0139	0.0052
Uranus	-85669-08-24 09:20 J	-29568943.36	-29568943.11	-29568942.86	0.0139	0.0041
Uranus	-85668-08-29 07:11 J	-29568573.45	-29568573.20	-29568572.94	0.0138	0.0031
Uranus	-85667-09-03 04:04 J	-29568203.58	-29568203.33	-29568203.06	0.0138	0.0020
Uranus	-85666-09-07 23:44 J	-29567833.77	-29567833.51	-29567833.24	0.0137	0.0009
Uranus	-85665-09-11 18:13 J	-29567464.00	-29567463.74	-29567463.47	0.0136	0.0003
Uranus	-85664-09-16 11:16 J	-29567094.29	-29567094.03	-29567093.76	0.0136	0.0012

Uranus	-85663-09-21 03:35 J	-29566724.61	-29566724.35	-29566724.09	0.0135	0.0022
Uranus	-85662-09-25 18:28 J	-29566354.99	-29566354.73	-29566354.48	0.0135	0.0031
Uranus	-85661-09-29 07:54 J	-29565985.41	-29565985.17	-29565984.91	0.0134	0.0041
Saturn	-85660-07-07 06:28 J	-29565704.35	-29565704.23	-29565704.08	0.0283	0.0238
Uranus	-85660-10-03 20:52 J	-29565615.87	-29565615.63	-29565615.39	0.0134	0.0049
Saturn	-85659-07-21 16:04 J	-29565325.06	-29565324.83	-29565324.59	0.0285	0.0108
Uranus	-85659-10-08 08:37 J	-29565246.36	-29565246.14	-29565245.90	0.0134	0.0058
Saturn	-85658-08-05 08:23 J	-29564945.40	-29564945.15	-29564944.90	0.0287	0.0033
Uranus	-85658-10-12 19:11 J	-29564876.91	-29564876.70	-29564876.46	0.0133	0.0066
Saturn	-85657-08-19 04:47 J	-29564565.49	-29564565.30	-29564565.09	0.0288	0.0175
Uranus	-85657-10-16 05:16 J	-29564507.48	-29564507.28	-29564507.05	0.0133	0.0074
Uranus	-85656-10-20 14:37 J	-29564138.09	-29564137.89	-29564137.69	0.0133	0.0081
Uranus	-85655-10-24 22:32 J	-29563768.73	-29563768.56	-29563768.35	0.0132	0.0089
Uranus	-85654-10-29 06:13 J	-29563399.41	-29563399.24	-29563399.05	0.0132	0.0094
Uranus	-85653-11-01 12:42 J	-29563030.12	-29563029.97	-29563029.79	0.0132	0.0100
Uranus	-85652-11-05 18:13 J	-29562660.86	-29562660.74	-29562660.56	0.0132	0.0106
Uranus	-85651-11-09 23:59 J	-29562291.63	-29562291.50	-29562291.36	0.0132	0.0110
Uranus	-85650-11-14 03:49 J	-29561922.44	-29561922.34	-29561922.20	0.0131	0.0115
Uranus	-85649-11-17 07:54 J	-29561553.27	-29561553.17	-29561553.05	0.0131	0.0118
Uranus	-85648-11-21 11:01 J	-29561184.11	-29561184.04	-29561183.92	0.0131	0.0121
Uranus	-85647-11-25 14:23 J	-29560814.97	-29560814.90	-29560814.81	0.0131	0.0124
Saturn	-85646-01-03 15:20 J	-29560775.88	-29560775.86	-29560775.81	0.0278	0.0274
Uranus	-85646-11-29 17:01 J	-29560445.85	-29560445.79	-29560445.71	0.0131	0.0126
Saturn	-85645-01-15 17:59 J	-29560398.93	-29560398.75	-29560398.55	0.0276	0.0164
Uranus	-85645-12-02 18:56 J	-29560076.74	-29560076.71	-29560076.63	0.0131	0.0128
Saturn	-85644-01-26 14:52 J	-29560022.11	-29560021.88	-29560021.65	0.0274	0.0050
Jupiter	-85644-09-26 21:35 J	-29559778.80	-29559778.60	-29559778.38	0.0511	0.0237
Uranus	-85644-12-06 21:06 J	-29559707.65	-29559707.62	-29559707.54	0.0132	0.0129
Saturn	-85643-02-07 06:42 J	-29559645.45	-29559645.22	-29559644.99	0.0272	0.0062
Uranus	-85643-12-10 23:30 J	-29559338.56	-29559338.52	-29559338.46	0.0132	0.0129

Saturn	-85642-02-18 19:40 J	-29559268.86	-29559268.68	-29559268.49	0.0271	0.0168
Uranus	-85642-12-15 00:56 J	-29558969.49	-29558969.46	-29558969.39	0.0132	0.0129
Saturn	-85641-03-01 06:56 J	-29558892.23	-29558892.21	-29558892.17	0.0270	0.0267
Uranus	-85641-12-18 03:06 J	-29558600.41	-29558600.37	-29558600.30	0.0132	0.0128
Uranus	-85640-12-22 05:16 J	-29558231.35	-29558231.28	-29558231.21	0.0132	0.0127
Mars	-85639-06-15 15:49 J	-29558056.00	-29558055.84	-29558055.69	0.1624	0.0974
Uranus	-85639-12-26 07:11 J	-29557862.28	-29557862.20	-29557862.12	0.0133	0.0125
Jupiter	-85638-03-22 03:20 J	-29557776.55	-29557776.36	-29557776.18	0.0518	0.0303
Uranus	-85638-12-30 08:23 J	-29557493.22	-29557493.15	-29557493.03	0.0133	0.0123
Uranus	-85636-01-02 10:47 J	-29557124.15	-29557124.05	-29557123.93	0.0133	0.0120
Uranus	-85635-01-06 12:56 J	-29556755.07	-29556754.96	-29556754.83	0.0134	0.0116
Uranus	-85634-01-10 15:20 J	-29556385.98	-29556385.86	-29556385.71	0.0134	0.0112
Uranus	-85633-01-14 17:59 J	-29556016.88	-29556016.75	-29556016.58	0.0135	0.0108
Mars	-85633-12-27 06:28 J	-29555669.39	-29555669.23	-29555669.08	0.1900	0.1101
Uranus	-85632-01-17 21:35 J	-29555647.75	-29555647.60	-29555647.43	0.0135	0.0102
Jupiter	-85632-10-01 17:44 J	-29555391.00	-29555390.76	-29555390.53	0.0513	0.0048
Uranus	-85631-01-22 01:25 J	-29555278.60	-29555278.44	-29555278.25	0.0136	0.0097
Uranus	-85630-01-26 05:59 J	-29554909.42	-29554909.25	-29554909.05	0.0136	0.0090
Saturn	-85630-07-15 17:16 J	-29554738.98	-29554738.78	-29554738.56	0.0284	0.0162
Uranus	-85629-01-30 11:01 J	-29554540.22	-29554540.04	-29554539.83	0.0137	0.0084
Saturn	-85629-07-29 05:59 J	-29554359.50	-29554359.25	-29554358.99	0.0286	0.0025
Uranus	-85628-02-02 17:16 J	-29554170.98	-29554170.78	-29554170.57	0.0137	0.0076
Saturn	-85628-08-13 00:13 J	-29553979.71	-29553979.49	-29553979.25	0.0288	0.0117
Uranus	-85627-02-06 23:59 J	-29553801.71	-29553801.50	-29553801.28	0.0138	0.0068
Saturn	-85627-08-27 22:04 J	-29553599.69	-29553599.58	-29553599.46	0.0289	0.0255
Uranus	-85626-02-11 07:40 J	-29553432.40	-29553432.18	-29553431.95	0.0138	0.0060
Jupiter	-85626-03-26 19:11 J	-29553388.93	-29553388.70	-29553388.47	0.0516	0.0016
Uranus	-85625-02-15 15:49 J	-29553063.06	-29553062.84	-29553062.61	0.0139	0.0050
Uranus	-85624-02-19 01:11 J	-29552693.68	-29552693.45	-29552693.21	0.0140	0.0041
Uranus	-85623-02-23 11:16 J	-29552324.27	-29552324.03	-29552323.79	0.0140	0.0031

Neptune -85623-03-20 19:11 J -29552298.80 -29552298.70 -29552298.56 0.0089 0.0078
 Uranus -85622-02-27 22:18 J -29551954.81 -29551954.57 -29551954.32 0.0141 0.0021
 Neptune -85622-03-23 05:01 J -29551931.49 -29551931.29 -29551931.09 0.0089 0.0053
 Uranus -85621-03-03 10:32 J -29551585.31 -29551585.06 -29551584.82 0.0141 0.0011
 Neptune -85621-03-24 14:37 J -29551564.13 -29551563.89 -29551563.65 0.0089 0.0028
 Uranus -85620-03-07 23:44 J -29551215.75 -29551215.51 -29551215.26 0.0142 0.0003
 Neptune -85620-03-27 00:13 J -29551196.74 -29551196.49 -29551196.23 0.0089 0.0004
 Jupiter -85620-10-06 17:30 J -29551002.95 -29551002.77 -29551002.59 0.0515 0.0342
 Uranus -85619-03-12 14:08 J -29550846.16 -29550845.91 -29550845.66 0.0143 0.0011
 Neptune -85619-03-29 09:49 J -29550829.32 -29550829.09 -29550828.84 0.0089 0.0022
 Uranus -85618-03-17 05:44 J -29550476.50 -29550476.26 -29550476.02 0.0143 0.0022
 Neptune -85618-03-31 19:25 J -29550461.89 -29550461.69 -29550461.46 0.0089 0.0047
 Uranus -85617-03-20 22:18 J -29550106.80 -29550106.57 -29550106.32 0.0144 0.0033
 Neptune -85617-04-02 05:30 J -29550094.40 -29550094.27 -29550094.11 0.0089 0.0072
 Saturn -85616-01-09 15:06 J -29549812.00 -29549811.87 -29549811.70 0.0276 0.0215
 Uranus -85616-03-25 16:32 J -29549737.04 -29549736.81 -29549736.57 0.0144 0.0045
 Saturn -85615-01-21 14:23 J -29549435.12 -29549434.90 -29549434.68 0.0274 0.0102
 Uranus -85615-03-30 11:44 J -29549367.23 -29549367.01 -29549366.77 0.0145 0.0056
 Saturn -85614-02-02 07:54 J -29549058.41 -29549058.17 -29549057.93 0.0272 0.0011
 Jupiter -85614-03-31 09:49 J -29549001.28 -29549001.09 -29549000.89 0.0513 0.0266
 Uranus -85614-04-04 08:08 J -29548997.36 -29548997.16 -29548996.92 0.0145 0.0067
 Saturn -85613-02-13 21:49 J -29548681.80 -29548681.59 -29548681.38 0.0271 0.0120
 Uranus -85613-04-08 06:13 J -29548627.44 -29548627.24 -29548627.02 0.0146 0.0078
 Saturn -85612-02-24 09:20 J -29548305.24 -29548305.11 -29548304.98 0.0270 0.0224
 Uranus -85612-04-13 05:01 J -29548257.47 -29548257.29 -29548257.07 0.0146 0.0088
 Uranus -85611-04-18 05:16 J -29547887.46 -29547887.28 -29547887.09 0.0146 0.0098
 Uranus -85610-04-23 06:13 J -29547517.40 -29547517.24 -29547517.05 0.0147 0.0107
 Uranus -85609-04-27 08:37 J -29547147.29 -29547147.14 -29547146.98 0.0147 0.0115
 Uranus -85608-05-02 11:16 J -29546777.15 -29546777.03 -29546776.87 0.0147 0.0123
 Uranus -85607-05-07 15:35 J -29546406.96 -29546406.85 -29546406.72 0.0147 0.0130

Mars	-85607-06-24 17:30 J	-29546358.87	-29546358.77	-29546358.67	0.1641	0.1394
Uranus	-85606-05-12 20:08 J	-29546036.74	-29546036.66	-29546036.54	0.0147	0.0136
Uranus	-85605-05-17 01:40 J	-29545666.48	-29545666.43	-29545666.33	0.0147	0.0141
Uranus	-85604-05-22 07:54 J	-29545296.20	-29545296.17	-29545296.10	0.0147	0.0144
Uranus	-85603-05-27 15:06 J	-29544925.87	-29544925.87	-29544925.85	0.0147	0.0147
Saturn	-85601-07-08 07:40 J	-29544153.33	-29544153.18	-29544153.01	0.0283	0.0221
Saturn	-85600-07-22 17:16 J	-29543774.01	-29543773.78	-29543773.53	0.0285	0.0091
Saturn	-85599-08-06 09:35 J	-29543394.35	-29543394.10	-29543393.85	0.0287	0.0050
Uranus	-85598-06-22 06:56 J	-29543074.23	-29543074.21	-29543074.15	0.0146	0.0144
Saturn	-85598-08-21 05:59 J	-29543014.42	-29543014.25	-29543014.05	0.0288	0.0191
Uranus	-85597-06-26 14:52 J	-29542703.93	-29542703.88	-29542703.79	0.0145	0.0140
Uranus	-85596-07-01 22:47 J	-29542333.63	-29542333.55	-29542333.44	0.0145	0.0135
Uranus	-85595-07-07 05:59 J	-29541963.35	-29541963.25	-29541963.11	0.0145	0.0129
Uranus	-85594-07-12 12:56 J	-29541593.08	-29541592.96	-29541592.80	0.0144	0.0121
Uranus	-85593-07-16 19:11 J	-29541222.84	-29541222.70	-29541222.53	0.0144	0.0114
Uranus	-85592-07-22 00:42 J	-29540852.63	-29540852.47	-29540852.28	0.0143	0.0105
Uranus	-85591-07-27 05:30 J	-29540482.45	-29540482.27	-29540482.07	0.0142	0.0097
Uranus	-85590-08-01 09:20 J	-29540112.29	-29540112.11	-29540111.88	0.0142	0.0088
Uranus	-85589-08-05 12:42 J	-29539742.18	-29539741.97	-29539741.75	0.0141	0.0077
Uranus	-85588-08-10 14:52 J	-29539372.10	-29539371.88	-29539371.64	0.0141	0.0068
Saturn	-85587-01-04 15:49 J	-29539224.92	-29539224.84	-29539224.74	0.0278	0.0258
Uranus	-85587-08-15 16:04 J	-29539002.05	-29539001.83	-29539001.57	0.0140	0.0057
Saturn	-85586-01-16 18:28 J	-29538847.92	-29538847.73	-29538847.52	0.0276	0.0147
Uranus	-85586-08-20 16:18 J	-29538632.05	-29538631.82	-29538631.56	0.0139	0.0047
Saturn	-85585-01-28 15:06 J	-29538471.11	-29538470.87	-29538470.63	0.0274	0.0034
Uranus	-85585-08-24 15:35 J	-29538262.09	-29538261.85	-29538261.58	0.0139	0.0036
Saturn	-85584-02-08 07:11 J	-29538094.43	-29538094.20	-29538093.97	0.0272	0.0077
Uranus	-85584-08-29 13:54 J	-29537892.18	-29537891.92	-29537891.66	0.0138	0.0025
Saturn	-85583-02-19 20:23 J	-29537717.83	-29537717.65	-29537717.48	0.0271	0.0182
Uranus	-85583-09-03 10:47 J	-29537522.31	-29537522.05	-29537521.79	0.0138	0.0014

Uranus	-85582-09-08 06:28 J	-29537152.49	-29537152.23	-29537151.97	0.0137	0.0003
Uranus	-85581-09-12 00:42 J	-29536782.73	-29536782.47	-29536782.21	0.0137	0.0007
Uranus	-85580-09-16 17:59 J	-29536413.01	-29536412.75	-29536412.49	0.0136	0.0017
Uranus	-85579-09-21 10:04 J	-29536043.33	-29536043.08	-29536042.82	0.0136	0.0027
Uranus	-85578-09-26 00:56 J	-29535673.71	-29535673.46	-29535673.21	0.0135	0.0036
Uranus	-85577-09-29 14:37 J	-29535304.12	-29535303.89	-29535303.63	0.0135	0.0046
Uranus	-85576-10-04 03:35 J	-29534934.58	-29534934.35	-29534934.10	0.0134	0.0054
Uranus	-85575-10-08 16:04 J	-29534565.06	-29534564.83	-29534564.60	0.0134	0.0062
Uranus	-85574-10-13 02:37 J	-29534195.60	-29534195.39	-29534195.16	0.0133	0.0070
Uranus	-85573-10-16 12:28 J	-29533826.17	-29533825.98	-29533825.75	0.0133	0.0078
Saturn	-85572-07-02 14:23 J	-29533566.96	-29533566.90	-29533566.81	0.0282	0.0268
Uranus	-85572-10-20 21:49 J	-29533456.77	-29533456.59	-29533456.38	0.0133	0.0085
Saturn	-85571-07-16 20:08 J	-29533187.87	-29533187.66	-29533187.44	0.0284	0.0144
Uranus	-85571-10-25 06:13 J	-29533087.41	-29533087.24	-29533087.04	0.0132	0.0091
Saturn	-85570-07-31 09:06 J	-29532808.37	-29532808.12	-29532807.86	0.0286	0.0008
Uranus	-85570-10-29 13:40 J	-29532718.09	-29532717.93	-29532717.75	0.0132	0.0097
Saturn	-85569-08-14 03:20 J	-29532428.57	-29532428.36	-29532428.13	0.0288	0.0134
Uranus	-85569-11-01 20:08 J	-29532348.80	-29532348.66	-29532348.48	0.0132	0.0103
Saturn	-85568-08-29 01:11 J	-29532048.54	-29532048.45	-29532048.36	0.0289	0.0270
Uranus	-85568-11-06 02:08 J	-29531979.54	-29531979.41	-29531979.25	0.0132	0.0108
Uranus	-85567-11-10 07:40 J	-29531610.31	-29531610.18	-29531610.04	0.0132	0.0112
Uranus	-85566-11-14 11:59 J	-29531241.11	-29531241.00	-29531240.87	0.0131	0.0116
Uranus	-85565-11-17 15:35 J	-29530871.93	-29530871.85	-29530871.72	0.0131	0.0120
Uranus	-85564-11-21 19:40 J	-29530502.77	-29530502.68	-29530502.59	0.0131	0.0122
Uranus	-85563-11-25 22:32 J	-29530133.62	-29530133.56	-29530133.46	0.0131	0.0125
Uranus	-85562-11-30 00:56 J	-29529764.51	-29529764.46	-29529764.37	0.0131	0.0126
Jupiter	-85561-09-26 01:11 J	-29529463.65	-29529463.45	-29529463.25	0.0510	0.0269
Uranus	-85561-12-03 03:35 J	-29529395.39	-29529395.35	-29529395.27	0.0131	0.0128
Mars	-85560-06-17 21:06 J	-29529198.81	-29529198.62	-29529198.43	0.1627	0.0302
Uranus	-85560-12-07 06:28 J	-29529026.29	-29529026.23	-29529026.18	0.0132	0.0128

Uranus	-85559-12-11 08:23 J	-29528657.20	-29528657.15	-29528657.09	0.0132	0.0128
Uranus	-85558-12-15 10:04 J	-29528288.12	-29528288.08	-29528288.00	0.0132	0.0128
Saturn	-85557-01-11 17:16 J	-29528260.94	-29528260.78	-29528260.61	0.0276	0.0198
Uranus	-85557-12-18 11:59 J	-29527919.04	-29527919.00	-29527918.91	0.0132	0.0127
Saturn	-85556-01-22 16:04 J	-29527884.05	-29527883.83	-29527883.60	0.0274	0.0086
Uranus	-85556-12-22 13:54 J	-29527549.98	-29527549.92	-29527549.82	0.0132	0.0125
Saturn	-85555-02-03 09:49 J	-29527507.33	-29527507.09	-29527506.85	0.0272	0.0027
Jupiter	-85555-03-21 14:08 J	-29527461.08	-29527460.91	-29527460.72	0.0518	0.0321
Uranus	-85555-12-26 15:49 J	-29527180.91	-29527180.84	-29527180.73	0.0133	0.0123
Saturn	-85554-02-14 23:30 J	-29527130.72	-29527130.52	-29527130.31	0.0271	0.0135
Uranus	-85554-12-30 17:30 J	-29526811.86	-29526811.77	-29526811.65	0.0133	0.0120
Saturn	-85553-02-26 11:16 J	-29526754.14	-29526754.03	-29526753.92	0.0270	0.0236
Uranus	-85552-01-02 19:54 J	-29526442.78	-29526442.67	-29526442.55	0.0133	0.0117
Uranus	-85551-01-06 22:04 J	-29526073.70	-29526073.58	-29526073.44	0.0134	0.0113
Uranus	-85550-01-11 00:28 J	-29525704.60	-29525704.48	-29525704.32	0.0134	0.0109
Uranus	-85549-01-15 03:35 J	-29525335.50	-29525335.35	-29525335.18	0.0135	0.0104
Jupiter	-85549-10-01 00:42 J	-29525075.71	-29525075.47	-29525075.23	0.0513	0.0024
Uranus	-85548-01-18 07:25 J	-29524966.36	-29524966.19	-29524966.02	0.0135	0.0099
Uranus	-85547-01-22 10:47 J	-29524597.21	-29524597.05	-29524596.85	0.0136	0.0093
Uranus	-85546-01-26 15:35 J	-29524228.02	-29524227.85	-29524227.64	0.0136	0.0086
Uranus	-85545-01-30 20:52 J	-29523858.82	-29523858.63	-29523858.42	0.0137	0.0079
Uranus	-85544-02-03 02:52 J	-29523489.57	-29523489.38	-29523489.15	0.0137	0.0072
Uranus	-85543-02-07 09:49 J	-29523120.30	-29523120.09	-29523119.87	0.0138	0.0063
Jupiter	-85543-03-26 04:47 J	-29523073.53	-29523073.30	-29523073.07	0.0516	0.0039
Uranus	-85542-02-11 17:01 J	-29522751.00	-29522750.79	-29522750.55	0.0138	0.0055
Saturn	-85542-07-10 11:01 J	-29522602.21	-29522602.04	-29522601.86	0.0283	0.0203
Uranus	-85541-02-16 01:25 J	-29522381.67	-29522381.44	-29522381.20	0.0139	0.0045
Saturn	-85541-07-23 20:37 J	-29522222.88	-29522222.64	-29522222.39	0.0285	0.0073
Neptune	-85541-09-25 11:30 J	-29522159.15	-29522159.02	-29522158.82	0.0088	0.0069
Uranus	-85540-02-19 10:32 J	-29522012.29	-29522012.06	-29522011.81	0.0140	0.0036

Saturn -85540-08-07 12:42 J -29521843.21 -29521842.97 -29521842.72 0.0287 0.0067
 Neptune -85540-09-28 01:40 J -29521791.64 -29521791.43 -29521791.18 0.0088 0.0043
 Uranus -85539-02-23 20:23 J -29521642.88 -29521642.65 -29521642.40 0.0140 0.0027
 Saturn -85539-08-22 09:20 J -29521463.27 -29521463.11 -29521462.92 0.0288 0.0206
 Neptune -85539-09-30 15:49 J -29521424.10 -29521423.84 -29521423.58 0.0088 0.0017
 Uranus -85538-02-28 07:40 J -29521273.42 -29521273.18 -29521272.93 0.0141 0.0016
 Neptune -85538-10-03 05:16 J -29521056.54 -29521056.28 -29521056.02 0.0088 0.0009
 Uranus -85537-03-03 19:40 J -29520903.92 -29520903.68 -29520903.43 0.0141 0.0005
 Neptune -85537-10-04 18:42 J -29520688.95 -29520688.72 -29520688.47 0.0088 0.0034
 Jupiter -85537-10-06 02:08 J -29520687.59 -29520687.41 -29520687.22 0.0515 0.0324
 Uranus -85536-03-08 08:52 J -29520534.37 -29520534.13 -29520533.88 0.0142 0.0006
 Neptune -85536-10-07 08:23 J -29520321.34 -29520321.15 -29520320.96 0.0088 0.0060
 Uranus -85535-03-12 23:01 J -29520164.78 -29520164.54 -29520164.29 0.0143 0.0017
 Neptune -85535-10-09 20:52 J -29519953.66 -29519953.63 -29519953.53 0.0088 0.0086
 Uranus -85534-03-17 14:37 J -29519795.13 -29519794.89 -29519794.64 0.0143 0.0027
 Pluto -85534-06-30 19:25 J -29519689.89 -29519689.69 -29519689.50 0.0067 0.0045
 Uranus -85533-03-21 07:11 J -29519425.43 -29519425.20 -29519424.95 0.0144 0.0039
 Pluto -85533-07-01 11:16 J -29519323.19 -29519323.03 -29519322.86 0.0067 0.0052
 Uranus -85532-03-26 01:25 J -29519055.67 -29519055.44 -29519055.20 0.0144 0.0050
 Jupiter -85531-03-30 13:11 J -29518686.16 -29518685.95 -29518685.75 0.0514 0.0226
 Uranus -85531-03-30 20:23 J -29518685.86 -29518685.65 -29518685.41 0.0145 0.0061 *
 Uranus -85530-04-04 17:01 J -29518315.99 -29518315.79 -29518315.56 0.0145 0.0072
 Uranus -85529-04-08 14:37 J -29517946.08 -29517945.89 -29517945.67 0.0146 0.0082
 Saturn -85528-01-05 17:16 J -29517673.88 -29517673.78 -29517673.65 0.0278 0.0242
 Uranus -85528-04-13 13:11 J -29517576.12 -29517575.95 -29517575.74 0.0146 0.0092
 Saturn -85527-01-17 19:54 J -29517296.87 -29517296.67 -29517296.45 0.0276 0.0131
 Uranus -85527-04-18 13:11 J -29517206.12 -29517205.95 -29517205.76 0.0146 0.0101
 Saturn -85526-01-29 16:32 J -29516920.05 -29516919.81 -29516919.57 0.0274 0.0017
 Uranus -85526-04-23 14:08 J -29516836.06 -29516835.91 -29516835.73 0.0147 0.0110
 Saturn -85525-02-10 08:52 J -29516543.36 -29516543.13 -29516542.91 0.0272 0.0093

Uranus	-85525-04-27 16:04 J	-29516465.96	-29516465.83	-29516465.67	0.0147	0.0118
Saturn	-85524-02-20 21:49 J	-29516166.74	-29516166.59	-29516166.42	0.0271	0.0197
Uranus	-85524-05-02 18:56 J	-29516095.82	-29516095.71	-29516095.56	0.0147	0.0125
Uranus	-85523-05-07 22:47 J	-29515725.64	-29515725.55	-29515725.42	0.0147	0.0132
Uranus	-85522-05-13 03:35 J	-29515355.43	-29515355.35	-29515355.24	0.0147	0.0137
Uranus	-85521-05-17 09:06 J	-29514985.17	-29514985.12	-29514985.03	0.0147	0.0141
Uranus	-85520-05-22 15:20 J	-29514614.89	-29514614.86	-29514614.80	0.0147	0.0145
Jupiter	-85519-04-04 01:25 J	-29514298.49	-29514298.44	-29514298.39	0.0512	0.0497
Uranus	-85519-05-27 22:32 J	-29514244.57	-29514244.56	-29514244.54	0.0147	0.0147
Uranus	-85515-06-17 05:44 J	-29512763.28	-29512763.26	-29512763.21	0.0146	0.0144
Uranus	-85514-06-22 13:40 J	-29512392.98	-29512392.93	-29512392.84	0.0146	0.0141
Uranus	-85513-06-26 21:35 J	-29512022.67	-29512022.60	-29512022.49	0.0145	0.0137
Saturn	-85513-07-03 19:25 J	-29512015.78	-29512015.69	-29512015.56	0.0282	0.0251
Uranus	-85512-07-02 05:01 J	-29511652.38	-29511652.29	-29511652.16	0.0145	0.0131
Saturn	-85512-07-18 01:25 J	-29511636.65	-29511636.44	-29511636.20	0.0284	0.0126
Uranus	-85511-07-07 12:13 J	-29511282.10	-29511281.99	-29511281.83	0.0145	0.0125
Saturn	-85511-08-01 14:52 J	-29511257.13	-29511256.88	-29511256.62	0.0286	0.0012
Uranus	-85510-07-12 19:25 J	-29510911.83	-29510911.69	-29510911.53	0.0144	0.0117
Saturn	-85510-08-16 09:20 J	-29510877.32	-29510877.11	-29510876.89	0.0288	0.0151
Uranus	-85509-07-17 00:56 J	-29510541.60	-29510541.46	-29510541.27	0.0144	0.0110
Saturn	-85509-08-30 06:42 J	-29510497.24	-29510497.22	-29510497.17	0.0289	0.0285
Uranus	-85508-07-22 06:42 J	-29510171.38	-29510171.22	-29510171.01	0.0143	0.0101
Uranus	-85507-07-27 11:59 J	-29509801.20	-29509801.00	-29509800.80	0.0142	0.0092
Mars	-85507-12-20 06:13 J	-29509655.31	-29509655.24	-29509655.17	0.1920	0.1790
Uranus	-85506-08-01 16:04 J	-29509431.04	-29509430.83	-29509430.61	0.0142	0.0082
Uranus	-85505-08-05 19:11 J	-29509060.92	-29509060.70	-29509060.47	0.0141	0.0072
Uranus	-85504-08-10 21:35 J	-29508690.83	-29508690.60	-29508690.36	0.0141	0.0062
Uranus	-85503-08-15 23:01 J	-29508320.78	-29508320.54	-29508320.29	0.0140	0.0051
Uranus	-85502-08-20 23:30 J	-29507950.77	-29507950.52	-29507950.26	0.0139	0.0041
Uranus	-85501-08-24 22:32 J	-29507580.81	-29507580.56	-29507580.30	0.0139	0.0030

Uranus	-85500-08-29 20:37 J	-29507210.89	-29507210.64	-29507210.37	0.0138	0.0020
Uranus	-85499-09-03 17:44 J	-29506841.02	-29506840.76	-29506840.50	0.0138	0.0008
Saturn	-85498-01-12 20:23 J	-29506709.83	-29506709.65	-29506709.47	0.0276	0.0182
Uranus	-85498-09-08 13:11 J	-29506471.21	-29506470.95	-29506470.68	0.0137	0.0004
Saturn	-85497-01-24 18:56 J	-29506332.94	-29506332.71	-29506332.47	0.0274	0.0069
Uranus	-85497-09-12 07:40 J	-29506101.44	-29506101.18	-29506100.91	0.0137	0.0013
Saturn	-85496-02-04 12:28 J	-29505956.21	-29505955.98	-29505955.74	0.0272	0.0044
Uranus	-85496-09-17 00:56 J	-29505731.71	-29505731.46	-29505731.20	0.0136	0.0022
Saturn	-85495-02-16 02:37 J	-29505579.59	-29505579.39	-29505579.19	0.0271	0.0150
Uranus	-85495-09-21 17:16 J	-29505362.03	-29505361.78	-29505361.52	0.0136	0.0032
Saturn	-85494-02-27 14:08 J	-29505202.99	-29505202.91	-29505202.81	0.0270	0.0250
Uranus	-85494-09-26 08:08 J	-29504992.40	-29504992.16	-29504991.90	0.0135	0.0041
Uranus	-85493-09-29 22:18 J	-29504622.81	-29504622.57	-29504622.32	0.0135	0.0050
Uranus	-85492-10-04 11:16 J	-29504253.25	-29504253.03	-29504252.79	0.0134	0.0059
Uranus	-85491-10-08 23:16 J	-29503883.74	-29503883.53	-29503883.29	0.0134	0.0067
Uranus	-85490-10-13 10:18 J	-29503514.27	-29503514.07	-29503513.84	0.0133	0.0074
Uranus	-85489-10-16 20:23 J	-29503144.83	-29503144.65	-29503144.42	0.0133	0.0082
Uranus	-85488-10-21 05:44 J	-29502775.43	-29502775.26	-29502775.05	0.0133	0.0089
Uranus	-85487-10-25 14:37 J	-29502406.06	-29502405.89	-29502405.71	0.0132	0.0095
Uranus	-85486-10-29 21:49 J	-29502036.74	-29502036.59	-29502036.41	0.0132	0.0101
Uranus	-85485-11-02 04:47 J	-29501667.45	-29501667.30	-29501667.14	0.0132	0.0105
Uranus	-85484-11-06 10:32 J	-29501298.19	-29501298.06	-29501297.91	0.0132	0.0110
Saturn	-85483-07-11 17:01 J	-29501050.97	-29501050.79	-29501050.59	0.0283	0.0185
Uranus	-85483-11-10 15:49 J	-29500928.95	-29500928.84	-29500928.70	0.0132	0.0114
Saturn	-85482-07-26 03:06 J	-29500671.62	-29500671.37	-29500671.12	0.0285	0.0053
Uranus	-85482-11-14 20:08 J	-29500559.76	-29500559.66	-29500559.53	0.0132	0.0118
Mars	-85481-06-20 03:35 J	-29500341.54	-29500341.35	-29500341.16	0.1630	0.0394
Saturn	-85481-08-08 19:11 J	-29500291.93	-29500291.70	-29500291.45	0.0287	0.0086
Uranus	-85481-11-18 00:13 J	-29500190.57	-29500190.49	-29500190.37	0.0131	0.0121
Saturn	-85480-08-23 15:49 J	-29499911.99	-29499911.84	-29499911.67	0.0288	0.0223

Uranus	-85480-11-22 03:49 J	-29499821.40	-29499821.34	-29499821.23	0.0131	0.0123
Uranus	-85479-11-26 07:40 J	-29499452.26	-29499452.18	-29499452.11	0.0131	0.0125
Jupiter	-85478-09-26 09:06 J	-29499148.32	-29499148.12	-29499147.92	0.0510	0.0288
Uranus	-85478-11-30 10:04 J	-29499083.13	-29499083.08	-29499083.00	0.0131	0.0127
Uranus	-85477-12-03 12:42 J	-29498714.01	-29498713.97	-29498713.89	0.0131	0.0128
Uranus	-85476-12-07 15:06 J	-29498344.91	-29498344.87	-29498344.79	0.0132	0.0128
Uranus	-85475-12-11 17:16 J	-29497975.81	-29497975.78	-29497975.69	0.0132	0.0128
Uranus	-85474-12-15 19:11 J	-29497606.74	-29497606.70	-29497606.61	0.0132	0.0127
Uranus	-85473-12-18 21:35 J	-29497237.67	-29497237.60	-29497237.51	0.0132	0.0125
Jupiter	-85472-03-20 16:18 J	-29497145.98	-29497145.82	-29497145.66	0.0519	0.0363
Uranus	-85472-12-22 23:01 J	-29496868.60	-29496868.54	-29496868.42	0.0132	0.0124
Uranus	-85471-12-27 00:56 J	-29496499.54	-29496499.46	-29496499.34	0.0133	0.0121
Uranus	-85470-12-31 03:20 J	-29496130.47	-29496130.36	-29496130.25	0.0133	0.0118
Saturn	-85469-01-07 19:40 J	-29496122.81	-29496122.68	-29496122.53	0.0278	0.0226
Uranus	-85468-01-03 05:01 J	-29495761.39	-29495761.29	-29495761.14	0.0133	0.0115
Saturn	-85468-01-18 22:18 J	-29495745.78	-29495745.57	-29495745.35	0.0276	0.0114
Uranus	-85467-01-07 07:40 J	-29495392.31	-29495392.18	-29495392.03	0.0134	0.0110
Saturn	-85467-01-30 19:11 J	-29495368.94	-29495368.70	-29495368.47	0.0274	0.0004
Uranus	-85466-01-11 10:18 J	-29495023.21	-29495023.07	-29495022.91	0.0134	0.0105
Saturn	-85466-02-11 11:16 J	-29494992.24	-29494992.03	-29494991.81	0.0272	0.0109
Jupiter	-85466-10-01 07:40 J	-29494760.42	-29494760.18	-29494759.94	0.0512	0.0005
Uranus	-85465-01-15 13:11 J	-29494654.10	-29494653.95	-29494653.77	0.0135	0.0101
Saturn	-85465-02-23 00:28 J	-29494615.62	-29494615.48	-29494615.32	0.0271	0.0211
Uranus	-85464-01-18 17:01 J	-29494284.96	-29494284.79	-29494284.61	0.0135	0.0094
Uranus	-85463-01-22 20:52 J	-29493915.80	-29493915.63	-29493915.43	0.0136	0.0089
Uranus	-85462-01-27 01:54 J	-29493546.61	-29493546.42	-29493546.22	0.0136	0.0081
Uranus	-85461-01-31 07:25 J	-29493177.40	-29493177.19	-29493176.98	0.0137	0.0074
Uranus	-85460-02-03 13:25 J	-29492808.15	-29492807.94	-29492807.72	0.0137	0.0066
Jupiter	-85460-03-25 05:16 J	-29492758.50	-29492758.28	-29492758.05	0.0517	0.0085
Uranus	-85459-02-07 19:54 J	-29492438.88	-29492438.67	-29492438.44	0.0138	0.0058

Neptune -85459-03-20 08:52 J -29492398.14 -29492398.13 -29492398.09 0.0089 0.0088
 Uranus -85458-02-12 03:20 J -29492069.58 -29492069.36 -29492069.12 0.0138 0.0049
 Neptune -85458-03-22 17:59 J -29492030.90 -29492030.75 -29492030.55 0.0089 0.0064
 Uranus -85457-02-16 11:30 J -29491700.25 -29491700.02 -29491699.77 0.0139 0.0040
 Neptune -85457-03-24 03:49 J -29491663.55 -29491663.34 -29491663.10 0.0089 0.0039
 Uranus -85456-02-19 20:52 J -29491330.87 -29491330.63 -29491330.39 0.0140 0.0030
 Neptune -85456-03-26 13:40 J -29491296.17 -29491295.93 -29491295.68 0.0089 0.0014
 Uranus -85455-02-24 06:42 J -29490961.46 -29490961.22 -29490960.97 0.0140 0.0020
 Neptune -85455-03-28 23:16 J -29490928.77 -29490928.53 -29490928.27 0.0089 0.0011
 Uranus -85454-02-28 17:59 J -29490592.00 -29490591.75 -29490591.51 0.0141 0.0010
 Neptune -85454-03-31 08:52 J -29490561.34 -29490561.13 -29490560.88 0.0089 0.0037
 Saturn -85454-07-06 03:06 J -29490464.50 -29490464.37 -29490464.22 0.0282 0.0233
 Jupiter -85454-10-06 02:52 J -29490372.58 -29490372.38 -29490372.18 0.0514 0.0281
 Uranus -85453-03-04 05:59 J -29490222.50 -29490222.25 -29490222.01 0.0141 0.0002
 Neptune -85453-04-01 18:28 J -29490193.89 -29490193.73 -29490193.52 0.0089 0.0062
 Saturn -85453-07-19 09:20 J -29490085.33 -29490085.11 -29490084.87 0.0284 0.0107
 Uranus -85452-03-08 19:11 J -29489852.95 -29489852.70 -29489852.45 0.0142 0.0011
 Neptune -85452-04-04 04:32 J -29489826.35 -29489826.31 -29489826.22 0.0089 0.0086
 Saturn -85452-08-02 23:01 J -29489705.79 -29489705.54 -29489705.29 0.0286 0.0030
 Uranus -85451-03-13 09:20 J -29489483.35 -29489483.11 -29489482.86 0.0143 0.0022
 Saturn -85451-08-17 17:44 J -29489325.96 -29489325.76 -29489325.55 0.0288 0.0169
 Uranus -85450-03-18 00:56 J -29489113.70 -29489113.46 -29489113.21 0.0143 0.0033
 Uranus -85449-03-21 17:44 J -29488743.99 -29488743.76 -29488743.52 0.0144 0.0044
 Uranus -85448-03-26 11:30 J -29488374.23 -29488374.02 -29488373.77 0.0144 0.0056
 Jupiter -85448-03-29 19:54 J -29488370.88 -29488370.67 -29488370.46 0.0515 0.0196
 Pluto -85447-01-04 18:13 J -29488089.98 -29488089.74 -29488089.48 0.0078 0.0011
 Uranus -85447-03-31 06:42 J -29488004.43 -29488004.22 -29488003.98 0.0145 0.0066
 Uranus -85446-04-05 03:06 J -29487634.56 -29487634.37 -29487634.14 0.0145 0.0076
 Uranus -85445-04-09 00:28 J -29487264.66 -29487264.48 -29487264.26 0.0146 0.0087
 Uranus -85444-04-13 23:16 J -29486894.70 -29486894.53 -29486894.33 0.0146 0.0096

Uranus	-85443-04-18 23:01 J	-29486524.70	-29486524.54	-29486524.36	0.0146	0.0105
Uranus	-85442-04-23 23:59 J	-29486154.65	-29486154.50	-29486154.34	0.0147	0.0113
Uranus	-85441-04-28 01:54 J	-29485784.56	-29485784.42	-29485784.27	0.0147	0.0120
Saturn	-85440-01-01 20:08 J	-29485535.70	-29485535.66	-29485535.62	0.0278	0.0274
Uranus	-85440-05-03 04:18 J	-29485414.43	-29485414.32	-29485414.18	0.0147	0.0127
Saturn	-85439-01-14 01:11 J	-29485158.63	-29485158.45	-29485158.25	0.0276	0.0164
Uranus	-85439-05-08 07:54 J	-29485044.25	-29485044.17	-29485044.04	0.0147	0.0133
Saturn	-85438-01-25 23:44 J	-29484781.74	-29484781.51	-29484781.27	0.0274	0.0051
Uranus	-85438-05-13 12:42 J	-29484674.04	-29484673.97	-29484673.87	0.0147	0.0138
Saturn	-85437-02-06 17:16 J	-29484405.01	-29484404.78	-29484404.55	0.0272	0.0060
Uranus	-85437-05-17 17:59 J	-29484303.79	-29484303.75	-29484303.66	0.0147	0.0143
Saturn	-85436-02-17 07:11 J	-29484028.38	-29484028.20	-29484028.00	0.0271	0.0166
Jupiter	-85436-04-03 10:18 J	-29483983.15	-29483983.07	-29483982.98	0.0512	0.0473
Uranus	-85436-05-23 00:13 J	-29483933.51	-29483933.49	-29483933.43	0.0147	0.0145
Saturn	-85435-02-28 19:11 J	-29483651.74	-29483651.70	-29483651.64	0.0270	0.0263
Uranus	-85435-05-28 07:25 J	-29483563.19	-29483563.19	-29483563.16	0.0147	0.0147
Mars	-85434-06-14 12:56 J	-29483181.09	-29483180.96	-29483180.83	0.1617	0.1187
Uranus	-85433-06-06 22:47 J	-29482822.55	-29482822.55	-29482822.54	0.0147	0.0147
Uranus	-85432-06-12 06:28 J	-29482452.26	-29482452.23	-29482452.19	0.0146	0.0145
Uranus	-85431-06-17 14:08 J	-29482081.95	-29482081.91	-29482081.83	0.0146	0.0142
Uranus	-85430-06-22 22:18 J	-29481711.64	-29481711.57	-29481711.48	0.0146	0.0138
Uranus	-85429-06-27 05:30 J	-29481341.34	-29481341.27	-29481341.14	0.0145	0.0134
Uranus	-85428-07-02 13:25 J	-29480971.05	-29480970.94	-29480970.81	0.0145	0.0127
Mars	-85428-12-23 13:25 J	-29480797.13	-29480796.94	-29480796.74	0.1914	0.0310
Uranus	-85427-07-07 20:23 J	-29480600.78	-29480600.65	-29480600.49	0.0145	0.0121
Uranus	-85426-07-13 02:52 J	-29480230.52	-29480230.38	-29480230.20	0.0144	0.0113
Uranus	-85425-07-17 09:20 J	-29479860.28	-29479860.11	-29479859.93	0.0144	0.0105
Saturn	-85424-07-13 02:23 J	-29479499.60	-29479499.40	-29479499.19	0.0283	0.0165
Uranus	-85424-07-22 14:37 J	-29479490.07	-29479489.89	-29479489.68	0.0143	0.0096
Saturn	-85423-07-27 12:42 J	-29479120.22	-29479119.97	-29479119.72	0.0285	0.0033

Uranus -85423-07-27 19:40 J -29479119.88 -29479119.68 -29479119.47 0.0142 0.0087 *
 Uranus -85422-08-01 23:44 J -29478749.72 -29478749.51 -29478749.28 0.0142 0.0077
 Saturn -85422-08-11 05:01 J -29478740.52 -29478740.29 -29478740.05 0.0287 0.0105
 Uranus -85421-08-06 02:52 J -29478379.61 -29478379.38 -29478379.14 0.0141 0.0067
 Saturn -85421-08-25 01:40 J -29478360.56 -29478360.43 -29478360.29 0.0288 0.0241
 Uranus -85420-08-11 05:16 J -29478009.51 -29478009.28 -29478009.03 0.0141 0.0056
 Uranus -85419-08-16 06:28 J -29477639.47 -29477639.23 -29477638.97 0.0140 0.0046
 Uranus -85418-08-21 06:56 J -29477269.46 -29477269.21 -29477268.95 0.0139 0.0035
 Uranus -85417-08-25 05:59 J -29476899.50 -29476899.25 -29476898.99 0.0139 0.0024
 Uranus -85416-08-30 04:04 J -29476529.59 -29476529.33 -29476529.07 0.0138 0.0013
 Uranus -85415-09-04 00:56 J -29476159.72 -29476159.46 -29476159.20 0.0138 0.0003
 Uranus -85414-09-08 20:23 J -29475789.91 -29475789.65 -29475789.39 0.0137 0.0008
 Uranus -85413-09-12 14:52 J -29475420.14 -29475419.88 -29475419.62 0.0137 0.0018
 Uranus -85412-09-17 08:08 J -29475050.41 -29475050.16 -29475049.90 0.0136 0.0027
 Uranus -85411-09-22 00:28 J -29474680.73 -29474680.48 -29474680.23 0.0136 0.0037
 Saturn -85410-01-08 23:59 J -29474571.64 -29474571.50 -29474571.33 0.0278 0.0210
 Uranus -85410-09-26 15:20 J -29474311.10 -29474310.86 -29474310.61 0.0135 0.0046
 Saturn -85409-01-21 02:23 J -29474194.61 -29474194.40 -29474194.17 0.0276 0.0097
 Uranus -85409-09-30 05:44 J -29473941.50 -29473941.26 -29473941.02 0.0135 0.0055
 Saturn -85408-01-31 23:16 J -29473817.77 -29473817.53 -29473817.30 0.0274 0.0016
 Uranus -85408-10-04 18:42 J -29473571.94 -29473571.72 -29473571.48 0.0134 0.0063
 Saturn -85407-02-12 15:20 J -29473441.07 -29473440.86 -29473440.64 0.0273 0.0125
 Uranus -85407-10-09 07:11 J -29473202.42 -29473202.20 -29473201.98 0.0134 0.0071
 Saturn -85406-02-24 04:32 J -29473064.43 -29473064.31 -29473064.17 0.0271 0.0226
 Uranus -85406-10-13 18:13 J -29472832.94 -29472832.74 -29472832.53 0.0133 0.0079
 Uranus -85405-10-17 04:32 J -29472463.50 -29472463.31 -29472463.11 0.0133 0.0085
 Uranus -85404-10-21 13:54 J -29472094.10 -29472093.92 -29472093.73 0.0133 0.0092
 Uranus -85403-10-25 22:18 J -29471724.73 -29471724.57 -29471724.39 0.0132 0.0098
 Mars -85402-06-23 09:20 J -29471484.26 -29471484.11 -29471483.97 0.1633 0.1089
 Uranus -85402-10-30 05:30 J -29471355.42 -29471355.27 -29471355.10 0.0132 0.0103

Uranus	-85401-11-02 11:59 J	-29470986.12	-29470986.00	-29470985.83	0.0132	0.0108
Uranus	-85400-11-06 18:13 J	-29470616.86	-29470616.74	-29470616.60	0.0132	0.0112
Uranus	-85399-11-10 23:30 J	-29470247.63	-29470247.52	-29470247.39	0.0132	0.0116
Uranus	-85398-11-15 04:04 J	-29469878.43	-29469878.33	-29469878.21	0.0132	0.0119
Uranus	-85397-11-18 08:23 J	-29469509.23	-29469509.15	-29469509.05	0.0132	0.0122
Uranus	-85396-11-22 11:30 J	-29469140.07	-29469140.02	-29469139.91	0.0131	0.0125
Saturn	-85395-07-07 13:54 J	-29468913.07	-29468912.92	-29468912.75	0.0282	0.0214
Jupiter	-85395-09-25 08:52 J	-29468833.31	-29468833.13	-29468832.94	0.0509	0.0328
Uranus	-85395-11-26 15:35 J	-29468770.92	-29468770.85	-29468770.78	0.0131	0.0126
Saturn	-85394-07-21 20:37 J	-29468533.87	-29468533.64	-29468533.39	0.0284	0.0088
Uranus	-85394-11-30 18:13 J	-29468401.79	-29468401.74	-29468401.66	0.0131	0.0127
Saturn	-85393-08-04 10:32 J	-29468154.31	-29468154.06	-29468153.81	0.0286	0.0050
Uranus	-85393-12-03 20:52 J	-29468032.66	-29468032.63	-29468032.54	0.0132	0.0128
Saturn	-85392-08-19 05:16 J	-29467774.46	-29467774.28	-29467774.08	0.0288	0.0188
Uranus	-85392-12-07 23:30 J	-29467663.56	-29467663.52	-29467663.44	0.0132	0.0128
Uranus	-85391-12-12 01:40 J	-29467294.47	-29467294.43	-29467294.34	0.0132	0.0127
Uranus	-85390-12-16 03:35 J	-29466925.40	-29466925.35	-29466925.25	0.0132	0.0126
Jupiter	-85389-03-19 20:52 J	-29466830.78	-29466830.63	-29466830.49	0.0520	0.0399
Uranus	-85389-12-19 06:13 J	-29466556.32	-29466556.24	-29466556.15	0.0132	0.0124
Uranus	-85388-12-23 07:40 J	-29466187.26	-29466187.18	-29466187.07	0.0132	0.0122
Uranus	-85387-12-27 09:35 J	-29465818.19	-29465818.10	-29465817.97	0.0133	0.0119
Uranus	-85386-12-31 11:44 J	-29465449.12	-29465449.01	-29465448.88	0.0133	0.0115
Uranus	-85384-01-03 13:54 J	-29465080.04	-29465079.92	-29465079.77	0.0133	0.0112
Uranus	-85383-01-07 16:32 J	-29464710.95	-29464710.81	-29464710.65	0.0134	0.0107
Jupiter	-85383-09-30 05:59 J	-29464445.49	-29464445.25	-29464445.01	0.0511	0.0046
Uranus	-85382-01-11 19:11 J	-29464341.84	-29464341.70	-29464341.53	0.0134	0.0102
Saturn	-85381-01-04 02:23 J	-29463984.47	-29463984.40	-29463984.30	0.0278	0.0258
Uranus	-85381-01-15 22:18 J	-29463972.73	-29463972.57	-29463972.38	0.0135	0.0097
Saturn	-85380-01-15 07:11 J	-29463607.39	-29463607.20	-29463606.98	0.0276	0.0148
Uranus	-85380-01-19 02:08 J	-29463603.58	-29463603.41	-29463603.21	0.0135	0.0091

Uranus	-85379-01-23 06:42 J	-29463234.41	-29463234.22	-29463234.03	0.0136	0.0084
Saturn	-85379-01-27 05:44 J	-29463230.49	-29463230.26	-29463230.02	0.0274	0.0034
Uranus	-85378-01-27 11:16 J	-29462865.22	-29462865.03	-29462864.81	0.0136	0.0077
Saturn	-85378-02-07 23:16 J	-29462853.76	-29462853.53	-29462853.30	0.0272	0.0076
Uranus	-85377-01-31 16:32 J	-29462496.00	-29462495.81	-29462495.58	0.0137	0.0070
Saturn	-85377-02-19 13:11 J	-29462477.12	-29462476.95	-29462476.76	0.0271	0.0181
Jupiter	-85377-03-24 12:42 J	-29462443.19	-29462442.97	-29462442.75	0.0517	0.0113
Neptune	-85377-09-24 21:35 J	-29462258.69	-29462258.60	-29462258.45	0.0088	0.0079
Uranus	-85376-02-03 22:47 J	-29462126.76	-29462126.55	-29462126.32	0.0137	0.0062
Neptune	-85376-09-27 11:59 J	-29461891.21	-29461891.00	-29461890.78	0.0088	0.0053
Uranus	-85375-02-08 05:30 J	-29461757.49	-29461757.27	-29461757.03	0.0138	0.0053
Neptune	-85375-09-30 01:25 J	-29461523.68	-29461523.44	-29461523.18	0.0088	0.0027
Uranus	-85374-02-12 12:56 J	-29461388.18	-29461387.96	-29461387.72	0.0138	0.0044
Neptune	-85374-10-02 15:20 J	-29461156.12	-29461155.86	-29461155.60	0.0088	0.0002
Uranus	-85373-02-16 21:20 J	-29461018.85	-29461018.61	-29461018.37	0.0139	0.0034
Neptune	-85373-10-04 04:47 J	-29460788.55	-29460788.30	-29460788.05	0.0088	0.0024
Uranus	-85372-02-20 06:28 J	-29460649.47	-29460649.23	-29460648.98	0.0140	0.0025
Neptune	-85372-10-06 17:44 J	-29460420.95	-29460420.76	-29460420.52	0.0088	0.0050
Uranus	-85371-02-24 16:32 J	-29460280.05	-29460279.81	-29460279.56	0.0140	0.0015
Jupiter	-85371-10-05 04:47 J	-29460057.50	-29460057.30	-29460057.09	0.0514	0.0243
Neptune	-85371-10-09 07:11 J	-29460053.32	-29460053.20	-29460053.04	0.0088	0.0074
Uranus	-85370-03-01 03:49 J	-29459910.59	-29459910.34	-29459910.09	0.0141	0.0005
Uranus	-85369-03-04 15:49 J	-29459541.08	-29459540.84	-29459540.59	0.0141	0.0006
Uranus	-85368-03-09 05:01 J	-29459171.53	-29459171.29	-29459171.04	0.0142	0.0017
Uranus	-85367-03-13 19:25 J	-29458801.92	-29458801.69	-29458801.44	0.0142	0.0028
Uranus	-85366-03-18 11:16 J	-29458432.26	-29458432.03	-29458431.78	0.0143	0.0038
Saturn	-85366-07-01 11:59 J	-29458327.07	-29458327.00	-29458326.90	0.0281	0.0264
Uranus	-85365-03-22 04:04 J	-29458062.56	-29458062.33	-29458062.09	0.0144	0.0049
Jupiter	-85365-03-29 02:37 J	-29458055.60	-29458055.39	-29458055.17	0.0515	0.0166
Saturn	-85365-07-14 14:37 J	-29457948.11	-29457947.89	-29457947.67	0.0283	0.0144

Uranus	-85364-03-26 22:04 J	-29457692.79	-29457692.58	-29457692.34	0.0144	0.0060
Saturn	-85364-07-29 01:11 J	-29457568.71	-29457568.45	-29457568.20	0.0285	0.0013
Uranus	-85363-03-31 17:01 J	-29457322.99	-29457322.79	-29457322.56	0.0145	0.0071
Saturn	-85363-08-12 17:44 J	-29457188.98	-29457188.76	-29457188.53	0.0287	0.0125
Uranus	-85362-04-05 13:25 J	-29456953.13	-29456952.94	-29456952.72	0.0145	0.0081
Saturn	-85362-08-27 14:23 J	-29456809.01	-29456808.90	-29456808.79	0.0288	0.0259
Uranus	-85361-04-09 10:47 J	-29456583.23	-29456583.05	-29456582.84	0.0146	0.0091
Uranus	-85360-04-14 09:20 J	-29456213.27	-29456213.11	-29456212.91	0.0146	0.0100
Uranus	-85359-04-19 08:52 J	-29455843.28	-29455843.13	-29455842.94	0.0146	0.0109
Uranus	-85358-04-24 10:04 J	-29455473.23	-29455473.08	-29455472.92	0.0147	0.0116
Uranus	-85357-04-28 11:44 J	-29455103.14	-29455103.01	-29455102.87	0.0147	0.0123
Uranus	-85356-05-03 14:23 J	-29454733.01	-29454732.90	-29454732.77	0.0147	0.0129
Uranus	-85355-05-08 17:44 J	-29454362.84	-29454362.76	-29454362.64	0.0147	0.0136
Mars	-85355-06-16 17:44 J	-29454323.95	-29454323.76	-29454323.58	0.1619	0.0529
Uranus	-85354-05-13 22:32 J	-29453992.62	-29453992.56	-29453992.47	0.0147	0.0140
Jupiter	-85353-04-02 11:16 J	-29453668.15	-29453668.03	-29453667.90	0.0512	0.0426
Uranus	-85353-05-18 03:49 J	-29453622.37	-29453622.34	-29453622.26	0.0147	0.0144
Uranus	-85352-05-23 10:04 J	-29453252.10	-29453252.08	-29453252.03	0.0147	0.0146
Saturn	-85351-01-10 06:28 J	-29453020.39	-29453020.23	-29453020.05	0.0278	0.0193
Uranus	-85351-05-28 17:01 J	-29452881.80	-29452881.79	-29452881.75	0.0147	0.0147
Saturn	-85350-01-22 08:37 J	-29452643.37	-29452643.14	-29452642.91	0.0276	0.0080
Uranus	-85350-06-03 00:13 J	-29452511.49	-29452511.49	-29452511.46	0.0147	0.0147
Saturn	-85349-02-03 05:01 J	-29452266.53	-29452266.29	-29452266.06	0.0274	0.0033
Uranus	-85349-06-07 07:25 J	-29452141.19	-29452141.19	-29452141.13	0.0147	0.0146
Mars	-85349-12-26 21:06 J	-29451938.77	-29451938.62	-29451938.46	0.1909	0.1155
Saturn	-85348-02-13 21:06 J	-29451889.82	-29451889.62	-29451889.42	0.0273	0.0141
Uranus	-85348-06-12 15:06 J	-29451770.89	-29451770.87	-29451770.79	0.0146	0.0144
Saturn	-85347-02-25 10:18 J	-29451513.17	-29451513.07	-29451512.95	0.0271	0.0241
Uranus	-85347-06-17 23:16 J	-29451400.58	-29451400.53	-29451400.44	0.0146	0.0140
Uranus	-85346-06-23 07:11 J	-29451030.29	-29451030.20	-29451030.10	0.0146	0.0135

Uranus	-85345-06-27 14:23 J	-29450659.99	-29450659.90	-29450659.76	0.0145	0.0131
Uranus	-85344-07-02 21:49 J	-29450289.71	-29450289.59	-29450289.44	0.0145	0.0124
Uranus	-85343-07-08 04:47 J	-29449919.43	-29449919.30	-29449919.13	0.0145	0.0117
Uranus	-85342-07-13 11:30 J	-29449549.17	-29449549.02	-29449548.83	0.0144	0.0109
Uranus	-85341-07-17 17:16 J	-29449178.94	-29449178.78	-29449178.57	0.0143	0.0101
Uranus	-85340-07-22 23:16 J	-29448808.72	-29448808.53	-29448808.32	0.0143	0.0091
Uranus	-85339-07-28 04:18 J	-29448438.53	-29448438.32	-29448438.11	0.0142	0.0082
Uranus	-85338-08-02 07:54 J	-29448068.38	-29448068.17	-29448067.93	0.0142	0.0072
Uranus	-85337-08-06 11:16 J	-29447698.26	-29447698.03	-29447697.78	0.0141	0.0061
Saturn	-85336-07-09 02:23 J	-29447361.57	-29447361.40	-29447361.21	0.0282	0.0195
Uranus	-85336-08-11 13:40 J	-29447328.16	-29447327.93	-29447327.67	0.0141	0.0051
Saturn	-85335-07-23 10:04 J	-29446982.33	-29446982.08	-29446981.83	0.0284	0.0067
Uranus	-85335-08-16 14:52 J	-29446958.12	-29446957.88	-29446957.62	0.0140	0.0040
Saturn	-85334-08-07 00:13 J	-29446602.73	-29446602.49	-29446602.24	0.0286	0.0070
Uranus	-85334-08-21 15:20 J	-29446588.12	-29446587.86	-29446587.61	0.0139	0.0029
Saturn	-85333-08-20 19:11 J	-29446222.86	-29446222.70	-29446222.51	0.0288	0.0208
Uranus	-85333-08-25 14:08 J	-29446218.17	-29446217.91	-29446217.65	0.0139	0.0018
Uranus	-85332-08-30 12:13 J	-29445848.25	-29445847.99	-29445847.73	0.0138	0.0007
Uranus	-85331-09-04 08:52 J	-29445478.39	-29445478.13	-29445477.87	0.0138	0.0003
Uranus	-85330-09-09 04:18 J	-29445108.58	-29445108.32	-29445108.06	0.0137	0.0013
Uranus	-85329-09-12 22:32 J	-29444738.81	-29444738.56	-29444738.29	0.0137	0.0024
Uranus	-85328-09-17 16:04 J	-29444369.07	-29444368.83	-29444368.57	0.0136	0.0033
Uranus	-85327-09-22 08:23 J	-29443999.39	-29443999.15	-29443998.89	0.0135	0.0042
Uranus	-85326-09-26 23:44 J	-29443629.75	-29443629.51	-29443629.27	0.0135	0.0051
Uranus	-85325-09-30 13:54 J	-29443260.14	-29443259.92	-29443259.68	0.0134	0.0060
Uranus	-85324-10-05 03:06 J	-29442890.58	-29442890.37	-29442890.13	0.0134	0.0068
Uranus	-85323-10-09 15:20 J	-29442521.06	-29442520.86	-29442520.63	0.0134	0.0076
Saturn	-85322-01-05 11:01 J	-29442433.15	-29442433.04	-29442432.91	0.0278	0.0240
Uranus	-85322-10-14 02:52 J	-29442151.59	-29442151.38	-29442151.18	0.0133	0.0083
Saturn	-85321-01-17 15:20 J	-29442056.07	-29442055.86	-29442055.65	0.0276	0.0129

Uranus	-85321-10-17 12:42 J	-29441782.14	-29441781.97	-29441781.76	0.0133	0.0090
Saturn	-85320-01-28 13:25 J	-29441679.18	-29441678.94	-29441678.70	0.0274	0.0017
Uranus	-85320-10-21 22:04 J	-29441412.74	-29441412.58	-29441412.39	0.0133	0.0096
Saturn	-85319-02-09 06:42 J	-29441302.44	-29441302.22	-29441301.99	0.0272	0.0093
Uranus	-85319-10-26 06:13 J	-29441043.39	-29441043.24	-29441043.06	0.0132	0.0102
Saturn	-85318-02-20 20:37 J	-29440925.80	-29440925.64	-29440925.48	0.0271	0.0196
Uranus	-85318-10-30 13:40 J	-29440674.07	-29440673.93	-29440673.76	0.0132	0.0106
Uranus	-85317-11-02 20:08 J	-29440304.77	-29440304.66	-29440304.49	0.0132	0.0111
Uranus	-85316-11-07 02:08 J	-29439935.51	-29439935.41	-29439935.26	0.0132	0.0115
Uranus	-85315-11-11 07:54 J	-29439566.27	-29439566.17	-29439566.05	0.0132	0.0118
Uranus	-85314-11-15 12:28 J	-29439197.07	-29439196.98	-29439196.87	0.0132	0.0121
Uranus	-85313-11-18 16:32 J	-29438827.87	-29438827.81	-29438827.70	0.0131	0.0124
Jupiter	-85312-09-24 09:06 J	-29438518.28	-29438518.12	-29438517.95	0.0509	0.0367
Uranus	-85312-11-22 20:23 J	-29438458.70	-29438458.65	-29438458.55	0.0131	0.0126
Uranus	-85311-11-26 23:44 J	-29438089.55	-29438089.51	-29438089.42	0.0131	0.0127
Uranus	-85310-12-01 02:52 J	-29437720.42	-29437720.38	-29437720.30	0.0131	0.0128
Uranus	-85309-12-04 05:44 J	-29437351.30	-29437351.26	-29437351.18	0.0132	0.0128
Uranus	-85308-12-08 08:23 J	-29436982.20	-29436982.15	-29436982.07	0.0132	0.0127
Saturn	-85307-07-03 02:23 J	-29436775.52	-29436775.40	-29436775.27	0.0281	0.0245
Uranus	-85307-12-12 10:47 J	-29436613.11	-29436613.05	-29436612.97	0.0132	0.0126
Jupiter	-85306-03-20 02:37 J	-29436515.51	-29436515.39	-29436515.26	0.0520	0.0431
Saturn	-85306-07-17 05:30 J	-29436396.49	-29436396.27	-29436396.04	0.0283	0.0124
Uranus	-85306-12-16 12:42 J	-29436244.04	-29436243.97	-29436243.88	0.0132	0.0124
Saturn	-85305-07-30 16:32 J	-29436017.07	-29436016.81	-29436016.56	0.0285	0.0009
Uranus	-85305-12-19 14:23 J	-29435874.97	-29435874.90	-29435874.79	0.0132	0.0123
Saturn	-85304-08-14 09:20 J	-29435637.32	-29435637.11	-29435636.89	0.0287	0.0146
Uranus	-85304-12-23 16:18 J	-29435505.91	-29435505.82	-29435505.70	0.0133	0.0120
Saturn	-85303-08-29 05:59 J	-29435257.31	-29435257.25	-29435257.18	0.0288	0.0278
Uranus	-85303-12-27 17:59 J	-29435136.84	-29435136.75	-29435136.61	0.0133	0.0117
Uranus	-85302-12-31 19:54 J	-29434767.77	-29434767.67	-29434767.51	0.0133	0.0114

Uranus -85300-01-03 22:32 J -29434398.69 -29434398.56 -29434398.40 0.0133 0.0109
 Jupiter -85300-09-29 09:06 J -29434130.35 -29434130.12 -29434129.88 0.0511 0.0079
 Uranus -85299-01-08 00:56 J -29434029.60 -29434029.46 -29434029.29 0.0134 0.0104
 Uranus -85298-01-12 03:35 J -29433660.49 -29433660.35 -29433660.16 0.0134 0.0100
 Uranus -85297-01-16 07:25 J -29433291.36 -29433291.19 -29433291.01 0.0135 0.0093
 Uranus -85296-01-19 11:16 J -29432922.21 -29432922.03 -29432921.84 0.0135 0.0087
 Uranus -85295-01-23 15:35 J -29432553.04 -29432552.85 -29432552.65 0.0136 0.0080
 Uranus -85294-01-27 20:23 J -29432183.85 -29432183.65 -29432183.44 0.0136 0.0072
 Neptune -85294-03-22 07:25 J -29432130.30 -29432130.19 -29432130.02 0.0089 0.0074
 Jupiter -85294-03-24 13:11 J -29432128.16 -29432127.95 -29432127.73 0.0517 0.0160
 Uranus -85293-02-01 01:40 J -29431814.64 -29431814.43 -29431814.21 0.0137 0.0065
 Neptune -85293-03-23 17:16 J -29431762.97 -29431762.78 -29431762.56 0.0089 0.0049
 Saturn -85292-01-11 14:23 J -29431469.08 -29431468.90 -29431468.71 0.0278 0.0176
 Uranus -85292-02-04 07:40 J -29431445.39 -29431445.18 -29431444.94 0.0137 0.0056
 Neptune -85292-03-26 03:06 J -29431395.61 -29431395.37 -29431395.12 0.0089 0.0024
 Saturn -85291-01-23 15:35 J -29431092.08 -29431091.85 -29431091.61 0.0276 0.0063
 Uranus -85291-02-08 14:08 J -29431076.13 -29431075.91 -29431075.67 0.0138 0.0048
 Neptune -85291-03-28 12:56 J -29431028.21 -29431027.96 -29431027.71 0.0089 0.0001
 Saturn -85290-02-04 11:30 J -29430715.25 -29430715.02 -29430714.78 0.0274 0.0050
 Uranus -85290-02-12 21:49 J -29430706.82 -29430706.59 -29430706.35 0.0138 0.0039
 Neptune -85290-03-30 22:32 J -29430660.80 -29430660.56 -29430660.32 0.0089 0.0025
 Saturn -85289-02-16 03:35 J -29430338.54 -29430338.35 -29430338.15 0.0272 0.0156
 Uranus -85289-02-17 05:59 J -29430337.48 -29430337.25 -29430337.00 0.0139 0.0029
 Neptune -85289-04-01 08:08 J -29430293.35 -29430293.16 -29430292.94 0.0089 0.0050
 Uranus -85288-02-20 15:20 J -29429968.10 -29429967.86 -29429967.62 0.0140 0.0019
 Saturn -85288-02-26 16:47 J -29429961.86 -29429961.80 -29429961.70 0.0271 0.0255
 Neptune -85288-04-03 17:44 J -29429925.87 -29429925.76 -29429925.60 0.0089 0.0075
 Pluto -85288-07-01 23:30 J -29429836.75 -29429836.52 -29429836.27 0.0067 0.0029
 Jupiter -85288-10-04 07:54 J -29429742.38 -29429742.17 -29429741.95 0.0513 0.0208
 Uranus -85287-02-25 01:25 J -29429598.69 -29429598.44 -29429598.20 0.0140 0.0009

Uranus	-85286-03-01 12:42 J	-29429229.22	-29429228.97	-29429228.73	0.0141	0.0002
Uranus	-85285-03-05 00:42 J	-29428859.72	-29428859.47	-29428859.22	0.0141	0.0011
Uranus	-85284-03-09 14:08 J	-29428490.15	-29428489.91	-29428489.66	0.0142	0.0022
Uranus	-85283-03-14 04:47 J	-29428120.55	-29428120.30	-29428120.06	0.0142	0.0033
Uranus	-85282-03-18 20:23 J	-29427750.88	-29427750.65	-29427750.41	0.0143	0.0044
Jupiter	-85282-03-29 01:11 J	-29427740.68	-29427740.45	-29427740.23	0.0515	0.0113
Uranus	-85281-03-22 13:11 J	-29427381.17	-29427380.95	-29427380.71	0.0144	0.0055
Uranus	-85280-03-27 07:11 J	-29427011.41	-29427011.20	-29427010.97	0.0144	0.0065
Uranus	-85279-04-01 02:08 J	-29426641.60	-29426641.41	-29426641.18	0.0145	0.0076
Uranus	-85278-04-05 22:47 J	-29426271.74	-29426271.55	-29426271.34	0.0145	0.0085
Uranus	-85277-04-09 19:54 J	-29425901.85	-29425901.67	-29425901.47	0.0146	0.0095
Saturn	-85277-07-10 16:18 J	-29425810.01	-29425809.82	-29425809.62	0.0282	0.0176
Uranus	-85276-04-14 18:42 J	-29425531.89	-29425531.72	-29425531.54	0.0146	0.0103
Mars	-85276-06-18 22:18 J	-29425466.76	-29425466.57	-29425466.37	0.1622	0.0144
Saturn	-85276-07-25 00:42 J	-29425430.72	-29425430.47	-29425430.22	0.0285	0.0047
Jupiter	-85276-10-09 02:52 J	-29425354.44	-29425354.38	-29425354.30	0.0515	0.0490
Uranus	-85275-04-19 18:28 J	-29425161.89	-29425161.73	-29425161.57	0.0146	0.0112
Saturn	-85275-08-08 15:35 J	-29425051.09	-29425050.85	-29425050.61	0.0287	0.0090
Uranus	-85274-04-24 18:42 J	-29424791.84	-29424791.72	-29424791.55	0.0147	0.0120
Saturn	-85274-08-23 11:01 J	-29424671.19	-29424671.04	-29424670.88	0.0288	0.0226
Uranus	-85273-04-28 20:37 J	-29424421.75	-29424421.64	-29424421.50	0.0147	0.0126
Uranus	-85272-05-03 23:16 J	-29424051.62	-29424051.53	-29424051.40	0.0147	0.0132
Uranus	-85271-05-09 03:06 J	-29423681.44	-29423681.37	-29423681.26	0.0147	0.0137
Jupiter	-85270-04-02 14:08 J	-29423353.06	-29423352.91	-29423352.76	0.0514	0.0387
Uranus	-85270-05-14 07:54 J	-29423311.22	-29423311.17	-29423311.08	0.0147	0.0141
Uranus	-85269-05-18 13:11 J	-29422940.97	-29422940.95	-29422940.87	0.0147	0.0145
Uranus	-85268-05-23 19:54 J	-29422570.70	-29422570.67	-29422570.63	0.0147	0.0146
Uranus	-85267-05-29 02:52 J	-29422200.40	-29422200.38	-29422200.36	0.0147	0.0147
Uranus	-85266-06-03 09:20 J	-29421830.12	-29421830.11	-29421830.06	0.0147	0.0146
Uranus	-85265-06-07 16:47 J	-29421459.82	-29421459.80	-29421459.73	0.0147	0.0145

Uranus -85264-06-13 00:28 J -29421089.53 -29421089.48 -29421089.40 0.0147 0.0142
 Saturn -85263-01-06 20:37 J -29420881.77 -29420881.64 -29420881.49 0.0278 0.0223
 Uranus -85263-06-18 08:23 J -29420719.22 -29420719.15 -29420719.05 0.0146 0.0138
 Saturn -85262-01-19 00:13 J -29420504.70 -29420504.49 -29420504.27 0.0276 0.0111
 Uranus -85262-06-23 15:49 J -29420348.93 -29420348.84 -29420348.72 0.0146 0.0133
 Saturn -85261-01-30 22:04 J -29420127.82 -29420127.58 -29420127.34 0.0274 0.0002
 Uranus -85261-06-27 23:30 J -29419978.64 -29419978.52 -29419978.39 0.0145 0.0127
 Saturn -85260-02-10 15:06 J -29419751.09 -29419750.87 -29419750.65 0.0272 0.0110
 Uranus -85260-07-03 06:42 J -29419608.35 -29419608.22 -29419608.07 0.0145 0.0120
 Saturn -85259-02-22 04:32 J -29419374.45 -29419374.31 -29419374.15 0.0271 0.0211
 Uranus -85259-07-08 13:54 J -29419238.08 -29419237.92 -29419237.76 0.0145 0.0113
 Uranus -85258-07-13 19:54 J -29418867.83 -29418867.67 -29418867.47 0.0144 0.0105
 Uranus -85257-07-18 01:54 J -29418497.59 -29418497.42 -29418497.20 0.0143 0.0097
 Uranus -85256-07-23 07:40 J -29418127.37 -29418127.18 -29418126.96 0.0143 0.0087
 Uranus -85255-07-28 12:42 J -29417757.19 -29417756.97 -29417756.75 0.0142 0.0077
 Uranus -85254-08-02 16:32 J -29417387.03 -29417386.81 -29417386.57 0.0142 0.0067
 Uranus -85253-08-06 19:54 J -29417016.91 -29417016.67 -29417016.43 0.0141 0.0056
 Uranus -85252-08-11 22:18 J -29416646.82 -29416646.57 -29416646.33 0.0141 0.0045
 Uranus -85251-08-16 23:01 J -29416276.78 -29416276.54 -29416276.27 0.0140 0.0034
 Uranus -85250-08-21 23:01 J -29415906.79 -29415906.54 -29415906.27 0.0139 0.0024
 Uranus -85249-08-25 22:04 J -29415536.84 -29415536.58 -29415536.32 0.0139 0.0013
 Saturn -85248-07-04 17:16 J -29415223.92 -29415223.78 -29415223.62 0.0281 0.0226
 Uranus -85248-08-30 19:54 J -29415166.93 -29415166.67 -29415166.40 0.0138 0.0003
 Saturn -85247-07-18 21:20 J -29414844.84 -29414844.61 -29414844.37 0.0284 0.0103
 Uranus -85247-09-04 16:32 J -29414797.07 -29414796.81 -29414796.55 0.0138 0.0009
 Saturn -85246-08-02 08:52 J -29414465.38 -29414465.13 -29414464.88 0.0286 0.0031
 Uranus -85246-09-09 11:59 J -29414427.26 -29414427.00 -29414426.74 0.0137 0.0019
 Saturn -85245-08-16 01:54 J -29414085.62 -29414085.42 -29414085.21 0.0287 0.0166
 Uranus -85245-09-13 06:28 J -29414057.48 -29414057.23 -29414056.97 0.0136 0.0029
 Uranus -85244-09-17 23:59 J -29413687.75 -29413687.50 -29413687.25 0.0136 0.0038

Uranus	-85243-09-22 16:04 J	-29413318.06	-29413317.83	-29413317.57	0.0135	0.0048
Uranus	-85242-09-27 07:25 J	-29412948.42	-29412948.19	-29412947.95	0.0135	0.0056
Uranus	-85241-09-30 21:35 J	-29412578.82	-29412578.60	-29412578.36	0.0134	0.0065
Uranus	-85240-10-05 11:01 J	-29412209.25	-29412209.04	-29412208.82	0.0134	0.0072
Uranus	-85239-10-09 23:01 J	-29411839.74	-29411839.54	-29411839.32	0.0134	0.0080
Uranus	-85238-10-14 09:49 J	-29411470.26	-29411470.09	-29411469.87	0.0133	0.0088
Uranus	-85237-10-17 20:23 J	-29411100.82	-29411100.65	-29411100.46	0.0133	0.0093
Uranus	-85236-10-22 05:16 J	-29410731.43	-29410731.28	-29410731.09	0.0133	0.0100
Uranus	-85235-10-26 13:40 J	-29410362.07	-29410361.93	-29410361.76	0.0132	0.0105
Saturn	-85234-01-01 15:35 J	-29410294.89	-29410294.85	-29410294.77	0.0279	0.0270
Uranus	-85234-10-30 21:06 J	-29409992.75	-29409992.62	-29409992.46	0.0132	0.0109
Saturn	-85233-01-13 23:16 J	-29409917.72	-29409917.53	-29409917.33	0.0277	0.0159
Uranus	-85233-11-03 03:49 J	-29409623.45	-29409623.34	-29409623.19	0.0132	0.0113
Saturn	-85232-01-24 23:59 J	-29409540.74	-29409540.50	-29409540.27	0.0275	0.0046
Uranus	-85232-11-07 09:49 J	-29409254.19	-29409254.09	-29409253.96	0.0132	0.0117
Saturn	-85231-02-05 19:11 J	-29409163.92	-29409163.70	-29409163.46	0.0274	0.0066
Uranus	-85231-11-11 15:20 J	-29408884.95	-29408884.86	-29408884.75	0.0132	0.0120
Saturn	-85230-02-17 10:47 J	-29408787.23	-29408787.05	-29408786.86	0.0272	0.0171
Uranus	-85230-11-15 19:54 J	-29408515.74	-29408515.67	-29408515.56	0.0131	0.0123
Saturn	-85229-02-29 00:13 J	-29408410.52	-29408410.49	-29408410.45	0.0271	0.0267
Mars	-85229-06-12 11:16 J	-29408306.12	-29408306.03	-29408305.93	0.1610	0.1376
Jupiter	-85229-09-23 11:44 J	-29408203.15	-29408203.01	-29408202.86	0.0508	0.0400
Uranus	-85229-11-19 00:28 J	-29408146.54	-29408146.48	-29408146.39	0.0131	0.0125
Uranus	-85228-11-23 04:04 J	-29407777.38	-29407777.33	-29407777.24	0.0131	0.0127
Uranus	-85227-11-27 07:40 J	-29407408.22	-29407408.18	-29407408.10	0.0131	0.0128
Uranus	-85226-12-01 10:47 J	-29407039.09	-29407039.05	-29407038.97	0.0131	0.0128
Uranus	-85225-12-04 13:40 J	-29406669.97	-29406669.93	-29406669.85	0.0132	0.0128
Uranus	-85224-12-08 16:04 J	-29406300.88	-29406300.83	-29406300.75	0.0132	0.0127
Jupiter	-85223-03-19 01:11 J	-29406200.53	-29406200.45	-29406200.36	0.0520	0.0482
Uranus	-85223-12-12 18:13 J	-29405931.80	-29405931.74	-29405931.65	0.0132	0.0125

Mars -85223-12-19 15:06 J -29405924.90 -29405924.87 -29405924.83 0.1927 0.1893
 Uranus -85222-12-16 20:08 J -29405562.73 -29405562.66 -29405562.56 0.0132 0.0123
 Uranus -85221-12-19 22:18 J -29405193.66 -29405193.57 -29405193.46 0.0132 0.0121
 Uranus -85220-12-23 23:59 J -29404824.60 -29404824.50 -29404824.38 0.0133 0.0118
 Saturn -85219-06-29 06:13 J -29404637.29 -29404637.24 -29404637.18 0.0280 0.0273
 Uranus -85219-12-28 01:40 J -29404455.53 -29404455.43 -29404455.29 0.0133 0.0115
 Saturn -85218-07-13 06:56 J -29404258.41 -29404258.21 -29404257.99 0.0283 0.0157
 Uranus -85217-01-01 04:18 J -29404086.46 -29404086.32 -29404086.19 0.0133 0.0111
 Saturn -85217-07-26 16:04 J -29403879.08 -29403878.83 -29403878.57 0.0285 0.0027
 Jupiter -85217-09-28 06:13 J -29403815.47 -29403815.24 -29403815.01 0.0510 0.0124
 Uranus -85216-01-04 05:59 J -29403717.37 -29403717.25 -29403717.08 0.0133 0.0107
 Saturn -85216-08-10 07:54 J -29403499.40 -29403499.17 -29403498.93 0.0287 0.0110
 Uranus -85215-01-08 08:52 J -29403348.28 -29403348.13 -29403347.96 0.0134 0.0101
 Saturn -85215-08-25 04:04 J -29403119.46 -29403119.33 -29403119.19 0.0288 0.0244
 Uranus -85214-01-12 11:59 J -29402979.17 -29402979.00 -29402978.83 0.0134 0.0096
 Uranus -85213-01-16 15:06 J -29402610.04 -29402609.87 -29402609.67 0.0135 0.0090
 Neptune -85213-09-24 07:40 J -29402358.18 -29402358.18 -29402358.14 0.0088 0.0088
 Uranus -85212-01-19 18:56 J -29402240.89 -29402240.71 -29402240.50 0.0135 0.0083
 Neptune -85212-09-26 21:49 J -29401990.77 -29401990.59 -29401990.40 0.0088 0.0063
 Uranus -85211-01-23 23:16 J -29401871.73 -29401871.53 -29401871.32 0.0136 0.0076
 Jupiter -85211-03-23 14:23 J -29401813.11 -29401812.90 -29401812.69 0.0519 0.0202
 Neptune -85211-09-29 11:30 J -29401623.25 -29401623.02 -29401622.77 0.0088 0.0038
 Uranus -85210-01-28 04:04 J -29401502.53 -29401502.33 -29401502.11 0.0136 0.0068
 Neptune -85210-10-02 01:11 J -29401255.70 -29401255.45 -29401255.18 0.0088 0.0012
 Uranus -85209-02-01 09:35 J -29401133.32 -29401133.10 -29401132.88 0.0137 0.0060
 Neptune -85209-10-03 14:52 J -29400888.13 -29400887.88 -29400887.61 0.0088 0.0013
 Uranus -85208-02-04 15:35 J -29400764.08 -29400763.85 -29400763.62 0.0137 0.0052
 Neptune -85208-10-06 04:18 J -29400520.54 -29400520.32 -29400520.07 0.0088 0.0038
 Uranus -85207-02-08 22:04 J -29400394.81 -29400394.58 -29400394.34 0.0138 0.0043
 Neptune -85207-10-08 17:16 J -29400152.94 -29400152.78 -29400152.58 0.0088 0.0064

Uranus -85206-02-13 05:30 J -29400025.50 -29400025.27 -29400025.03 0.0138 0.0034
 Neptune -85206-10-11 07:11 J -29399785.20 -29399785.20 -29399785.20 0.0088 0.0088
 Uranus -85205-02-17 13:40 J -29399656.17 -29399655.93 -29399655.68 0.0139 0.0024
 Jupiter -85205-10-03 03:20 J -29399427.58 -29399427.36 -29399427.13 0.0512 0.0157
 Saturn -85204-01-08 06:42 J -29399330.37 -29399330.22 -29399330.05 0.0278 0.0205
 Uranus -85204-02-20 23:01 J -29399286.78 -29399286.54 -29399286.29 0.0140 0.0014
 Saturn -85203-01-20 09:35 J -29398953.32 -29398953.10 -29398952.87 0.0276 0.0093
 Uranus -85203-02-25 09:06 J -29398917.37 -29398917.12 -29398916.87 0.0140 0.0004
 Saturn -85202-02-01 06:42 J -29398576.45 -29398576.22 -29398575.98 0.0274 0.0019
 Uranus -85202-03-01 20:23 J -29398547.90 -29398547.65 -29398547.40 0.0141 0.0006
 Pluto -85201-01-07 00:28 J -29398236.72 -29398236.48 -29398236.22 0.0078 0.0013
 Saturn -85201-02-12 23:16 J -29398199.74 -29398199.53 -29398199.31 0.0272 0.0126
 Uranus -85201-03-05 08:37 J -29398178.38 -29398178.14 -29398177.89 0.0141 0.0017
 Saturn -85200-02-23 12:42 J -29397823.09 -29397822.97 -29397822.83 0.0271 0.0225
 Uranus -85200-03-09 22:04 J -29397808.82 -29397808.58 -29397808.33 0.0142 0.0027
 Uranus -85199-03-14 12:28 J -29397439.21 -29397438.98 -29397438.73 0.0142 0.0039
 Jupiter -85199-03-28 05:16 J -29397425.50 -29397425.28 -29397425.05 0.0516 0.0080
 Uranus -85198-03-19 04:18 J -29397069.54 -29397069.32 -29397069.08 0.0143 0.0049
 Uranus -85197-03-22 21:06 J -29396699.84 -29396699.62 -29396699.39 0.0144 0.0060
 Mars -85197-06-21 03:35 J -29396609.52 -29396609.35 -29396609.19 0.1625 0.0827
 Uranus -85196-03-27 14:52 J -29396330.08 -29396329.88 -29396329.65 0.0144 0.0070
 Uranus -85195-04-01 10:04 J -29395960.28 -29395960.08 -29395959.87 0.0145 0.0080
 Uranus -85194-04-06 06:28 J -29395590.42 -29395590.23 -29395590.03 0.0145 0.0090
 Uranus -85193-04-10 03:35 J -29395220.52 -29395220.35 -29395220.16 0.0146 0.0099
 Jupiter -85193-10-08 01:11 J -29395039.56 -29395039.45 -29395039.33 0.0514 0.0443
 Uranus -85192-04-15 02:08 J -29394850.57 -29394850.41 -29394850.23 0.0146 0.0107
 Uranus -85191-04-20 01:25 J -29394480.57 -29394480.44 -29394480.26 0.0146 0.0116
 Uranus -85190-04-25 02:23 J -29394110.52 -29394110.40 -29394110.24 0.0147 0.0123
 Uranus -85189-04-29 04:04 J -29393740.43 -29393740.33 -29393740.19 0.0147 0.0129
 Saturn -85189-07-06 08:23 J -29393672.31 -29393672.15 -29393671.97 0.0282 0.0206

Uranus	-85188-05-04 07:11 J	-29393370.29	-29393370.20	-29393370.09	0.0147	0.0134
Saturn	-85188-07-20 13:11 J	-29393293.19	-29393292.95	-29393292.70	0.0284	0.0082
Jupiter	-85187-04-01 19:25 J	-29393037.85	-29393037.69	-29393037.52	0.0514	0.0354
Uranus	-85187-05-09 11:01 J	-29393000.10	-29393000.04	-29392999.94	0.0147	0.0139
Saturn	-85187-08-04 01:11 J	-29392913.69	-29392913.45	-29392913.19	0.0286	0.0052
Uranus	-85186-05-14 15:49 J	-29392629.89	-29392629.84	-29392629.76	0.0147	0.0143
Saturn	-85186-08-18 18:42 J	-29392533.90	-29392533.72	-29392533.52	0.0287	0.0186
Uranus	-85185-05-18 21:06 J	-29392259.63	-29392259.62	-29392259.55	0.0147	0.0146
Uranus	-85184-05-24 03:35 J	-29391889.36	-29391889.35	-29391889.31	0.0147	0.0146
Uranus	-85183-05-29 10:18 J	-29391519.08	-29391519.07	-29391519.03	0.0147	0.0146
Uranus	-85182-06-03 17:30 J	-29391148.80	-29391148.77	-29391148.73	0.0147	0.0145
Uranus	-85181-06-08 00:56 J	-29390778.51	-29390778.46	-29390778.40	0.0147	0.0143
Uranus	-85180-06-13 08:23 J	-29390408.21	-29390408.15	-29390408.06	0.0147	0.0140
Uranus	-85179-06-18 16:04 J	-29390037.91	-29390037.83	-29390037.72	0.0146	0.0136
Uranus	-85178-06-23 23:30 J	-29389667.62	-29389667.52	-29389667.39	0.0146	0.0130
Uranus	-85177-06-28 06:56 J	-29389297.33	-29389297.21	-29389297.06	0.0145	0.0124
Uranus	-85176-07-03 14:23 J	-29388927.04	-29388926.90	-29388926.74	0.0145	0.0117
Saturn	-85175-01-03 01:54 J	-29388743.51	-29388743.42	-29388743.31	0.0279	0.0252
Uranus	-85175-07-08 21:06 J	-29388556.77	-29388556.62	-29388556.43	0.0145	0.0110
Saturn	-85174-01-15 08:08 J	-29388366.36	-29388366.16	-29388365.95	0.0277	0.0142
Uranus	-85174-07-14 03:49 J	-29388186.51	-29388186.34	-29388186.14	0.0144	0.0101
Saturn	-85173-01-27 08:23 J	-29387989.39	-29387989.15	-29387988.92	0.0275	0.0029
Uranus	-85173-07-18 10:04 J	-29387816.27	-29387816.08	-29387815.87	0.0143	0.0092
Saturn	-85172-02-07 03:06 J	-29387612.59	-29387612.37	-29387612.14	0.0273	0.0082
Uranus	-85172-07-23 15:35 J	-29387446.04	-29387445.85	-29387445.62	0.0143	0.0082
Saturn	-85171-02-18 17:59 J	-29387235.91	-29387235.75	-29387235.56	0.0272	0.0186
Uranus	-85171-07-28 20:37 J	-29387075.86	-29387075.64	-29387075.41	0.0142	0.0072
Uranus	-85170-08-03 00:42 J	-29386705.70	-29386705.47	-29386705.23	0.0142	0.0061
Uranus	-85169-08-07 03:49 J	-29386335.58	-29386335.34	-29386335.09	0.0141	0.0050
Uranus	-85168-08-12 05:59 J	-29385965.50	-29385965.25	-29385964.99	0.0141	0.0039

Uranus	-85167-08-17 06:56 J	-29385595.47	-29385595.21	-29385594.95	0.0140	0.0028
Uranus	-85166-08-22 06:56 J	-29385225.47	-29385225.21	-29385224.95	0.0139	0.0018
Uranus	-85165-08-26 05:44 J	-29384855.52	-29384855.26	-29384854.99	0.0139	0.0007
Uranus	-85164-08-31 03:35 J	-29384485.61	-29384485.35	-29384485.08	0.0138	0.0004
Uranus	-85163-09-05 00:13 J	-29384115.75	-29384115.49	-29384115.23	0.0138	0.0014
Uranus	-85162-09-09 19:40 J	-29383745.93	-29383745.68	-29383745.42	0.0137	0.0024
Uranus	-85161-09-13 14:08 J	-29383376.15	-29383375.91	-29383375.65	0.0136	0.0034
Saturn	-85160-06-30 18:42 J	-29383085.81	-29383085.72	-29383085.61	0.0281	0.0256
Uranus	-85160-09-18 07:40 J	-29383006.42	-29383006.18	-29383005.92	0.0136	0.0044
Saturn	-85159-07-14 20:23 J	-29382706.86	-29382706.65	-29382706.42	0.0283	0.0138
Uranus	-85159-09-22 23:59 J	-29382636.73	-29382636.50	-29382636.25	0.0135	0.0053
Saturn	-85158-07-29 06:28 J	-29382327.48	-29382327.23	-29382326.98	0.0285	0.0007
Uranus	-85158-09-27 15:35 J	-29382267.08	-29382266.85	-29382266.62	0.0135	0.0061
Saturn	-85157-08-11 22:47 J	-29381947.77	-29381947.55	-29381947.32	0.0287	0.0129
Uranus	-85157-10-01 05:44 J	-29381897.47	-29381897.26	-29381897.03	0.0134	0.0070
Saturn	-85156-08-26 19:25 J	-29381567.79	-29381567.69	-29381567.58	0.0289	0.0261
Uranus	-85156-10-05 19:11 J	-29381527.91	-29381527.70	-29381527.49	0.0134	0.0077
Uranus	-85155-10-10 06:56 J	-29381158.39	-29381158.21	-29381157.99	0.0134	0.0085
Uranus	-85154-10-14 17:59 J	-29380788.92	-29380788.75	-29380788.54	0.0133	0.0092
Uranus	-85153-10-18 04:32 J	-29380419.48	-29380419.31	-29380419.13	0.0133	0.0097
Uranus	-85152-10-22 13:25 J	-29380050.09	-29380049.94	-29380049.76	0.0133	0.0103
Uranus	-85151-10-26 21:35 J	-29379680.73	-29379680.60	-29379680.44	0.0132	0.0108
Mars	-85150-06-15 15:35 J	-29379449.02	-29379448.85	-29379448.68	0.1613	0.0740
Uranus	-85150-10-31 05:01 J	-29379311.41	-29379311.29	-29379311.14	0.0132	0.0112
Uranus	-85149-11-03 11:44 J	-29378942.11	-29378942.01	-29378941.87	0.0132	0.0116
Uranus	-85148-11-07 18:13 J	-29378572.85	-29378572.74	-29378572.63	0.0132	0.0119
Uranus	-85147-11-11 23:30 J	-29378203.60	-29378203.52	-29378203.42	0.0132	0.0122
Jupiter	-85146-09-23 08:37 J	-29377888.25	-29377888.14	-29377888.02	0.0507	0.0441
Uranus	-85146-11-16 04:04 J	-29377834.39	-29377834.33	-29377834.23	0.0131	0.0125
Saturn	-85145-01-10 16:47 J	-29377778.97	-29377778.80	-29377778.61	0.0278	0.0187

Uranus -85145-11-19 08:23 J -29377465.19 -29377465.15 -29377465.05 0.0131 0.0127
 Saturn -85144-01-21 18:56 J -29377401.93 -29377401.71 -29377401.48 0.0276 0.0076
 Uranus -85144-11-23 12:28 J -29377096.02 -29377095.98 -29377095.90 0.0131 0.0128
 Mars -85144-12-23 00:56 J -29377066.65 -29377066.46 -29377066.27 0.1922 0.0343
 Saturn -85143-02-02 15:20 J -29377025.09 -29377024.86 -29377024.62 0.0274 0.0035
 Uranus -85143-11-27 16:18 J -29376726.87 -29376726.82 -29376726.76 0.0131 0.0128
 Saturn -85142-02-14 07:11 J -29376648.39 -29376648.20 -29376647.98 0.0272 0.0141
 Uranus -85142-12-01 19:25 J -29376357.74 -29376357.69 -29376357.63 0.0131 0.0128
 Saturn -85141-02-25 20:23 J -29376271.75 -29376271.65 -29376271.53 0.0271 0.0239
 Uranus -85141-12-04 21:35 J -29375988.63 -29375988.60 -29375988.51 0.0131 0.0128
 Jupiter -85140-03-18 03:49 J -29375885.35 -29375885.34 -29375885.31 0.0522 0.0519
 Uranus -85140-12-09 00:13 J -29375619.55 -29375619.49 -29375619.41 0.0132 0.0126
 Uranus -85139-12-13 02:37 J -29375250.47 -29375250.39 -29375250.31 0.0132 0.0124
 Uranus -85138-12-17 04:04 J -29374881.40 -29374881.33 -29374881.22 0.0132 0.0122
 Uranus -85137-12-20 06:13 J -29374512.33 -29374512.24 -29374512.12 0.0132 0.0119
 Uranus -85136-12-24 07:40 J -29374143.27 -29374143.18 -29374143.04 0.0132 0.0117
 Uranus -85135-12-28 09:49 J -29373774.20 -29373774.09 -29373773.94 0.0133 0.0113
 Jupiter -85134-09-28 04:47 J -29373500.52 -29373500.30 -29373500.07 0.0509 0.0167
 Uranus -85133-01-01 11:59 J -29373405.13 -29373405.00 -29373404.84 0.0133 0.0108
 Uranus -85132-01-04 14:23 J -29373036.04 -29373035.90 -29373035.73 0.0133 0.0104
 Uranus -85131-01-08 17:01 J -29372666.95 -29372666.79 -29372666.62 0.0134 0.0098
 Uranus -85130-01-12 19:54 J -29372297.84 -29372297.67 -29372297.48 0.0134 0.0092
 Neptune -85130-03-21 22:04 J -29372229.67 -29372229.58 -29372229.50 0.0089 0.0084
 Saturn -85130-07-08 22:18 J -29372120.75 -29372120.57 -29372120.38 0.0282 0.0187
 Uranus -85129-01-16 23:30 J -29371928.71 -29371928.52 -29371928.33 0.0135 0.0086
 Neptune -85129-03-23 06:56 J -29371862.38 -29371862.21 -29371862.00 0.0089 0.0059
 Saturn -85129-07-22 04:04 J -29371741.58 -29371741.33 -29371741.08 0.0284 0.0062
 Uranus -85128-01-20 02:52 J -29371559.56 -29371559.38 -29371559.16 0.0135 0.0079
 Jupiter -85128-03-22 20:08 J -29371497.86 -29371497.66 -29371497.46 0.0519 0.0234
 Neptune -85128-03-25 16:32 J -29371495.02 -29371494.81 -29371494.56 0.0089 0.0035

Saturn -85128-08-05 17:01 J -29371362.04 -29371361.79 -29371361.55 0.0286 0.0071
 Uranus -85127-01-24 07:11 J -29371190.40 -29371190.20 -29371189.98 0.0136 0.0072
 Neptune -85127-03-28 02:37 J -29371127.64 -29371127.39 -29371127.14 0.0089 0.0010
 Saturn -85127-08-20 11:01 J -29370982.21 -29370982.04 -29370981.86 0.0288 0.0205
 Uranus -85126-01-28 11:44 J -29370821.22 -29370821.01 -29370820.78 0.0136 0.0064
 Neptune -85126-03-30 12:13 J -29370760.23 -29370759.99 -29370759.73 0.0089 0.0015
 Uranus -85125-02-01 16:47 J -29370452.01 -29370451.80 -29370451.56 0.0137 0.0056
 Neptune -85125-03-31 22:04 J -29370392.80 -29370392.58 -29370392.35 0.0089 0.0039
 Uranus -85124-02-04 22:47 J -29370082.77 -29370082.55 -29370082.31 0.0137 0.0047
 Neptune -85124-04-03 07:40 J -29370025.34 -29370025.18 -29370024.99 0.0089 0.0064
 Uranus -85123-02-09 05:16 J -29369713.51 -29369713.28 -29369713.04 0.0138 0.0038
 Neptune -85123-04-05 17:44 J -29369657.76 -29369657.76 -29369657.74 0.0089 0.0089
 Uranus -85122-02-13 12:56 J -29369344.20 -29369343.96 -29369343.72 0.0138 0.0029
 Jupiter -85122-10-03 04:18 J -29369112.55 -29369112.32 -29369112.08 0.0512 0.0120
 Uranus -85121-02-17 21:06 J -29368974.87 -29368974.62 -29368974.38 0.0139 0.0019
 Uranus -85120-02-21 06:13 J -29368605.49 -29368605.24 -29368605.00 0.0140 0.0009
 Uranus -85119-02-25 16:18 J -29368236.07 -29368235.82 -29368235.57 0.0140 0.0001
 Uranus -85118-03-02 03:35 J -29367866.59 -29367866.35 -29367866.10 0.0141 0.0011
 Mars -85118-06-24 10:04 J -29367752.15 -29367752.08 -29367752.02 0.1628 0.1522
 Uranus -85117-03-05 15:49 J -29367497.08 -29367496.84 -29367496.59 0.0141 0.0022
 Saturn -85116-01-04 11:30 J -29367192.13 -29367192.02 -29367191.88 0.0279 0.0236
 Uranus -85116-03-10 05:16 J -29367127.51 -29367127.28 -29367127.03 0.0142 0.0033
 Jupiter -85116-03-27 08:37 J -29367110.37 -29367110.14 -29367109.92 0.0516 0.0041
 Saturn -85115-01-16 17:01 J -29366815.00 -29366814.79 -29366814.57 0.0277 0.0125
 Uranus -85115-03-14 19:40 J -29366757.91 -29366757.68 -29366757.44 0.0142 0.0044
 Saturn -85114-01-28 16:18 J -29366438.06 -29366437.82 -29366437.58 0.0275 0.0012
 Uranus -85114-03-19 11:16 J -29366388.25 -29366388.03 -29366387.79 0.0143 0.0054
 Saturn -85113-02-09 10:18 J -29366061.29 -29366061.07 -29366060.84 0.0273 0.0097
 Uranus -85113-03-23 03:49 J -29366018.55 -29366018.34 -29366018.11 0.0144 0.0065
 Saturn -85112-02-20 00:42 J -29365684.62 -29365684.47 -29365684.30 0.0272 0.0199

Uranus	-85112-03-27 21:35 J	-29365648.80	-29365648.60	-29365648.37	0.0144	0.0075
Uranus	-85111-04-01 16:32 J	-29365279.00	-29365278.81	-29365278.59	0.0145	0.0085
Uranus	-85110-04-06 12:42 J	-29364909.14	-29364908.97	-29364908.76	0.0145	0.0094
Jupiter	-85110-10-08 03:49 J	-29364724.48	-29364724.34	-29364724.19	0.0514	0.0408
Uranus	-85109-04-10 10:04 J	-29364539.25	-29364539.08	-29364538.90	0.0146	0.0103
Uranus	-85108-04-15 08:23 J	-29364169.29	-29364169.15	-29364168.97	0.0146	0.0111
Uranus	-85107-04-20 08:08 J	-29363799.30	-29363799.16	-29363799.00	0.0146	0.0118
Uranus	-85106-04-25 08:37 J	-29363429.25	-29363429.14	-29363428.99	0.0147	0.0126
Uranus	-85105-04-29 11:01 J	-29363059.15	-29363059.04	-29363058.93	0.0147	0.0131
Jupiter	-85104-03-31 20:23 J	-29362722.82	-29362722.65	-29362722.46	0.0514	0.0310
Uranus	-85104-05-04 13:25 J	-29362689.01	-29362688.94	-29362688.83	0.0147	0.0137
Uranus	-85103-05-09 17:44 J	-29362318.83	-29362318.76	-29362318.68	0.0147	0.0141
Uranus	-85102-05-14 22:04 J	-29361948.61	-29361948.58	-29361948.51	0.0147	0.0144
Uranus	-85101-05-19 04:04 J	-29361578.36	-29361578.33	-29361578.30	0.0147	0.0146
Saturn	-85101-07-02 05:59 J	-29361534.38	-29361534.25	-29361534.12	0.0281	0.0238
Uranus	-85100-05-24 10:04 J	-29361208.10	-29361208.08	-29361208.05	0.0147	0.0146
Saturn	-85100-07-16 08:23 J	-29361155.37	-29361155.15	-29361154.91	0.0283	0.0119
Uranus	-85099-05-29 16:32 J	-29360837.82	-29360837.81	-29360837.77	0.0147	0.0147
Saturn	-85099-07-30 19:11 J	-29360775.95	-29360775.70	-29360775.45	0.0285	0.0012
Uranus	-85098-06-03 23:16 J	-29360467.55	-29360467.53	-29360467.46	0.0147	0.0145
Saturn	-85098-08-14 11:44 J	-29360396.22	-29360396.01	-29360395.78	0.0287	0.0147
Uranus	-85097-06-08 06:56 J	-29360097.26	-29360097.21	-29360097.13	0.0147	0.0142
Saturn	-85097-08-28 08:52 J	-29360016.18	-29360016.13	-29360016.05	0.0289	0.0277
Uranus	-85096-06-13 14:23 J	-29359726.96	-29359726.90	-29359726.80	0.0147	0.0139
Uranus	-85095-06-18 22:18 J	-29359356.66	-29359356.57	-29359356.46	0.0146	0.0134
Uranus	-85094-06-24 05:44 J	-29358986.37	-29358986.26	-29358986.12	0.0146	0.0128
Uranus	-85093-06-28 13:25 J	-29358616.07	-29358615.94	-29358615.78	0.0146	0.0122
Uranus	-85092-07-03 20:52 J	-29358245.77	-29358245.63	-29358245.45	0.0145	0.0114
Uranus	-85091-07-09 04:18 J	-29357875.49	-29357875.32	-29357875.14	0.0145	0.0106
Uranus	-85090-07-14 10:32 J	-29357505.23	-29357505.06	-29357504.84	0.0144	0.0097

Uranus	-85089-07-18 17:01 J	-29357134.98	-29357134.79	-29357134.57	0.0144	0.0088
Uranus	-85088-07-23 23:01 J	-29356764.76	-29356764.54	-29356764.32	0.0143	0.0077
Saturn	-85088-12-30 17:16 J	-29356604.81	-29356604.78	-29356604.75	0.0280	0.0277
Uranus	-85087-07-29 03:49 J	-29356394.57	-29356394.34	-29356394.11	0.0142	0.0067
Saturn	-85086-01-12 01:25 J	-29356227.62	-29356227.44	-29356227.24	0.0277	0.0170
Uranus	-85086-08-03 07:54 J	-29356024.41	-29356024.17	-29356023.93	0.0142	0.0056
Saturn	-85085-01-24 03:06 J	-29355850.61	-29355850.37	-29355850.14	0.0275	0.0059
Uranus	-85085-08-07 10:32 J	-29355654.29	-29355654.06	-29355653.80	0.0141	0.0046
Saturn	-85084-02-03 22:47 J	-29355473.79	-29355473.55	-29355473.32	0.0273	0.0051
Uranus	-85084-08-12 12:56 J	-29355284.21	-29355283.96	-29355283.70	0.0141	0.0034
Saturn	-85083-02-15 14:08 J	-29355097.10	-29355096.91	-29355096.71	0.0272	0.0155
Uranus	-85083-08-17 13:54 J	-29354914.18	-29354913.92	-29354913.66	0.0140	0.0023
Saturn	-85082-02-27 03:06 J	-29354720.45	-29354720.37	-29354720.28	0.0270	0.0251
Uranus	-85082-08-22 13:54 J	-29354544.18	-29354543.92	-29354543.66	0.0139	0.0012
Uranus	-85081-08-26 12:42 J	-29354174.23	-29354173.97	-29354173.70	0.0139	0.0002
Uranus	-85080-08-31 10:47 J	-29353804.32	-29353804.05	-29353803.79	0.0138	0.0009
Uranus	-85079-09-05 07:11 J	-29353434.46	-29353434.20	-29353433.94	0.0138	0.0019
Uranus	-85078-09-10 02:52 J	-29353064.63	-29353064.38	-29353064.12	0.0137	0.0030
Uranus	-85077-09-13 21:20 J	-29352694.85	-29352694.61	-29352694.34	0.0136	0.0040
Uranus	-85076-09-18 14:52 J	-29352325.11	-29352324.88	-29352324.62	0.0136	0.0049
Uranus	-85075-09-23 07:25 J	-29351955.42	-29351955.19	-29351954.94	0.0135	0.0058
Uranus	-85074-09-27 23:01 J	-29351585.76	-29351585.54	-29351585.31	0.0135	0.0066
Uranus	-85073-10-01 13:11 J	-29351216.15	-29351215.95	-29351215.72	0.0134	0.0075
Uranus	-85072-10-06 02:23 J	-29350846.59	-29350846.40	-29350846.18	0.0134	0.0082
Mars	-85071-06-17 20:08 J	-29350591.85	-29350591.66	-29350591.47	0.1615	0.0082
Saturn	-85071-07-10 09:49 J	-29350569.28	-29350569.09	-29350568.88	0.0282	0.0169
Uranus	-85071-10-10 14:23 J	-29350477.08	-29350476.90	-29350476.69	0.0134	0.0089
Saturn	-85070-07-24 16:18 J	-29350190.07	-29350189.82	-29350189.57	0.0284	0.0043
Uranus	-85070-10-15 01:25 J	-29350107.60	-29350107.44	-29350107.24	0.0133	0.0095
Saturn	-85069-08-07 05:44 J	-29349810.49	-29349810.26	-29349810.01	0.0286	0.0091

Uranus	-85069-10-18 11:30 J	-29349738.17	-29349738.02	-29349737.83	0.0133	0.0101
Saturn	-85068-08-22 00:42 J	-29349430.62	-29349430.47	-29349430.31	0.0288	0.0222
Uranus	-85068-10-22 20:52 J	-29349368.78	-29349368.63	-29349368.47	0.0133	0.0106
Uranus	-85067-10-27 05:01 J	-29348999.42	-29348999.29	-29348999.14	0.0132	0.0111
Uranus	-85066-10-31 12:13 J	-29348630.09	-29348629.99	-29348629.84	0.0132	0.0116
Uranus	-85065-11-03 19:40 J	-29348260.79	-29348260.68	-29348260.57	0.0132	0.0118
Mars	-85065-12-26 09:20 J	-29348208.27	-29348208.11	-29348207.96	0.1917	0.1169
Uranus	-85064-11-08 01:11 J	-29347891.52	-29347891.45	-29347891.33	0.0132	0.0122
Jupiter	-85063-09-22 10:18 J	-29347573.15	-29347573.07	-29347572.99	0.0507	0.0475
Uranus	-85063-11-12 07:11 J	-29347522.28	-29347522.20	-29347522.11	0.0132	0.0124
Uranus	-85062-11-16 12:13 J	-29347153.06	-29347152.99	-29347152.91	0.0131	0.0126
Uranus	-85061-11-19 16:32 J	-29346783.85	-29346783.81	-29346783.73	0.0131	0.0127
Uranus	-85060-11-23 20:08 J	-29346414.69	-29346414.66	-29346414.58	0.0131	0.0129
Uranus	-85059-11-27 23:44 J	-29346045.54	-29346045.51	-29346045.44	0.0131	0.0129
Uranus	-85058-12-02 03:20 J	-29345676.41	-29345676.36	-29345676.30	0.0131	0.0128
Saturn	-85057-01-06 20:08 J	-29345640.80	-29345640.66	-29345640.51	0.0278	0.0218
Uranus	-85057-12-05 05:59 J	-29345307.31	-29345307.25	-29345307.19	0.0131	0.0127
Saturn	-85056-01-18 00:28 J	-29345263.69	-29345263.48	-29345263.25	0.0276	0.0108
Uranus	-85056-12-09 07:40 J	-29344938.23	-29344938.18	-29344938.08	0.0132	0.0126
Saturn	-85055-01-29 23:01 J	-29344886.78	-29344886.54	-29344886.30	0.0274	0.0004
Uranus	-85055-12-13 09:49 J	-29344569.15	-29344569.09	-29344568.98	0.0132	0.0124
Saturn	-85054-02-10 16:18 J	-29344510.03	-29344509.82	-29344509.60	0.0273	0.0111
Uranus	-85054-12-17 11:59 J	-29344200.08	-29344200.00	-29344199.89	0.0132	0.0121
Saturn	-85053-02-22 05:59 J	-29344133.38	-29344133.25	-29344133.09	0.0271	0.0212
Uranus	-85053-12-20 13:40 J	-29343831.02	-29343830.93	-29343830.79	0.0132	0.0118
Uranus	-85052-12-24 15:35 J	-29343461.95	-29343461.85	-29343461.71	0.0132	0.0115
Jupiter	-85051-09-27 08:23 J	-29343185.37	-29343185.15	-29343184.93	0.0509	0.0196
Uranus	-85051-12-28 17:30 J	-29343092.88	-29343092.77	-29343092.61	0.0133	0.0111
Uranus	-85049-01-01 19:54 J	-29342723.80	-29342723.67	-29342723.50	0.0133	0.0106
Uranus	-85048-01-04 22:32 J	-29342354.72	-29342354.56	-29342354.40	0.0133	0.0101

Neptune -85048-09-26 07:25 J -29342090.32 -29342090.19 -29342090.02 0.0088 0.0073
 Uranus -85047-01-09 01:11 J -29341985.62 -29341985.45 -29341985.27 0.0134 0.0095
 Neptune -85047-09-28 21:20 J -29341722.82 -29341722.61 -29341722.38 0.0088 0.0048
 Uranus -85046-01-13 04:04 J -29341616.50 -29341616.33 -29341616.13 0.0134 0.0089
 Neptune -85046-10-01 11:16 J -29341355.28 -29341355.03 -29341354.77 0.0088 0.0022
 Uranus -85045-01-17 07:11 J -29341247.38 -29341247.20 -29341246.99 0.0135 0.0083
 Jupiter -85045-03-21 22:47 J -29341182.74 -29341182.55 -29341182.35 0.0519 0.0273
 Neptune -85045-10-03 00:56 J -29340987.72 -29340987.46 -29340987.19 0.0088 0.0004
 Uranus -85044-01-20 11:01 J -29340878.23 -29340878.04 -29340877.83 0.0135 0.0075
 Neptune -85044-10-05 14:23 J -29340620.15 -29340619.90 -29340619.65 0.0088 0.0028
 Uranus -85043-01-24 14:52 J -29340509.08 -29340508.88 -29340508.65 0.0136 0.0068
 Neptune -85043-10-08 03:20 J -29340252.55 -29340252.36 -29340252.12 0.0088 0.0053
 Uranus -85042-01-28 19:40 J -29340139.90 -29340139.68 -29340139.45 0.0136 0.0060
 Pluto -85042-07-04 01:40 J -29339983.67 -29339983.43 -29339983.16 0.0067 0.0019
 Saturn -85042-07-04 13:54 J -29339983.06 -29339982.92 -29339982.75 0.0281 0.0222
 Neptune -85042-10-10 17:01 J -29339884.90 -29339884.79 -29339884.66 0.0088 0.0078
 Uranus -85041-02-02 00:56 J -29339770.69 -29339770.46 -29339770.23 0.0137 0.0051
 Saturn -85041-07-17 17:30 J -29339604.00 -29339603.77 -29339603.53 0.0283 0.0102
 Uranus -85040-02-05 06:28 J -29339401.46 -29339401.23 -29339400.99 0.0137 0.0043
 Saturn -85040-08-01 05:01 J -29339224.54 -29339224.29 -29339224.04 0.0286 0.0030
 Uranus -85039-02-09 12:56 J -29339032.19 -29339031.96 -29339031.71 0.0138 0.0034
 Saturn -85039-08-15 22:18 J -29338844.77 -29338844.57 -29338844.36 0.0287 0.0163
 Jupiter -85039-10-02 05:01 J -29338797.52 -29338797.29 -29338797.05 0.0511 0.0085
 Uranus -85038-02-13 20:23 J -29338662.88 -29338662.65 -29338662.40 0.0138 0.0024
 Uranus -85037-02-18 04:32 J -29338293.55 -29338293.31 -29338293.06 0.0139 0.0015
 Uranus -85036-02-21 13:54 J -29337924.17 -29337923.92 -29337923.67 0.0139 0.0004
 Uranus -85035-02-25 23:59 J -29337554.75 -29337554.50 -29337554.25 0.0140 0.0006
 Uranus -85034-03-02 11:16 J -29337185.27 -29337185.03 -29337184.78 0.0141 0.0017
 Uranus -85033-03-05 23:30 J -29336815.76 -29336815.52 -29336815.28 0.0141 0.0027
 Jupiter -85033-03-26 10:18 J -29336795.30 -29336795.07 -29336794.84 0.0518 0.0004

Uranus	-85032-03-10 12:42 J	-29336446.20	-29336445.97	-29336445.73	0.0142	0.0038
Uranus	-85031-03-15 03:06 J	-29336076.60	-29336076.37	-29336076.13	0.0142	0.0049
Uranus	-85030-03-19 18:28 J	-29335706.94	-29335706.73	-29335706.49	0.0143	0.0059
Uranus	-85029-03-23 10:47 J	-29335337.25	-29335337.05	-29335336.82	0.0144	0.0070
Saturn	-85028-01-01 01:25 J	-29335053.52	-29335053.44	-29335053.35	0.0279	0.0260
Uranus	-85028-03-28 04:32 J	-29334967.50	-29334967.31	-29334967.09	0.0144	0.0080
Saturn	-85027-01-13 08:37 J	-29334676.33	-29334676.14	-29334675.93	0.0277	0.0153
Uranus	-85027-04-01 23:30 J	-29334597.70	-29334597.52	-29334597.31	0.0145	0.0089
Jupiter	-85027-10-07 02:52 J	-29334409.54	-29334409.38	-29334409.21	0.0513	0.0368
Saturn	-85026-01-25 09:35 J	-29334299.34	-29334299.10	-29334298.87	0.0275	0.0042
Uranus	-85026-04-06 19:25 J	-29334227.85	-29334227.69	-29334227.49	0.0145	0.0098
Saturn	-85025-02-06 04:32 J	-29333922.54	-29333922.31	-29333922.07	0.0273	0.0066
Uranus	-85025-04-10 16:32 J	-29333857.96	-29333857.81	-29333857.62	0.0146	0.0107
Saturn	-85024-02-16 19:25 J	-29333545.87	-29333545.69	-29333545.50	0.0272	0.0169
Uranus	-85024-04-15 15:20 J	-29333488.01	-29333487.86	-29333487.70	0.0146	0.0114
Mars	-85024-06-11 12:56 J	-29333431.00	-29333430.96	-29333430.91	0.1605	0.1555
Saturn	-85023-02-28 08:08 J	-29333169.22	-29333169.16	-29333169.11	0.0270	0.0262
Uranus	-85023-04-20 14:52 J	-29333118.01	-29333117.88	-29333117.74	0.0146	0.0122
Uranus	-85022-04-25 15:20 J	-29332747.96	-29332747.86	-29332747.72	0.0147	0.0129
Jupiter	-85021-03-31 00:42 J	-29332407.66	-29332407.47	-29332407.28	0.0516	0.0279
Uranus	-85021-04-29 17:16 J	-29332377.86	-29332377.78	-29332377.66	0.0147	0.0134
Uranus	-85020-05-04 20:37 J	-29332007.72	-29332007.64	-29332007.55	0.0147	0.0138
Uranus	-85019-05-10 00:13 J	-29331637.54	-29331637.49	-29331637.42	0.0147	0.0142
Uranus	-85018-05-15 04:32 J	-29331267.33	-29331267.31	-29331267.25	0.0147	0.0145
Uranus	-85017-05-19 10:04 J	-29330897.09	-29330897.08	-29330897.04	0.0147	0.0147
Uranus	-85016-05-24 16:04 J	-29330526.83	-29330526.83	-29330526.80	0.0147	0.0147
Uranus	-85015-05-29 22:18 J	-29330156.57	-29330156.57	-29330156.51	0.0147	0.0147
Uranus	-85014-06-04 05:30 J	-29329786.30	-29329786.27	-29329786.21	0.0147	0.0144
Uranus	-85013-06-08 12:42 J	-29329416.02	-29329415.97	-29329415.88	0.0147	0.0141
Saturn	-85013-06-27 19:40 J	-29329396.75	-29329396.68	-29329396.60	0.0280	0.0266

Uranus	-85012-06-13 20:08 J	-29329045.73	-29329045.66	-29329045.55	0.0147	0.0137
Saturn	-85012-07-11 18:42 J	-29329017.93	-29329017.72	-29329017.50	0.0283	0.0152
Uranus	-85011-06-19 04:04 J	-29328675.43	-29328675.33	-29328675.21	0.0146	0.0132
Saturn	-85011-07-26 02:08 J	-29328638.66	-29328638.41	-29328638.16	0.0285	0.0025
Uranus	-85010-06-24 11:44 J	-29328305.14	-29328305.01	-29328304.88	0.0146	0.0125
Saturn	-85010-08-09 16:18 J	-29328259.05	-29328258.82	-29328258.59	0.0287	0.0108
Uranus	-85009-06-28 19:11 J	-29327934.83	-29327934.70	-29327934.53	0.0145	0.0119
Saturn	-85009-08-23 11:30 J	-29327879.15	-29327879.02	-29327878.87	0.0288	0.0238
Uranus	-85008-07-04 02:37 J	-29327564.53	-29327564.39	-29327564.20	0.0145	0.0111
Uranus	-85007-07-09 10:18 J	-29327194.25	-29327194.07	-29327193.88	0.0145	0.0102
Uranus	-85006-07-14 16:47 J	-29326823.98	-29326823.80	-29326823.59	0.0144	0.0093
Uranus	-85005-07-18 23:16 J	-29326453.73	-29326453.53	-29326453.31	0.0144	0.0083
Uranus	-85004-07-24 04:47 J	-29326083.51	-29326083.30	-29326083.06	0.0143	0.0073
Uranus	-85003-07-29 09:49 J	-29325713.32	-29325713.09	-29325712.85	0.0142	0.0062
Uranus	-85002-08-03 13:40 J	-29325343.16	-29325342.93	-29325342.67	0.0142	0.0051
Uranus	-85001-08-07 17:01 J	-29324973.04	-29324972.79	-29324972.53	0.0141	0.0040

85TH MILLENNIUM BCE

This is a list of transits of Earth in the 85th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Uranus	-85000-08-12 19:11 J	-29324602.95	-29324602.70	-29324602.44	0.0141	0.0029		
Uranus	-84999-08-17 20:08 J	-29324232.92	-29324232.66	-29324232.40	0.0140	0.0018		
Saturn	-84998-01-08 02:37 J	-29324089.55	-29324089.39	-29324089.22	0.0278	0.0202		

Uranus	-84998-08-22 20:23 J	-29323862.91	-29323862.65	-29323862.39	0.0140	0.0007
Saturn	-84997-01-20 06:28 J	-29323712.45	-29323712.23	-29323712.00	0.0276	0.0092
Uranus	-84997-08-26 19:25 J	-29323492.96	-29323492.69	-29323492.43	0.0139	0.0004
Saturn	-84996-01-31 04:04 J	-29323335.57	-29323335.33	-29323335.10	0.0274	0.0019
Uranus	-84996-08-31 17:16 J	-29323123.04	-29323122.78	-29323122.52	0.0138	0.0015
Saturn	-84995-02-11 20:37 J	-29322958.85	-29322958.64	-29322958.43	0.0272	0.0124
Uranus	-84995-09-05 14:08 J	-29322753.17	-29322752.91	-29322752.65	0.0138	0.0025
Saturn	-84994-02-23 10:04 J	-29322582.21	-29322582.08	-29322581.94	0.0271	0.0223
Uranus	-84994-09-10 10:04 J	-29322383.33	-29322383.08	-29322382.82	0.0137	0.0035
Uranus	-84993-09-14 04:47 J	-29322013.54	-29322013.30	-29322013.05	0.0137	0.0045
Mars	-84992-06-20 00:56 J	-29321734.64	-29321734.46	-29321734.28	0.1618	0.0585
Uranus	-84992-09-18 22:32 J	-29321643.80	-29321643.56	-29321643.32	0.0136	0.0054
Uranus	-84991-09-23 14:52 J	-29321274.10	-29321273.88	-29321273.64	0.0135	0.0063
Uranus	-84990-09-28 06:28 J	-29320904.44	-29320904.23	-29320904.00	0.0135	0.0071
Uranus	-84989-10-01 20:52 J	-29320534.83	-29320534.63	-29320534.41	0.0135	0.0079
Uranus	-84988-10-06 09:49 J	-29320165.28	-29320165.09	-29320164.88	0.0134	0.0087
Uranus	-84987-10-10 21:49 J	-29319795.76	-29319795.59	-29319795.39	0.0134	0.0093
Uranus	-84986-10-15 08:52 J	-29319426.28	-29319426.13	-29319425.94	0.0133	0.0099
Uranus	-84985-10-18 18:56 J	-29319056.85	-29319056.71	-29319056.53	0.0133	0.0105
Uranus	-84984-10-23 04:04 J	-29318687.45	-29318687.33	-29318687.16	0.0133	0.0110
Saturn	-84983-07-05 19:11 J	-29318431.85	-29318431.70	-29318431.51	0.0281	0.0207
Uranus	-84983-10-27 13:11 J	-29318318.08	-29318317.95	-29318317.82	0.0132	0.0114
Saturn	-84982-07-19 23:44 J	-29318052.75	-29318052.51	-29318052.27	0.0284	0.0085
Uranus	-84982-10-31 20:52 J	-29317948.74	-29317948.63	-29317948.51	0.0132	0.0118
Saturn	-84981-08-02 11:30 J	-29317673.27	-29317673.02	-29317672.77	0.0286	0.0046
Uranus	-84981-11-04 03:35 J	-29317579.44	-29317579.35	-29317579.24	0.0132	0.0121
Saturn	-84980-08-17 05:30 J	-29317293.47	-29317293.27	-29317293.07	0.0288	0.0179
Jupiter	-84980-09-21 13:54 J	-29317257.96	-29317257.92	-29317257.88	0.0506	0.0497
Uranus	-84980-11-08 09:35 J	-29317210.16	-29317210.10	-29317210.00	0.0132	0.0124
Uranus	-84979-11-12 15:35 J	-29316840.91	-29316840.85	-29316840.77	0.0132	0.0126

Uranus	-84978-11-16 20:37 J	-29316471.68	-29316471.64	-29316471.57	0.0131	0.0128
Uranus	-84977-11-20 01:11 J	-29316102.49	-29316102.45	-29316102.39	0.0131	0.0129
Uranus	-84976-11-24 05:01 J	-29315733.31	-29315733.29	-29315733.23	0.0131	0.0129
Uranus	-84975-11-28 08:52 J	-29315364.17	-29315364.13	-29315364.08	0.0131	0.0129
Uranus	-84974-12-02 11:30 J	-29314995.05	-29314995.02	-29314994.95	0.0131	0.0128
Uranus	-84973-12-05 14:23 J	-29314625.95	-29314625.90	-29314625.82	0.0132	0.0127
Uranus	-84972-12-09 16:32 J	-29314256.87	-29314256.81	-29314256.72	0.0132	0.0125
Uranus	-84971-12-13 18:28 J	-29313887.79	-29313887.73	-29313887.61	0.0132	0.0123
Uranus	-84970-12-17 20:37 J	-29313518.72	-29313518.64	-29313518.51	0.0132	0.0120
Saturn	-84969-01-03 06:56 J	-29313502.31	-29313502.21	-29313502.08	0.0279	0.0243
Uranus	-84969-12-20 22:47 J	-29313149.65	-29313149.55	-29313149.42	0.0132	0.0117
Saturn	-84968-01-14 13:40 J	-29313125.13	-29313124.93	-29313124.71	0.0277	0.0135
Jupiter	-84968-09-26 11:01 J	-29312870.25	-29312870.04	-29312869.82	0.0508	0.0224
Uranus	-84968-12-25 00:42 J	-29312780.58	-29312780.47	-29312780.32	0.0132	0.0113
Saturn	-84967-01-26 13:54 J	-29312748.16	-29312747.92	-29312747.68	0.0275	0.0026
Uranus	-84967-12-29 02:37 J	-29312411.51	-29312411.39	-29312411.22	0.0133	0.0109
Saturn	-84966-02-07 08:23 J	-29312371.37	-29312371.15	-29312370.91	0.0273	0.0081
Uranus	-84965-01-02 05:16 J	-29312042.42	-29312042.28	-29312042.11	0.0133	0.0103
Saturn	-84965-02-18 22:47 J	-29311994.71	-29311994.55	-29311994.36	0.0271	0.0181
Neptune	-84965-03-22 20:23 J	-29311961.78	-29311961.65	-29311961.47	0.0089	0.0070
Uranus	-84964-01-05 07:25 J	-29311673.33	-29311673.19	-29311673.00	0.0133	0.0099
Neptune	-84964-03-25 05:59 J	-29311594.45	-29311594.25	-29311594.02	0.0089	0.0045
Uranus	-84963-01-09 10:32 J	-29311304.23	-29311304.06	-29311303.87	0.0134	0.0092
Neptune	-84963-03-27 15:49 J	-29311227.08	-29311226.84	-29311226.58	0.0089	0.0020
Uranus	-84962-01-13 13:25 J	-29310935.12	-29310934.94	-29310934.74	0.0134	0.0086
Jupiter	-84962-03-22 02:08 J	-29310867.58	-29310867.41	-29310867.22	0.0521	0.0307
Neptune	-84962-03-30 01:40 J	-29310859.68	-29310859.43	-29310859.18	0.0089	0.0004
Uranus	-84961-01-17 16:32 J	-29310565.99	-29310565.81	-29310565.59	0.0135	0.0079
Neptune	-84961-03-31 11:16 J	-29310492.26	-29310492.03	-29310491.78	0.0089	0.0029
Uranus	-84960-01-20 20:08 J	-29310196.86	-29310196.66	-29310196.44	0.0135	0.0071

Neptune -84960-04-02 21:20 J -29310124.81 -29310124.61 -29310124.40 0.0089 0.0053
 Uranus -84959-01-25 00:13 J -29309827.70 -29309827.49 -29309827.26 0.0136 0.0063
 Neptune -84959-04-05 06:42 J -29309757.31 -29309757.22 -29309757.07 0.0089 0.0079
 Uranus -84958-01-29 04:47 J -29309458.51 -29309458.30 -29309458.06 0.0136 0.0055
 Uranus -84957-02-02 09:49 J -29309089.31 -29309089.09 -29309088.85 0.0137 0.0047
 Uranus -84956-02-05 15:35 J -29308720.07 -29308719.85 -29308719.60 0.0137 0.0038
 Jupiter -84956-10-01 06:56 J -29308482.45 -29308482.21 -29308481.97 0.0510 0.0050
 Pluto -84955-01-08 03:06 J -29308383.60 -29308383.37 -29308383.12 0.0078 0.0024
 Uranus -84955-02-09 22:18 J -29308350.80 -29308350.57 -29308350.32 0.0138 0.0029
 Uranus -84954-02-14 05:44 J -29307981.50 -29307981.26 -29307981.01 0.0138 0.0019
 Saturn -84954-06-29 23:59 J -29307845.59 -29307845.50 -29307845.37 0.0280 0.0251
 Uranus -84953-02-18 13:54 J -29307612.16 -29307611.92 -29307611.67 0.0139 0.0009
 Saturn -84953-07-13 00:13 J -29307466.71 -29307466.49 -29307466.27 0.0283 0.0135
 Uranus -84952-02-21 23:01 J -29307242.78 -29307242.54 -29307242.29 0.0139 0.0003
 Saturn -84952-07-27 08:08 J -29307087.41 -29307087.16 -29307086.90 0.0285 0.0009
 Uranus -84951-02-26 09:20 J -29306873.36 -29306873.11 -29306872.86 0.0140 0.0012
 Saturn -84951-08-10 22:47 J -29306707.77 -29306707.55 -29306707.31 0.0287 0.0124
 Uranus -84950-03-02 20:37 J -29306503.88 -29306503.64 -29306503.40 0.0141 0.0022
 Jupiter -84950-03-26 18:56 J -29306479.94 -29306479.71 -29306479.48 0.0518 0.0022
 Saturn -84950-08-25 18:42 J -29306327.83 -29306327.72 -29306327.59 0.0289 0.0253
 Uranus -84949-03-06 08:37 J -29306134.38 -29306134.14 -29306133.90 0.0141 0.0033
 Uranus -84948-03-10 21:49 J -29305764.82 -29305764.59 -29305764.35 0.0142 0.0043
 Uranus -84947-03-15 11:59 J -29305395.22 -29305395.00 -29305394.77 0.0142 0.0054
 Uranus -84946-03-20 03:20 J -29305025.58 -29305025.36 -29305025.14 0.0143 0.0064
 Uranus -84945-03-23 19:25 J -29304655.89 -29304655.69 -29304655.46 0.0144 0.0075
 Mars -84945-06-13 16:04 J -29304573.99 -29304573.83 -29304573.67 0.1607 0.0922
 Uranus -84944-03-28 12:56 J -29304286.14 -29304285.96 -29304285.74 0.0144 0.0085
 Jupiter -84944-10-06 06:28 J -29304094.41 -29304094.23 -29304094.05 0.0512 0.0335
 Uranus -84943-04-02 07:40 J -29303916.35 -29303916.18 -29303915.97 0.0145 0.0094
 Uranus -84942-04-07 03:49 J -29303546.50 -29303546.34 -29303546.15 0.0145 0.0102

Uranus	-84941-04-11 00:42 J	-29303176.61	-29303176.47	-29303176.29	0.0146	0.0111
Uranus	-84940-04-15 23:16 J	-29302806.66	-29302806.53	-29302806.37	0.0146	0.0118
Saturn	-84939-01-09 07:40 J	-29302538.35	-29302538.18	-29302537.99	0.0278	0.0186
Uranus	-84939-04-20 22:47 J	-29302436.66	-29302436.55	-29302436.41	0.0146	0.0125
Saturn	-84938-01-21 10:47 J	-29302161.28	-29302161.05	-29302160.82	0.0276	0.0076
Jupiter	-84938-03-31 09:20 J	-29302092.30	-29302092.11	-29302091.91	0.0516	0.0255
Uranus	-84938-04-25 23:30 J	-29302066.61	-29302066.52	-29302066.39	0.0147	0.0132
Saturn	-84937-02-02 07:40 J	-29301784.42	-29301784.18	-29301783.94	0.0274	0.0033
Uranus	-84937-04-30 01:11 J	-29301696.52	-29301696.45	-29301696.34	0.0147	0.0137
Saturn	-84936-02-12 23:44 J	-29301407.72	-29301407.51	-29301407.31	0.0272	0.0137
Uranus	-84936-05-05 04:18 J	-29301326.37	-29301326.32	-29301326.24	0.0147	0.0141
Saturn	-84935-02-24 12:13 J	-29301031.09	-29301030.99	-29301030.85	0.0271	0.0234
Uranus	-84935-05-10 07:54 J	-29300956.20	-29300956.17	-29300956.11	0.0147	0.0144
Uranus	-84934-05-15 12:28 J	-29300585.99	-29300585.98	-29300585.94	0.0147	0.0147
Uranus	-84933-05-19 17:59 J	-29300215.75	-29300215.75	-29300215.74	0.0147	0.0147
Uranus	-84932-05-24 23:44 J	-29299845.51	-29299845.51	-29299845.48	0.0147	0.0147
Uranus	-84931-05-30 06:28 J	-29299475.26	-29299475.23	-29299475.20	0.0147	0.0146
Uranus	-84930-06-04 12:42 J	-29299105.01	-29299104.97	-29299104.89	0.0147	0.0143
Uranus	-84929-06-08 19:54 J	-29298734.72	-29298734.67	-29298734.57	0.0147	0.0140
Uranus	-84928-06-14 03:49 J	-29298364.43	-29298364.34	-29298364.24	0.0147	0.0135
Uranus	-84927-06-19 11:01 J	-29297994.14	-29297994.04	-29297993.90	0.0146	0.0130
Uranus	-84926-06-24 18:56 J	-29297623.84	-29297623.71	-29297623.56	0.0146	0.0123
Uranus	-84925-06-29 02:37 J	-29297253.53	-29297253.39	-29297253.22	0.0145	0.0116
Uranus	-84924-07-04 10:04 J	-29296883.24	-29296883.08	-29296882.89	0.0145	0.0107
Saturn	-84924-07-06 21:49 J	-29296880.76	-29296880.59	-29296880.39	0.0282	0.0191
Uranus	-84923-07-09 17:16 J	-29296512.95	-29296512.78	-29296512.57	0.0145	0.0099
Saturn	-84923-07-21 02:52 J	-29296501.62	-29296501.38	-29296501.13	0.0284	0.0068
Uranus	-84922-07-15 00:13 J	-29296142.69	-29296142.49	-29296142.28	0.0144	0.0089
Saturn	-84922-08-04 15:06 J	-29296122.11	-29296121.87	-29296121.62	0.0286	0.0063
Uranus	-84921-07-19 06:28 J	-29295772.44	-29295772.23	-29295772.00	0.0144	0.0079

Saturn	-84921-08-18 09:35 J	-29295742.28	-29295742.10	-29295741.90	0.0288	0.0194
Uranus	-84920-07-24 11:59 J	-29295402.22	-29295402.00	-29295401.75	0.0143	0.0068
Uranus	-84919-07-29 17:01 J	-29295032.03	-29295031.79	-29295031.55	0.0142	0.0057
Uranus	-84918-08-03 20:52 J	-29294661.87	-29294661.63	-29294661.37	0.0142	0.0046
Uranus	-84917-08-07 23:59 J	-29294291.75	-29294291.50	-29294291.24	0.0141	0.0035
Uranus	-84916-08-13 01:54 J	-29293921.67	-29293921.42	-29293921.15	0.0141	0.0024
Uranus	-84915-08-18 03:06 J	-29293551.63	-29293551.37	-29293551.11	0.0140	0.0012
Uranus	-84914-08-23 03:20 J	-29293181.62	-29293181.36	-29293181.10	0.0139	0.0002
Mars	-84913-06-22 05:44 J	-29292877.38	-29292877.26	-29292877.14	0.1621	0.1269
Uranus	-84913-08-27 02:23 J	-29292811.66	-29292811.40	-29292811.14	0.0139	0.0010
Uranus	-84912-09-01 00:28 J	-29292441.73	-29292441.48	-29292441.21	0.0138	0.0020
Uranus	-84911-09-05 21:20 J	-29292071.86	-29292071.61	-29292071.35	0.0138	0.0031
Saturn	-84910-01-04 10:18 J	-29291951.19	-29291951.07	-29291950.92	0.0279	0.0228
Uranus	-84910-09-10 17:16 J	-29291702.02	-29291701.78	-29291701.52	0.0137	0.0041
Saturn	-84909-01-16 16:47 J	-29291574.01	-29291573.80	-29291573.58	0.0277	0.0119
Uranus	-84909-09-14 11:59 J	-29291332.23	-29291332.00	-29291331.74	0.0137	0.0051
Saturn	-84908-01-27 16:32 J	-29291197.05	-29291196.81	-29291196.57	0.0275	0.0010
Uranus	-84908-09-19 05:44 J	-29290962.48	-29290962.26	-29290962.01	0.0136	0.0059
Saturn	-84907-02-08 10:32 J	-29290820.28	-29290820.06	-29290819.83	0.0273	0.0095
Uranus	-84907-09-23 22:32 J	-29290592.79	-29290592.56	-29290592.33	0.0136	0.0068
Saturn	-84906-02-20 00:28 J	-29290443.64	-29290443.48	-29290443.30	0.0271	0.0193
Uranus	-84906-09-28 13:54 J	-29290223.12	-29290222.92	-29290222.70	0.0135	0.0076
Uranus	-84905-10-02 04:04 J	-29289853.52	-29289853.33	-29289853.12	0.0135	0.0084
Uranus	-84904-10-06 17:30 J	-29289483.96	-29289483.77	-29289483.58	0.0134	0.0091
Uranus	-84903-10-11 05:30 J	-29289114.44	-29289114.27	-29289114.09	0.0134	0.0097
Uranus	-84902-10-15 16:47 J	-29288744.96	-29288744.80	-29288744.63	0.0133	0.0103
Uranus	-84901-10-19 02:37 J	-29288375.52	-29288375.39	-29288375.22	0.0133	0.0108
Uranus	-84900-10-23 11:59 J	-29288006.12	-29288006.00	-29288005.85	0.0133	0.0113
Uranus	-84899-10-27 20:37 J	-29287636.75	-29287636.64	-29287636.51	0.0132	0.0117
Uranus	-84898-11-01 04:32 J	-29287267.41	-29287267.31	-29287267.20	0.0132	0.0120

Uranus	-84897-11-04 11:30 J	-29286898.10	-29286898.02	-29286897.93	0.0132	0.0123
Uranus	-84896-11-08 17:44 J	-29286528.82	-29286528.76	-29286528.67	0.0132	0.0126
Saturn	-84895-07-01 02:52 J	-29286294.51	-29286294.38	-29286294.24	0.0281	0.0235
Uranus	-84895-11-12 23:30 J	-29286159.56	-29286159.52	-29286159.45	0.0132	0.0128
Saturn	-84894-07-15 03:20 J	-29285915.59	-29285915.36	-29285915.14	0.0283	0.0119
Uranus	-84894-11-17 05:01 J	-29285790.33	-29285790.29	-29285790.24	0.0132	0.0129
Saturn	-84893-07-28 11:44 J	-29285536.26	-29285536.01	-29285535.75	0.0285	0.0008
Uranus	-84893-11-20 09:20 J	-29285421.14	-29285421.11	-29285421.06	0.0131	0.0130
Saturn	-84892-08-12 02:52 J	-29285156.59	-29285156.38	-29285156.15	0.0287	0.0139
Uranus	-84892-11-24 13:11 J	-29285051.98	-29285051.95	-29285051.90	0.0131	0.0130
Saturn	-84891-08-26 23:16 J	-29284776.62	-29284776.53	-29284776.43	0.0289	0.0266
Uranus	-84891-11-28 16:18 J	-29284682.84	-29284682.82	-29284682.75	0.0131	0.0130
Uranus	-84890-12-02 19:54 J	-29284313.72	-29284313.67	-29284313.61	0.0131	0.0128
Uranus	-84889-12-05 22:04 J	-29283944.63	-29283944.58	-29283944.49	0.0132	0.0127
Uranus	-84888-12-10 00:28 J	-29283575.54	-29283575.48	-29283575.38	0.0132	0.0125
Uranus	-84887-12-14 02:52 J	-29283206.45	-29283206.38	-29283206.27	0.0132	0.0122
Uranus	-84886-12-18 05:01 J	-29282837.38	-29282837.29	-29282837.16	0.0132	0.0119
Jupiter	-84885-09-25 15:35 J	-29282555.05	-29282554.85	-29282554.64	0.0507	0.0252
Uranus	-84885-12-21 07:11 J	-29282468.30	-29282468.20	-29282468.06	0.0132	0.0115
Neptune	-84884-09-25 17:01 J	-29282189.86	-29282189.79	-29282189.68	0.0088	0.0083
Uranus	-84884-12-25 09:35 J	-29282099.23	-29282099.10	-29282098.96	0.0132	0.0111
Neptune	-84883-09-28 07:11 J	-29281822.39	-29281822.20	-29281821.99	0.0088	0.0058
Uranus	-84883-12-29 11:44 J	-29281730.15	-29281730.01	-29281729.85	0.0133	0.0106
Neptune	-84882-09-30 21:20 J	-29281454.85	-29281454.61	-29281454.35	0.0088	0.0033
Saturn	-84882-12-30 01:11 J	-29281364.49	-29281364.45	-29281364.41	0.0280	0.0275
Uranus	-84881-01-02 14:08 J	-29281361.06	-29281360.91	-29281360.73	0.0133	0.0101
Neptune	-84881-10-02 11:01 J	-29281087.30	-29281087.04	-29281086.77	0.0088	0.0008
Uranus	-84880-01-05 16:32 J	-29280991.97	-29280991.81	-29280991.62	0.0133	0.0095
Saturn	-84880-01-10 10:32 J	-29280987.24	-29280987.06	-29280986.86	0.0277	0.0170
Neptune	-84880-10-05 00:42 J	-29280719.72	-29280719.47	-29280719.20	0.0088	0.0018

Uranus -84879-01-09 19:25 J -29280622.86 -29280622.69 -29280622.49 0.0134 0.0089
 Saturn -84879-01-22 13:11 J -29280610.18 -29280609.95 -29280609.72 0.0275 0.0060
 Jupiter -84879-03-21 12:28 J -29280552.15 -29280551.98 -29280551.80 0.0521 0.0325
 Neptune -84879-10-07 13:54 J -29280352.13 -29280351.92 -29280351.67 0.0088 0.0043
 Uranus -84878-01-13 22:18 J -29280253.75 -29280253.57 -29280253.36 0.0134 0.0082
 Saturn -84878-02-03 09:35 J -29280233.34 -29280233.10 -29280232.87 0.0273 0.0048
 Neptune -84878-10-10 03:06 J -29279984.51 -29279984.37 -29279984.17 0.0088 0.0068
 Uranus -84877-01-18 01:40 J -29279884.63 -29279884.43 -29279884.22 0.0135 0.0075
 Saturn -84877-02-15 00:56 J -29279856.65 -29279856.46 -29279856.26 0.0272 0.0150
 Uranus -84876-01-21 05:16 J -29279515.49 -29279515.28 -29279515.06 0.0135 0.0067
 Saturn -84876-02-25 13:25 J -29279480.03 -29279479.94 -29279479.83 0.0271 0.0244
 Uranus -84875-01-25 09:35 J -29279146.32 -29279146.10 -29279145.88 0.0136 0.0059
 Uranus -84874-01-29 13:54 J -29278777.14 -29278776.92 -29278776.68 0.0136 0.0051
 Uranus -84873-02-02 19:25 J -29278407.93 -29278407.69 -29278407.46 0.0137 0.0042
 Jupiter -84873-09-30 14:23 J -29278167.14 -29278166.90 -29278166.66 0.0510 0.0030
 Uranus -84872-02-06 00:56 J -29278038.69 -29278038.46 -29278038.21 0.0137 0.0033
 Uranus -84871-02-10 07:40 J -29277669.41 -29277669.18 -29277668.93 0.0138 0.0024
 Uranus -84870-02-14 15:20 J -29277300.10 -29277299.86 -29277299.61 0.0138 0.0014
 Uranus -84869-02-18 23:44 J -29276930.76 -29276930.51 -29276930.26 0.0139 0.0004
 Uranus -84868-02-22 09:06 J -29276561.37 -29276561.12 -29276560.87 0.0139 0.0007
 Uranus -84867-02-26 19:25 J -29276191.93 -29276191.69 -29276191.44 0.0140 0.0017
 Jupiter -84867-03-26 03:20 J -29276164.58 -29276164.36 -29276164.13 0.0519 0.0047
 Uranus -84866-03-03 06:28 J -29275822.47 -29275822.23 -29275821.98 0.0141 0.0028
 Mars -84866-06-16 19:25 J -29275716.88 -29275716.69 -29275716.50 0.1609 0.0290
 Uranus -84865-03-06 18:28 J -29275452.96 -29275452.73 -29275452.48 0.0141 0.0039
 Saturn -84865-07-07 21:49 J -29275329.77 -29275329.59 -29275329.38 0.0282 0.0176
 Uranus -84864-03-11 07:40 J -29275083.40 -29275083.18 -29275082.94 0.0142 0.0049
 Saturn -84864-07-22 03:20 J -29274950.60 -29274950.36 -29274950.11 0.0284 0.0053
 Uranus -84863-03-15 21:49 J -29274713.80 -29274713.59 -29274713.36 0.0143 0.0059
 Saturn -84863-08-05 16:04 J -29274571.07 -29274570.83 -29274570.58 0.0286 0.0077

Uranus	-84862-03-20 13:11 J	-29274344.16	-29274343.95	-29274343.72	0.0143	0.0069
Saturn	-84862-08-20 11:01 J	-29274191.21	-29274191.04	-29274190.86	0.0288	0.0207
Uranus	-84861-03-24 05:16 J	-29273974.47	-29273974.28	-29273974.05	0.0144	0.0080
Jupiter	-84861-10-05 13:40 J	-29273779.11	-29273778.93	-29273778.74	0.0512	0.0317
Uranus	-84860-03-28 23:16 J	-29273604.72	-29273604.53	-29273604.33	0.0144	0.0089
Mars	-84860-12-22 11:01 J	-29273336.23	-29273336.04	-29273335.84	0.1929	0.0408
Uranus	-84859-04-02 17:44 J	-29273234.92	-29273234.76	-29273234.56	0.0145	0.0098
Uranus	-84858-04-07 13:54 J	-29272865.08	-29272864.92	-29272864.74	0.0145	0.0106
Uranus	-84857-04-11 10:47 J	-29272495.18	-29272495.05	-29272494.88	0.0146	0.0115
Uranus	-84856-04-16 09:20 J	-29272125.23	-29272125.11	-29272124.96	0.0146	0.0122
Jupiter	-84855-03-30 13:25 J	-29271777.15	-29271776.94	-29271776.73	0.0517	0.0222
Uranus	-84855-04-21 08:52 J	-29271755.23	-29271755.13	-29271755.00	0.0146	0.0129
Uranus	-84854-04-26 09:35 J	-29271385.18	-29271385.10	-29271384.98	0.0147	0.0135
Uranus	-84853-04-30 11:30 J	-29271015.09	-29271015.02	-29271014.93	0.0147	0.0139
Uranus	-84852-05-05 14:08 J	-29270644.95	-29270644.91	-29270644.84	0.0147	0.0143
Saturn	-84851-01-05 12:28 J	-29270400.13	-29270399.98	-29270399.82	0.0279	0.0211
Uranus	-84851-05-10 17:30 J	-29270274.78	-29270274.77	-29270274.71	0.0147	0.0146
Saturn	-84850-01-17 18:28 J	-29270022.94	-29270022.73	-29270022.50	0.0277	0.0103
Uranus	-84850-05-15 22:18 J	-29269904.57	-29269904.57	-29269904.56	0.0147	0.0147
Saturn	-84849-01-29 17:44 J	-29269645.99	-29269645.76	-29269645.52	0.0275	0.0007
Saturn	-84848-02-09 11:30 J	-29269269.24	-29269269.02	-29269268.80	0.0273	0.0109
Uranus	-84848-05-25 09:06 J	-29269164.12	-29269164.12	-29269164.10	0.0147	0.0147
Saturn	-84847-02-21 01:11 J	-29268892.60	-29268892.45	-29268892.29	0.0271	0.0205
Uranus	-84847-05-30 15:06 J	-29268793.89	-29268793.87	-29268793.81	0.0147	0.0145
Uranus	-84846-06-04 22:04 J	-29268423.63	-29268423.58	-29268423.51	0.0147	0.0142
Uranus	-84845-06-09 05:16 J	-29268053.35	-29268053.28	-29268053.19	0.0147	0.0138
Uranus	-84844-06-14 12:13 J	-29267683.07	-29267682.99	-29267682.86	0.0147	0.0134
Jupiter	-84843-04-04 03:35 J	-29267389.41	-29267389.35	-29267389.28	0.0515	0.0494
Uranus	-84843-06-19 20:08 J	-29267312.77	-29267312.66	-29267312.52	0.0146	0.0128
Uranus	-84842-06-25 03:49 J	-29266942.47	-29266942.34	-29266942.18	0.0146	0.0120

Uranus	-84841-06-29 11:44 J	-29266572.16	-29266572.01	-29266571.83	0.0145	0.0112
Uranus	-84840-07-04 19:25 J	-29266201.87	-29266201.69	-29266201.51	0.0145	0.0103
Uranus	-84839-07-10 02:37 J	-29265831.59	-29265831.39	-29265831.19	0.0145	0.0094
Uranus	-84838-07-15 09:06 J	-29265461.32	-29265461.12	-29265460.90	0.0144	0.0084
Uranus	-84837-07-19 15:20 J	-29265091.07	-29265090.86	-29265090.63	0.0144	0.0074
Saturn	-84836-07-02 02:52 J	-29264743.52	-29264743.38	-29264743.21	0.0281	0.0221
Uranus	-84836-07-24 20:37 J	-29264720.86	-29264720.64	-29264720.39	0.0143	0.0063
Saturn	-84835-07-16 03:49 J	-29264364.57	-29264364.34	-29264364.10	0.0283	0.0104
Uranus	-84835-07-30 01:25 J	-29264350.68	-29264350.44	-29264350.19	0.0142	0.0052
Saturn	-84834-07-30 12:56 J	-29263985.21	-29263984.96	-29263984.71	0.0285	0.0023
Uranus	-84834-08-04 05:30 J	-29263980.52	-29263980.27	-29263980.02	0.0142	0.0040
Uranus	-84833-08-08 08:08 J	-29263610.41	-29263610.16	-29263609.89	0.0141	0.0029
Saturn	-84833-08-13 04:32 J	-29263605.51	-29263605.31	-29263605.08	0.0287	0.0155
Uranus	-84832-08-13 10:18 J	-29263240.33	-29263240.07	-29263239.80	0.0141	0.0018
Saturn	-84832-08-28 01:25 J	-29263225.49	-29263225.44	-29263225.37	0.0289	0.0279
Uranus	-84831-08-18 11:16 J	-29262870.29	-29262870.03	-29262869.76	0.0140	0.0007
Uranus	-84830-08-23 11:44 J	-29262500.28	-29262500.01	-29262499.75	0.0139	0.0005
Uranus	-84829-08-27 10:47 J	-29262130.31	-29262130.05	-29262129.79	0.0139	0.0015
Uranus	-84828-09-01 08:37 J	-29261760.39	-29261760.14	-29261759.87	0.0138	0.0026
Uranus	-84827-09-06 05:44 J	-29261390.51	-29261390.26	-29261390.00	0.0138	0.0037
Uranus	-84826-09-11 01:54 J	-29261020.66	-29261020.42	-29261020.17	0.0137	0.0046
Uranus	-84825-09-14 20:37 J	-29260650.87	-29260650.64	-29260650.40	0.0137	0.0056
Uranus	-84824-09-19 14:23 J	-29260281.12	-29260280.90	-29260280.66	0.0136	0.0065
Uranus	-84823-09-24 06:42 J	-29259911.42	-29259911.22	-29259910.99	0.0136	0.0074
Saturn	-84823-12-31 03:06 J	-29259813.45	-29259813.37	-29259813.28	0.0280	0.0260
Uranus	-84822-09-28 22:32 J	-29259541.76	-29259541.56	-29259541.35	0.0135	0.0081
Saturn	-84821-01-12 12:13 J	-29259436.18	-29259435.99	-29259435.78	0.0277	0.0154
Uranus	-84821-10-02 12:28 J	-29259172.16	-29259171.98	-29259171.77	0.0135	0.0089
Saturn	-84820-01-23 14:23 J	-29259059.14	-29259058.90	-29259058.67	0.0275	0.0045
Uranus	-84820-10-07 01:40 J	-29258802.60	-29258802.43	-29258802.24	0.0134	0.0095

Saturn	-84819-02-04 10:18 J	-29258682.30	-29258682.07	-29258681.84	0.0273	0.0062
Uranus	-84819-10-11 13:25 J	-29258433.08	-29258432.94	-29258432.75	0.0134	0.0102
Saturn	-84818-02-16 01:25 J	-29258305.62	-29258305.44	-29258305.24	0.0272	0.0162
Uranus	-84818-10-16 01:11 J	-29258063.60	-29258063.45	-29258063.29	0.0133	0.0107
Saturn	-84817-02-27 13:40 J	-29257929.01	-29257928.93	-29257928.85	0.0270	0.0254
Uranus	-84817-10-19 11:01 J	-29257694.16	-29257694.04	-29257693.88	0.0133	0.0112
Uranus	-84816-10-23 20:52 J	-29257324.75	-29257324.63	-29257324.51	0.0133	0.0116
Uranus	-84815-10-28 05:01 J	-29256955.37	-29256955.29	-29256955.16	0.0132	0.0121
Uranus	-84814-11-01 13:11 J	-29256586.03	-29256585.95	-29256585.85	0.0132	0.0124
Uranus	-84813-11-04 20:23 J	-29256216.72	-29256216.65	-29256216.57	0.0132	0.0126
Uranus	-84812-11-09 02:52 J	-29255847.43	-29255847.38	-29255847.32	0.0132	0.0128
Uranus	-84811-11-13 08:23 J	-29255478.17	-29255478.15	-29255478.09	0.0132	0.0130
Uranus	-84810-11-17 13:40 J	-29255108.94	-29255108.93	-29255108.89	0.0132	0.0131
Uranus	-84809-11-20 17:59 J	-29254739.76	-29254739.75	-29254739.72	0.0131	0.0131
Uranus	-84808-11-24 21:49 J	-29254370.60	-29254370.59	-29254370.55	0.0131	0.0131
Saturn	-84807-06-25 23:59 J	-29254157.56	-29254157.50	-29254157.43	0.0279	0.0269
Uranus	-84807-11-29 01:11 J	-29254001.47	-29254001.45	-29254001.39	0.0131	0.0130
Saturn	-84806-07-09 21:06 J	-29253778.83	-29253778.62	-29253778.41	0.0282	0.0160
Uranus	-84806-12-03 04:04 J	-29253632.36	-29253632.33	-29253632.25	0.0132	0.0129
Saturn	-84805-07-23 02:52 J	-29253399.63	-29253399.38	-29253399.13	0.0284	0.0038
Uranus	-84805-12-06 06:42 J	-29253263.26	-29253263.22	-29253263.12	0.0132	0.0127
Saturn	-84804-08-06 15:49 J	-29253020.08	-29253019.84	-29253019.60	0.0286	0.0092
Uranus	-84804-12-10 09:35 J	-29252894.17	-29252894.10	-29252894.00	0.0132	0.0124
Saturn	-84803-08-21 10:47 J	-29252640.20	-29252640.05	-29252639.88	0.0288	0.0220
Uranus	-84803-12-14 11:59 J	-29252525.09	-29252525.00	-29252524.89	0.0132	0.0121
Jupiter	-84802-09-26 00:56 J	-29252239.67	-29252239.46	-29252239.26	0.0507	0.0264
Uranus	-84802-12-18 14:23 J	-29252156.01	-29252155.90	-29252155.78	0.0132	0.0117
Neptune	-84801-03-22 10:04 J	-29252061.16	-29252061.08	-29252060.93	0.0089	0.0080
Uranus	-84801-12-21 16:18 J	-29251786.93	-29251786.82	-29251786.68	0.0132	0.0113
Neptune	-84800-03-24 19:40 J	-29251693.86	-29251693.68	-29251693.46	0.0089	0.0055

Uranus -84800-12-25 18:42 J -29251417.85 -29251417.72 -29251417.57 0.0132 0.0109
 Neptune -84799-03-27 05:30 J -29251326.51 -29251326.27 -29251326.04 0.0089 0.0030
 Uranus -84799-12-29 20:52 J -29251048.77 -29251048.63 -29251048.46 0.0133 0.0104
 Neptune -84798-03-29 14:52 J -29250959.13 -29250958.88 -29250958.63 0.0089 0.0006
 Uranus -84797-01-02 23:16 J -29250679.68 -29250679.53 -29250679.35 0.0133 0.0098
 Neptune -84797-03-31 00:28 J -29250591.72 -29250591.48 -29250591.23 0.0089 0.0018
 Uranus -84796-01-06 01:40 J -29250310.59 -29250310.43 -29250310.23 0.0133 0.0093
 Jupiter -84796-03-20 16:04 J -29250236.99 -29250236.83 -29250236.66 0.0522 0.0360
 Neptune -84796-04-02 09:49 J -29250224.29 -29250224.09 -29250223.85 0.0089 0.0043
 Pluto -84796-07-05 08:52 J -29250130.39 -29250130.13 -29250129.86 0.0067 0.0005
 Uranus -84795-01-10 04:32 J -29249941.48 -29249941.31 -29249941.10 0.0134 0.0086
 Neptune -84795-04-04 19:54 J -29249856.82 -29249856.67 -29249856.49 0.0089 0.0067
 Uranus -84794-01-14 07:40 J -29249572.37 -29249572.18 -29249571.97 0.0134 0.0078
 Uranus -84793-01-18 11:01 J -29249203.25 -29249203.04 -29249202.83 0.0135 0.0071
 Saturn -84792-01-06 12:42 J -29248849.13 -29248848.97 -29248848.79 0.0279 0.0195
 Uranus -84792-01-21 14:23 J -29248834.11 -29248833.90 -29248833.67 0.0135 0.0063
 Saturn -84791-01-18 18:42 J -29248471.95 -29248471.72 -29248471.49 0.0277 0.0087
 Uranus -84791-01-25 18:42 J -29248464.94 -29248464.72 -29248464.49 0.0136 0.0055
 Uranus -84790-01-29 23:16 J -29248095.75 -29248095.53 -29248095.29 0.0136 0.0046
 Saturn -84790-01-30 17:44 J -29248095.00 -29248094.76 -29248094.52 0.0275 0.0020
 Jupiter -84790-09-30 22:47 J -29247851.79 -29247851.55 -29247851.31 0.0509 0.0015
 Uranus -84789-02-03 04:18 J -29247726.54 -29247726.32 -29247726.07 0.0137 0.0038
 Saturn -84789-02-11 11:01 J -29247718.25 -29247718.04 -29247717.82 0.0273 0.0123
 Uranus -84788-02-06 10:32 J -29247357.30 -29247357.06 -29247356.82 0.0137 0.0028
 Saturn -84788-02-22 00:28 J -29247341.61 -29247341.48 -29247341.33 0.0271 0.0217
 Uranus -84787-02-10 17:16 J -29246988.02 -29246987.78 -29246987.53 0.0138 0.0019
 Mars -84787-06-18 23:59 J -29246859.68 -29246859.50 -29246859.31 0.1612 0.0371
 Uranus -84786-02-15 00:56 J -29246618.70 -29246618.46 -29246618.21 0.0138 0.0009
 Uranus -84785-02-19 09:35 J -29246249.35 -29246249.10 -29246248.86 0.0139 0.0002
 Uranus -84784-02-22 18:56 J -29245879.96 -29245879.71 -29245879.47 0.0139 0.0012

Jupiter -84784-03-25 07:25 J -29245849.42 -29245849.19 -29245848.97 0.0520 0.0080
 Uranus -84783-02-27 05:01 J -29245510.53 -29245510.29 -29245510.04 0.0140 0.0023
 Uranus -84782-03-03 16:04 J -29245141.06 -29245140.83 -29245140.58 0.0141 0.0034
 Uranus -84781-03-07 04:04 J -29244771.55 -29244771.33 -29244771.08 0.0141 0.0045
 Mars -84781-12-25 21:06 J -29244477.77 -29244477.62 -29244477.46 0.1925 0.1167
 Uranus -84780-03-11 17:30 J -29244401.99 -29244401.77 -29244401.54 0.0142 0.0054
 Uranus -84779-03-16 07:40 J -29244032.39 -29244032.18 -29244031.95 0.0143 0.0065
 Uranus -84778-03-20 22:47 J -29243662.75 -29243662.55 -29243662.33 0.0143 0.0075
 Jupiter -84778-10-05 18:28 J -29243463.93 -29243463.73 -29243463.53 0.0511 0.0287
 Uranus -84777-03-24 15:35 J -29243293.05 -29243292.85 -29243292.65 0.0144 0.0084
 Saturn -84777-07-03 02:08 J -29243192.56 -29243192.41 -29243192.22 0.0281 0.0206
 Uranus -84776-03-29 09:06 J -29242923.30 -29242923.12 -29242922.92 0.0144 0.0094
 Saturn -84776-07-17 03:20 J -29242813.59 -29242813.36 -29242813.11 0.0283 0.0089
 Uranus -84775-04-03 03:35 J -29242553.51 -29242553.35 -29242553.16 0.0145 0.0103
 Saturn -84775-07-31 12:42 J -29242434.22 -29242433.97 -29242433.72 0.0285 0.0039
 Uranus -84774-04-07 23:44 J -29242183.65 -29242183.51 -29242183.33 0.0145 0.0111
 Saturn -84774-08-15 04:47 J -29242054.49 -29242054.30 -29242054.08 0.0287 0.0169
 Uranus -84773-04-11 21:06 J -29241813.75 -29241813.62 -29241813.47 0.0146 0.0119
 Jupiter -84772-03-29 23:59 J -29241461.71 -29241461.50 -29241461.29 0.0518 0.0202
 Uranus -84772-04-16 19:25 J -29241443.79 -29241443.69 -29241443.54 0.0146 0.0126
 Uranus -84771-04-21 19:11 J -29241073.79 -29241073.70 -29241073.58 0.0146 0.0132
 Uranus -84770-04-26 19:54 J -29240703.74 -29240703.67 -29240703.57 0.0147 0.0138
 Uranus -84769-04-30 21:35 J -29240333.64 -29240333.60 -29240333.52 0.0147 0.0142
 Uranus -84768-05-06 00:28 J -29239963.50 -29239963.48 -29239963.43 0.0147 0.0145
 Uranus -84764-05-25 18:56 J -29238482.71 -29238482.71 -29238482.69 0.0147 0.0147
 Saturn -84763-01-01 04:04 J -29238262.43 -29238262.33 -29238262.20 0.0280 0.0245
 Uranus -84763-05-31 00:56 J -29238112.48 -29238112.46 -29238112.40 0.0147 0.0145
 Saturn -84762-01-13 13:25 J -29237885.14 -29237884.94 -29237884.73 0.0277 0.0138
 Uranus -84762-06-05 07:54 J -29237742.23 -29237742.17 -29237742.09 0.0147 0.0141
 Saturn -84761-01-25 15:06 J -29237508.10 -29237507.87 -29237507.63 0.0275 0.0030

Uranus	-84761-06-09 14:52 J	-29237371.95	-29237371.88	-29237371.77	0.0147	0.0137
Saturn	-84760-02-05 10:47 J	-29237131.27	-29237131.05	-29237130.82	0.0273	0.0076
Jupiter	-84760-04-03 15:35 J	-29237073.93	-29237073.85	-29237073.76	0.0515	0.0478
Uranus	-84760-06-14 22:18 J	-29237001.66	-29237001.57	-29237001.44	0.0147	0.0132
Saturn	-84759-02-17 01:54 J	-29236754.60	-29236754.42	-29236754.24	0.0271	0.0175
Uranus	-84759-06-20 06:28 J	-29236631.37	-29236631.23	-29236631.10	0.0146	0.0125
Saturn	-84758-02-28 13:25 J	-29236377.98	-29236377.94	-29236377.89	0.0270	0.0264
Uranus	-84758-06-25 13:40 J	-29236261.06	-29236260.93	-29236260.76	0.0146	0.0118
Uranus	-84757-06-29 21:49 J	-29235890.76	-29235890.59	-29235890.42	0.0145	0.0109
Uranus	-84756-07-05 04:47 J	-29235520.47	-29235520.30	-29235520.10	0.0145	0.0100
Uranus	-84755-07-10 11:59 J	-29235150.19	-29235150.00	-29235149.78	0.0145	0.0091
Uranus	-84754-07-15 18:28 J	-29234779.93	-29234779.73	-29234779.50	0.0144	0.0080
Uranus	-84753-07-20 00:56 J	-29234409.69	-29234409.46	-29234409.23	0.0144	0.0069
Uranus	-84752-07-25 05:59 J	-29234039.48	-29234039.25	-29234039.00	0.0143	0.0058
Uranus	-84751-07-30 10:32 J	-29233669.30	-29233669.06	-29233668.80	0.0142	0.0047
Uranus	-84750-08-04 14:23 J	-29233299.15	-29233298.90	-29233298.64	0.0142	0.0035
Uranus	-84749-08-08 17:30 J	-29232929.03	-29232928.77	-29232928.51	0.0141	0.0023
Saturn	-84748-06-26 22:18 J	-29232606.66	-29232606.57	-29232606.46	0.0279	0.0254
Uranus	-84748-08-13 19:25 J	-29232558.95	-29232558.69	-29232558.43	0.0141	0.0012
Saturn	-84747-07-10 19:25 J	-29232227.90	-29232227.69	-29232227.47	0.0282	0.0145
Uranus	-84747-08-18 20:37 J	-29232188.91	-29232188.64	-29232188.38	0.0140	0.0002
Saturn	-84746-07-25 01:25 J	-29231848.69	-29231848.44	-29231848.19	0.0284	0.0023
Uranus	-84746-08-23 20:52 J	-29231818.89	-29231818.63	-29231818.37	0.0139	0.0010
Saturn	-84745-08-07 14:52 J	-29231469.11	-29231468.88	-29231468.64	0.0286	0.0107
Uranus	-84745-08-27 19:54 J	-29231448.93	-29231448.67	-29231448.41	0.0139	0.0021
Saturn	-84744-08-22 10:04 J	-29231089.22	-29231089.08	-29231088.92	0.0288	0.0233
Uranus	-84744-09-01 17:44 J	-29231079.00	-29231078.76	-29231078.49	0.0138	0.0033
Uranus	-84743-09-06 15:06 J	-29230709.12	-29230708.87	-29230708.62	0.0138	0.0042
Uranus	-84742-09-11 10:47 J	-29230339.28	-29230339.05	-29230338.79	0.0137	0.0053
Uranus	-84741-09-15 05:30 J	-29229969.49	-29229969.27	-29229969.02	0.0136	0.0062

Mars	-84740-06-12 17:59 J	-29229698.89	-29229698.75	-29229698.61	0.1601	0.1103
Uranus	-84740-09-19 23:16 J	-29229599.75	-29229599.53	-29229599.30	0.0136	0.0070
Uranus	-84739-09-24 15:35 J	-29229230.05	-29229229.85	-29229229.63	0.0135	0.0079
Uranus	-84738-09-29 06:56 J	-29228860.40	-29228860.21	-29228860.00	0.0135	0.0086
Uranus	-84737-10-02 20:37 J	-29228490.80	-29228490.64	-29228490.43	0.0135	0.0094
Uranus	-84736-10-07 10:18 J	-29228121.24	-29228121.07	-29228120.89	0.0134	0.0099
Uranus	-84735-10-11 22:04 J	-29227751.72	-29227751.58	-29227751.40	0.0134	0.0106
Uranus	-84734-10-16 09:35 J	-29227382.24	-29227382.10	-29227381.95	0.0133	0.0111
Saturn	-84733-01-08 12:28 J	-29227298.15	-29227297.98	-29227297.79	0.0279	0.0180
Uranus	-84733-10-19 19:54 J	-29227012.79	-29227012.67	-29227012.54	0.0133	0.0115
Saturn	-84732-01-19 18:13 J	-29226920.96	-29226920.74	-29226920.50	0.0277	0.0072
Uranus	-84732-10-24 05:01 J	-29226643.38	-29226643.29	-29226643.16	0.0133	0.0120
Saturn	-84731-01-31 17:16 J	-29226544.01	-29226543.78	-29226543.54	0.0275	0.0035
Uranus	-84731-10-28 13:40 J	-29226274.00	-29226273.93	-29226273.82	0.0132	0.0124
Saturn	-84730-02-12 10:47 J	-29226167.26	-29226167.05	-29226166.85	0.0273	0.0136
Uranus	-84730-11-01 21:49 J	-29225904.65	-29225904.59	-29225904.50	0.0132	0.0126
Saturn	-84729-02-23 23:59 J	-29225790.61	-29225790.50	-29225790.36	0.0271	0.0229
Uranus	-84729-11-05 04:32 J	-29225535.34	-29225535.31	-29225535.23	0.0132	0.0129
Uranus	-84728-11-09 11:01 J	-29225166.05	-29225166.04	-29225165.98	0.0132	0.0131
Uranus	-84727-11-13 17:01 J	-29224796.79	-29224796.79	-29224796.77	0.0132	0.0132
Uranus	-84724-11-25 06:13 J	-29223689.24	-29223689.24	-29223689.21	0.0131	0.0131
Uranus	-84723-11-29 09:49 J	-29223320.12	-29223320.09	-29223320.05	0.0131	0.0130
Uranus	-84722-12-03 12:28 J	-29222951.01	-29222950.98	-29222950.91	0.0131	0.0129
Uranus	-84721-12-06 15:20 J	-29222581.92	-29222581.86	-29222581.78	0.0132	0.0126
Uranus	-84720-12-10 17:59 J	-29222212.83	-29222212.75	-29222212.66	0.0132	0.0123
Jupiter	-84719-09-25 06:28 J	-29221924.43	-29221924.23	-29221924.03	0.0506	0.0289
Neptune	-84719-09-27 16:04 J	-29221921.99	-29221921.83	-29221921.65	0.0088	0.0068
Uranus	-84719-12-14 20:08 J	-29221843.75	-29221843.66	-29221843.54	0.0132	0.0120
Saturn	-84718-07-05 02:23 J	-29221641.58	-29221641.40	-29221641.21	0.0281	0.0190
Neptune	-84718-09-30 06:13 J	-29221554.47	-29221554.24	-29221554.01	0.0088	0.0043

Uranus -84718-12-18 22:18 J -29221474.67 -29221474.57 -29221474.44 0.0132 0.0116
 Saturn -84717-07-18 03:49 J -29221262.58 -29221262.34 -29221262.10 0.0283 0.0073
 Neptune -84717-10-01 19:54 J -29221186.91 -29221186.67 -29221186.39 0.0088 0.0019
 Uranus -84717-12-22 00:42 J -29221105.59 -29221105.47 -29221105.33 0.0132 0.0112
 Saturn -84716-08-01 13:11 J -29220883.19 -29220882.95 -29220882.69 0.0285 0.0055
 Neptune -84716-10-04 09:49 J -29220819.34 -29220819.09 -29220818.82 0.0088 0.0008
 Uranus -84716-12-26 03:20 J -29220736.51 -29220736.36 -29220736.22 0.0132 0.0107
 Saturn -84715-08-16 05:44 J -29220503.45 -29220503.26 -29220503.06 0.0288 0.0183
 Neptune -84715-10-06 23:16 J -29220451.75 -29220451.53 -29220451.26 0.0088 0.0033
 Uranus -84715-12-30 05:01 J -29220367.43 -29220367.29 -29220367.11 0.0133 0.0102
 Neptune -84714-10-09 13:11 J -29220084.14 -29220083.95 -29220083.74 0.0088 0.0057
 Uranus -84713-01-03 07:25 J -29219998.34 -29219998.19 -29219997.99 0.0133 0.0096
 Jupiter -84713-03-20 01:40 J -29219921.57 -29219921.43 -29219921.27 0.0523 0.0383
 Neptune -84713-10-11 01:54 J -29219716.49 -29219716.42 -29219716.29 0.0088 0.0081
 Uranus -84712-01-06 09:49 J -29219629.25 -29219629.09 -29219628.88 0.0133 0.0090
 Uranus -84711-01-10 12:56 J -29219260.15 -29219259.96 -29219259.76 0.0134 0.0082
 Uranus -84710-01-14 15:35 J -29218891.04 -29218890.85 -29218890.63 0.0134 0.0075
 Pluto -84709-01-10 11:16 J -29218530.20 -29218530.03 -29218529.84 0.0078 0.0054
 Uranus -84709-01-18 18:56 J -29218521.92 -29218521.71 -29218521.49 0.0135 0.0067
 Uranus -84708-01-21 22:32 J -29218152.78 -29218152.56 -29218152.33 0.0135 0.0059
 Mars -84708-06-21 04:04 J -29218002.47 -29218002.33 -29218002.18 0.1614 0.1029
 Uranus -84707-01-26 02:52 J -29217783.60 -29217783.38 -29217783.15 0.0136 0.0051
 Jupiter -84707-09-30 03:49 J -29217536.58 -29217536.34 -29217536.10 0.0508 0.0016
 Uranus -84706-01-30 07:25 J -29217414.42 -29217414.19 -29217413.95 0.0136 0.0042
 Uranus -84705-02-03 12:56 J -29217045.20 -29217044.96 -29217044.72 0.0137 0.0033
 Saturn -84704-01-02 05:16 J -29216711.41 -29216711.28 -29216711.14 0.0280 0.0229
 Uranus -84704-02-06 18:56 J -29216675.95 -29216675.71 -29216675.46 0.0137 0.0023
 Saturn -84703-01-14 14:08 J -29216334.12 -29216333.91 -29216333.69 0.0277 0.0122
 Uranus -84703-02-11 01:54 J -29216306.66 -29216306.42 -29216306.17 0.0138 0.0013
 Saturn -84702-01-26 15:49 J -29215957.07 -29215956.84 -29215956.60 0.0275 0.0015

Uranus	-84702-02-15 09:35 J	-29215937.34	-29215937.10	-29215936.85	0.0138	0.0003
Saturn	-84701-02-07 11:16 J	-29215580.25	-29215580.03	-29215579.80	0.0273	0.0090
Uranus	-84701-02-19 17:59 J	-29215567.99	-29215567.75	-29215567.50	0.0139	0.0008
Jupiter	-84701-03-24 19:25 J	-29215533.92	-29215533.69	-29215533.47	0.0520	0.0095
Saturn	-84700-02-18 01:54 J	-29215203.58	-29215203.42	-29215203.24	0.0271	0.0188
Uranus	-84700-02-23 03:20 J	-29215198.60	-29215198.36	-29215198.11	0.0139	0.0018
Uranus	-84699-02-27 13:40 J	-29214829.17	-29214828.93	-29214828.69	0.0140	0.0028
Uranus	-84698-03-04 00:42 J	-29214459.70	-29214459.47	-29214459.23	0.0141	0.0039
Uranus	-84697-03-07 12:42 J	-29214090.19	-29214089.97	-29214089.73	0.0141	0.0049
Uranus	-84696-03-12 02:08 J	-29213720.63	-29213720.41	-29213720.19	0.0142	0.0059
Uranus	-84695-03-16 16:04 J	-29213351.03	-29213350.83	-29213350.60	0.0143	0.0070
Jupiter	-84695-10-05 02:52 J	-29213148.58	-29213148.38	-29213148.17	0.0511	0.0268
Uranus	-84694-03-21 07:40 J	-29212981.38	-29212981.18	-29212980.97	0.0143	0.0079
Uranus	-84693-03-25 00:13 J	-29212611.68	-29212611.49	-29212611.29	0.0144	0.0089
Uranus	-84692-03-29 17:44 J	-29212241.93	-29212241.76	-29212241.57	0.0144	0.0098
Uranus	-84691-04-03 12:56 J	-29211872.12	-29211871.96	-29211871.79	0.0145	0.0107
Uranus	-84690-04-08 08:52 J	-29211502.26	-29211502.13	-29211501.96	0.0145	0.0116
Jupiter	-84689-03-29 10:32 J	-29211146.27	-29211146.06	-29211145.84	0.0518	0.0183
Uranus	-84689-04-12 06:28 J	-29211132.35	-29211132.23	-29211132.09	0.0146	0.0123
Saturn	-84689-06-27 21:49 J	-29211055.70	-29211055.59	-29211055.44	0.0279	0.0240
Uranus	-84688-04-17 05:01 J	-29210762.38	-29210762.29	-29210762.16	0.0146	0.0130
Saturn	-84688-07-11 19:11 J	-29210676.92	-29210676.70	-29210676.48	0.0282	0.0129
Uranus	-84687-04-22 04:32 J	-29210392.38	-29210392.31	-29210392.20	0.0146	0.0136
Saturn	-84687-07-26 00:56 J	-29210297.71	-29210297.46	-29210297.20	0.0284	0.0007
Uranus	-84686-04-27 05:30 J	-29210022.32	-29210022.27	-29210022.18	0.0147	0.0141
Saturn	-84686-08-09 14:37 J	-29209918.11	-29209917.89	-29209917.66	0.0286	0.0122
Uranus	-84685-05-01 06:56 J	-29209652.23	-29209652.21	-29209652.14	0.0147	0.0145
Saturn	-84685-08-23 10:04 J	-29209538.20	-29209538.08	-29209537.94	0.0288	0.0247
Uranus	-84680-05-26 04:47 J	-29207801.30	-29207801.30	-29207801.28	0.0147	0.0147
Uranus	-84679-05-31 10:47 J	-29207431.08	-29207431.05	-29207430.99	0.0147	0.0144

Uranus	-84678-06-05 17:59 J	-29207060.82	-29207060.75	-29207060.68	0.0147	0.0140
Jupiter	-84677-04-02 19:40 J	-29206758.79	-29206758.68	-29206758.56	0.0516	0.0444
Uranus	-84677-06-10 00:42 J	-29206690.54	-29206690.47	-29206690.35	0.0147	0.0136
Uranus	-84676-06-15 08:08 J	-29206320.26	-29206320.16	-29206320.02	0.0147	0.0130
Saturn	-84676-12-27 22:47 J	-29206124.61	-29206124.55	-29206124.48	0.0282	0.0271
Uranus	-84675-06-20 16:18 J	-29205949.95	-29205949.82	-29205949.67	0.0146	0.0123
Saturn	-84674-01-09 12:42 J	-29205747.16	-29205746.97	-29205746.77	0.0279	0.0165
Uranus	-84674-06-26 00:13 J	-29205579.65	-29205579.49	-29205579.33	0.0146	0.0114
Saturn	-84673-01-21 18:28 J	-29205369.96	-29205369.73	-29205369.49	0.0277	0.0056
Uranus	-84673-06-30 07:40 J	-29205209.35	-29205209.18	-29205208.99	0.0146	0.0106
Saturn	-84672-02-01 17:30 J	-29204993.01	-29204992.77	-29204992.54	0.0275	0.0050
Uranus	-84672-07-05 14:52 J	-29204839.06	-29204838.88	-29204838.68	0.0145	0.0096
Saturn	-84671-02-13 11:01 J	-29204616.24	-29204616.04	-29204615.84	0.0273	0.0150
Uranus	-84671-07-10 22:04 J	-29204468.79	-29204468.58	-29204468.37	0.0145	0.0086
Saturn	-84670-02-25 00:13 J	-29204239.59	-29204239.49	-29204239.37	0.0271	0.0241
Uranus	-84670-07-16 04:18 J	-29204098.53	-29204098.32	-29204098.09	0.0144	0.0075
Uranus	-84669-07-20 10:32 J	-29203728.29	-29203728.06	-29203727.82	0.0144	0.0064
Uranus	-84668-07-25 15:20 J	-29203358.09	-29203357.86	-29203357.60	0.0143	0.0053
Uranus	-84667-07-30 19:54 J	-29202987.91	-29202987.67	-29202987.40	0.0142	0.0042
Uranus	-84666-08-04 23:44 J	-29202617.76	-29202617.51	-29202617.24	0.0142	0.0030
Uranus	-84665-08-09 02:37 J	-29202247.64	-29202247.39	-29202247.12	0.0141	0.0019
Uranus	-84664-08-14 04:47 J	-29201877.56	-29201877.30	-29201877.03	0.0141	0.0007
Uranus	-84663-08-19 05:59 J	-29201507.51	-29201507.25	-29201506.98	0.0140	0.0005
Uranus	-84662-08-24 06:13 J	-29201137.50	-29201137.24	-29201136.97	0.0139	0.0016
Mars	-84661-06-14 21:35 J	-29200841.78	-29200841.60	-29200841.41	0.1603	0.0468
Uranus	-84661-08-28 05:16 J	-29200767.53	-29200767.28	-29200767.02	0.0139	0.0027
Saturn	-84660-06-22 11:16 J	-29200469.03	-29200469.03	-29200469.03	0.0278	0.0278
Uranus	-84660-09-02 03:20 J	-29200397.61	-29200397.36	-29200397.10	0.0138	0.0038
Saturn	-84659-07-06 03:20 J	-29200090.55	-29200090.36	-29200090.16	0.0281	0.0175
Uranus	-84659-09-07 00:13 J	-29200027.72	-29200027.49	-29200027.23	0.0138	0.0049

Saturn -84658-07-20 05:01 J -29199711.53 -29199711.29 -29199711.04 0.0283 0.0057
 Uranus -84658-09-11 20:08 J -29199657.88 -29199657.66 -29199657.41 0.0137 0.0058
 Saturn -84657-08-02 14:52 J -29199332.12 -29199331.88 -29199331.63 0.0286 0.0070
 Uranus -84657-09-15 14:37 J -29199288.10 -29199287.89 -29199287.65 0.0136 0.0067
 Saturn -84656-08-17 07:25 J -29198952.37 -29198952.19 -29198952.00 0.0288 0.0197
 Uranus -84656-09-20 08:08 J -29198918.36 -29198918.16 -29198917.93 0.0136 0.0076
 Uranus -84655-09-25 00:42 J -29198548.67 -29198548.47 -29198548.26 0.0135 0.0084
 Uranus -84654-09-29 15:49 J -29198179.02 -29198178.84 -29198178.64 0.0135 0.0091
 Uranus -84653-10-03 05:59 J -29197809.42 -29197809.25 -29197809.07 0.0134 0.0098
 Uranus -84652-10-07 19:11 J -29197439.86 -29197439.70 -29197439.53 0.0134 0.0104
 Uranus -84651-10-12 07:11 J -29197070.33 -29197070.20 -29197070.04 0.0134 0.0110
 Uranus -84650-10-16 18:13 J -29196700.84 -29196700.74 -29196700.58 0.0133 0.0116
 Uranus -84649-10-20 05:01 J -29196331.40 -29196331.29 -29196331.18 0.0133 0.0119
 Uranus -84648-10-24 14:08 J -29195961.98 -29195961.91 -29195961.80 0.0133 0.0124
 Uranus -84647-10-28 23:01 J -29195592.60 -29195592.54 -29195592.45 0.0132 0.0127
 Uranus -84646-11-02 06:56 J -29195223.25 -29195223.21 -29195223.15 0.0132 0.0129
 Saturn -84645-01-04 06:42 J -29195160.36 -29195160.22 -29195160.05 0.0280 0.0214
 Uranus -84645-11-05 14:08 J -29194853.92 -29194853.91 -29194853.88 0.0132 0.0131
 Saturn -84644-01-15 15:49 J -29194783.05 -29194782.84 -29194782.61 0.0277 0.0106
 Saturn -84643-01-27 17:30 J -29194406.01 -29194405.77 -29194405.53 0.0275 0.0002
 Saturn -84642-02-08 12:42 J -29194029.19 -29194028.97 -29194028.75 0.0273 0.0105
 Saturn -84641-02-20 03:20 J -29193652.51 -29193652.36 -29193652.19 0.0271 0.0200
 Uranus -84639-11-29 18:13 J -29192638.75 -29192638.74 -29192638.69 0.0131 0.0131
 Uranus -84638-12-03 21:06 J -29192269.65 -29192269.62 -29192269.55 0.0131 0.0129
 Neptune -84637-03-21 23:59 J -29192160.51 -29192160.50 -29192160.46 0.0089 0.0088
 Uranus -84637-12-06 23:59 J -29191900.55 -29191900.50 -29191900.41 0.0131 0.0126
 Neptune -84636-03-24 09:20 J -29191793.28 -29191793.11 -29191792.93 0.0089 0.0064
 Jupiter -84636-09-24 13:40 J -29191609.12 -29191608.93 -29191608.74 0.0506 0.0309
 Uranus -84636-12-11 02:37 J -29191531.46 -29191531.39 -29191531.28 0.0132 0.0123
 Neptune -84635-03-26 18:13 J -29191425.94 -29191425.74 -29191425.49 0.0089 0.0041

Uranus -84635-12-15 05:01 J -29191162.38 -29191162.29 -29191162.17 0.0132 0.0119
 Neptune -84634-03-29 04:04 J -29191058.57 -29191058.33 -29191058.08 0.0089 0.0017
 Uranus -84634-12-19 07:11 J -29190793.30 -29190793.20 -29190793.06 0.0132 0.0115
 Neptune -84633-03-30 13:25 J -29190691.18 -29190690.94 -29190690.68 0.0089 0.0008
 Uranus -84633-12-22 09:35 J -29190424.22 -29190424.10 -29190423.95 0.0132 0.0110
 Neptune -84632-04-01 23:01 J -29190323.76 -29190323.54 -29190323.29 0.0089 0.0032
 Uranus -84632-12-26 11:59 J -29190055.14 -29190055.00 -29190054.84 0.0132 0.0105
 Neptune -84631-04-04 08:37 J -29189956.32 -29189956.14 -29189955.93 0.0089 0.0056
 Uranus -84631-12-30 14:23 J -29189686.06 -29189685.90 -29189685.73 0.0133 0.0099
 Jupiter -84630-03-20 11:59 J -29189606.13 -29189606.00 -29189605.85 0.0523 0.0402
 Neptune -84630-04-06 18:42 J -29189588.81 -29189588.72 -29189588.60 0.0089 0.0080
 Saturn -84630-06-29 23:59 J -29189504.64 -29189504.50 -29189504.34 0.0279 0.0223
 Uranus -84629-01-03 16:04 J -29189316.99 -29189316.83 -29189316.63 0.0133 0.0093
 Saturn -84629-07-12 21:06 J -29189125.84 -29189125.62 -29189125.38 0.0282 0.0112
 Uranus -84628-01-06 18:28 J -29188947.90 -29188947.73 -29188947.52 0.0133 0.0087
 Saturn -84628-07-27 03:06 J -29188746.62 -29188746.37 -29188746.11 0.0284 0.0011
 Uranus -84627-01-10 21:20 J -29188578.80 -29188578.61 -29188578.40 0.0134 0.0079
 Saturn -84627-08-10 17:01 J -29188367.01 -29188366.79 -29188366.56 0.0286 0.0137
 Uranus -84626-01-14 23:59 J -29188209.70 -29188209.50 -29188209.28 0.0134 0.0071
 Saturn -84626-08-25 12:28 J -29187987.07 -29187986.98 -29187986.86 0.0288 0.0262
 Uranus -84625-01-19 03:06 J -29187840.57 -29187840.37 -29187840.14 0.0135 0.0064
 Uranus -84624-01-22 06:56 J -29187471.43 -29187471.21 -29187470.98 0.0135 0.0055
 Jupiter -84624-09-29 13:25 J -29187221.17 -29187220.94 -29187220.70 0.0508 0.0031
 Uranus -84623-01-26 11:01 J -29187102.26 -29187102.04 -29187101.80 0.0136 0.0047
 Uranus -84622-01-30 15:49 J -29186733.08 -29186732.84 -29186732.60 0.0136 0.0037
 Uranus -84621-02-03 20:52 J -29186363.86 -29186363.63 -29186363.38 0.0137 0.0029
 Uranus -84620-02-07 03:06 J -29185994.61 -29185994.37 -29185994.12 0.0137 0.0019
 Uranus -84619-02-11 10:18 J -29185625.32 -29185625.07 -29185624.83 0.0138 0.0008
 Uranus -84618-02-15 17:44 J -29185256.00 -29185255.76 -29185255.51 0.0138 0.0002
 Jupiter -84618-03-24 22:32 J -29185218.78 -29185218.56 -29185218.34 0.0521 0.0133

Uranus	-84617-02-20 02:08 J	-29184886.65	-29184886.41	-29184886.16	0.0139	0.0013
Saturn	-84617-12-28 23:44 J	-29184573.61	-29184573.51	-29184573.41	0.0282	0.0256
Uranus	-84616-02-23 11:30 J	-29184517.26	-29184517.02	-29184516.78	0.0139	0.0023
Saturn	-84615-01-10 13:25 J	-29184196.14	-29184195.94	-29184195.73	0.0279	0.0149
Uranus	-84615-02-27 21:35 J	-29184147.84	-29184147.60	-29184147.36	0.0140	0.0034
Saturn	-84614-01-22 19:11 J	-29183818.93	-29183818.70	-29183818.46	0.0277	0.0041
Uranus	-84614-03-04 08:37 J	-29183778.37	-29183778.14	-29183777.90	0.0141	0.0044
Saturn	-84613-02-03 18:13 J	-29183441.97	-29183441.74	-29183441.51	0.0275	0.0065
Uranus	-84613-03-07 20:37 J	-29183408.86	-29183408.64	-29183408.41	0.0141	0.0055
Saturn	-84612-02-14 11:44 J	-29183065.20	-29183065.01	-29183064.82	0.0273	0.0164
Uranus	-84612-03-12 09:35 J	-29183039.31	-29183039.10	-29183038.87	0.0142	0.0065
Jupiter	-84612-10-04 11:44 J	-29182833.21	-29182833.01	-29182832.80	0.0510	0.0250
Saturn	-84611-02-26 01:11 J	-29182688.52	-29182688.45	-29182688.36	0.0271	0.0253
Uranus	-84611-03-16 23:59 J	-29182669.70	-29182669.50	-29182669.28	0.0143	0.0075
Uranus	-84610-03-21 14:52 J	-29182300.06	-29182299.88	-29182299.66	0.0143	0.0086
Uranus	-84609-03-25 07:54 J	-29181930.35	-29181930.17	-29181929.98	0.0144	0.0094
Uranus	-84608-03-30 01:25 J	-29181560.60	-29181560.44	-29181560.25	0.0144	0.0103
Uranus	-84607-04-03 20:23 J	-29181190.79	-29181190.65	-29181190.48	0.0145	0.0112
Jupiter	-84606-03-29 12:28 J	-29180831.20	-29180830.98	-29180830.76	0.0519	0.0142
Uranus	-84606-04-08 17:01 J	-29180820.93	-29180820.79	-29180820.65	0.0145	0.0119
Uranus	-84605-04-12 14:23 J	-29180451.01	-29180450.90	-29180450.77	0.0146	0.0127
Uranus	-84604-04-17 12:56 J	-29180081.05	-29180080.96	-29180080.85	0.0146	0.0133
Uranus	-84603-04-22 12:13 J	-29179711.04	-29179710.99	-29179710.89	0.0146	0.0140
Uranus	-84602-04-27 12:56 J	-29179340.99	-29179340.96	-29179340.89	0.0147	0.0144
Saturn	-84601-06-23 14:23 J	-29178917.97	-29178917.90	-29178917.81	0.0278	0.0263
Saturn	-84600-07-07 06:56 J	-29178539.41	-29178539.21	-29178538.99	0.0281	0.0159
Saturn	-84599-07-21 08:52 J	-29178160.38	-29178160.13	-29178159.88	0.0283	0.0040
Saturn	-84598-08-04 18:42 J	-29177780.95	-29177780.72	-29177780.47	0.0286	0.0087
Saturn	-84597-08-18 11:16 J	-29177401.18	-29177401.03	-29177400.84	0.0288	0.0213
Uranus	-84595-05-31 18:42 J	-29176749.75	-29176749.72	-29176749.66	0.0147	0.0144

Jupiter -84594-04-03 04:04 J -29176443.45 -29176443.33 -29176443.19 0.0516 0.0419
 Uranus -84594-06-06 01:40 J -29176379.49 -29176379.43 -29176379.34 0.0147 0.0140
 Uranus -84593-06-10 08:52 J -29176009.21 -29176009.13 -29176009.01 0.0147 0.0135
 Uranus -84592-06-15 16:47 J -29175638.91 -29175638.80 -29175638.66 0.0147 0.0128
 Uranus -84591-06-21 00:28 J -29175268.61 -29175268.48 -29175268.31 0.0146 0.0121
 Uranus -84590-06-26 08:23 J -29174898.30 -29174898.15 -29174897.97 0.0146 0.0112
 Uranus -84589-06-30 16:04 J -29174528.00 -29174527.83 -29174527.63 0.0146 0.0103
 Uranus -84588-07-05 23:30 J -29174157.71 -29174157.52 -29174157.31 0.0145 0.0093
 Uranus -84587-07-11 06:42 J -29173787.43 -29173787.22 -29173787.00 0.0145 0.0082
 Saturn -84586-01-05 09:35 J -29173609.27 -29173609.10 -29173608.93 0.0280 0.0198
 Uranus -84586-07-16 12:56 J -29173417.17 -29173416.96 -29173416.72 0.0144 0.0071
 Saturn -84585-01-17 18:28 J -29173231.95 -29173231.73 -29173231.50 0.0277 0.0090
 Uranus -84585-07-20 18:56 J -29173046.94 -29173046.71 -29173046.46 0.0144 0.0060
 Saturn -84584-01-28 19:54 J -29172854.90 -29172854.67 -29172854.43 0.0275 0.0018
 Uranus -84584-07-25 23:59 J -29172676.73 -29172676.50 -29172676.24 0.0143 0.0049
 Saturn -84583-02-09 15:20 J -29172478.07 -29172477.86 -29172477.64 0.0273 0.0120
 Uranus -84583-07-31 04:47 J -29172306.54 -29172306.30 -29172306.04 0.0143 0.0037
 Saturn -84582-02-21 06:13 J -29172101.38 -29172101.24 -29172101.09 0.0271 0.0213
 Mars -84582-06-18 00:13 J -29171984.68 -29171984.49 -29171984.29 0.1605 0.0169
 Uranus -84582-08-05 08:37 J -29171936.39 -29171936.14 -29171935.88 0.0142 0.0025
 Uranus -84581-08-09 11:44 J -29171566.27 -29171566.01 -29171565.75 0.0141 0.0013
 Uranus -84580-08-14 13:54 J -29171196.18 -29171195.92 -29171195.66 0.0141 0.0001
 Uranus -84579-08-19 15:06 J -29170826.13 -29170825.87 -29170825.61 0.0140 0.0011
 Uranus -84578-08-24 15:20 J -29170456.12 -29170455.86 -29170455.60 0.0139 0.0022
 Uranus -84577-08-28 14:23 J -29170086.15 -29170085.90 -29170085.64 0.0139 0.0033
 Uranus -84576-09-02 12:28 J -29169716.22 -29169715.98 -29169715.72 0.0138 0.0044
 Mars -84576-12-21 18:28 J -29169605.92 -29169605.73 -29169605.53 0.1936 0.0524
 Uranus -84575-09-07 09:20 J -29169346.34 -29169346.11 -29169345.86 0.0138 0.0054
 Uranus -84574-09-12 05:16 J -29168976.51 -29168976.28 -29168976.04 0.0137 0.0063
 Uranus -84573-09-15 23:30 J -29168606.73 -29168606.52 -29168606.28 0.0137 0.0073

Uranus -84572-09-20 17:01 J -29168236.99 -29168236.79 -29168236.57 0.0136 0.0081
 Saturn -84571-07-01 04:47 J -29167953.47 -29167953.30 -29167953.13 0.0279 0.0207
 Uranus -84571-09-25 09:20 J -29167867.30 -29167867.11 -29167866.90 0.0135 0.0089
 Saturn -84570-07-15 01:54 J -29167574.65 -29167574.42 -29167574.18 0.0282 0.0095
 Uranus -84570-09-30 00:28 J -29167497.64 -29167497.48 -29167497.28 0.0135 0.0096
 Saturn -84569-07-28 07:54 J -29167195.42 -29167195.17 -29167194.91 0.0284 0.0028
 Uranus -84569-10-03 14:23 J -29167128.05 -29167127.90 -29167127.71 0.0134 0.0103
 Saturn -84568-08-11 21:49 J -29166815.80 -29166815.59 -29166815.37 0.0286 0.0154
 Uranus -84568-10-08 04:04 J -29166758.48 -29166758.33 -29166758.17 0.0134 0.0108
 Saturn -84567-08-26 17:30 J -29166435.83 -29166435.77 -29166435.69 0.0288 0.0276
 Uranus -84567-10-12 16:04 J -29166388.95 -29166388.83 -29166388.68 0.0134 0.0114
 Uranus -84566-10-17 03:35 J -29166019.47 -29166019.35 -29166019.24 0.0133 0.0119
 Uranus -84565-10-20 13:25 J -29165650.02 -29165649.94 -29165649.83 0.0133 0.0123
 Uranus -84564-10-24 23:16 J -29165280.59 -29165280.53 -29165280.45 0.0133 0.0127
 Uranus -84563-10-29 07:54 J -29164911.21 -29164911.17 -29164911.11 0.0132 0.0129
 Uranus -84562-11-02 15:49 J -29164541.84 -29164541.84 -29164541.83 0.0132 0.0132
 Saturn -84558-12-31 01:40 J -29163022.54 -29163022.43 -29163022.29 0.0282 0.0242
 Saturn -84556-01-11 15:49 J -29162645.05 -29162644.84 -29162644.63 0.0279 0.0134
 Saturn -84555-01-23 21:35 J -29162267.83 -29162267.60 -29162267.36 0.0277 0.0025
 Neptune -84555-09-26 23:59 J -29162021.59 -29162021.50 -29162021.34 0.0088 0.0079
 Uranus -84555-11-30 02:37 J -29161957.40 -29161957.39 -29161957.36 0.0131 0.0131
 Saturn -84554-02-04 20:23 J -29161890.87 -29161890.65 -29161890.42 0.0275 0.0081
 Neptune -84554-09-29 14:37 J -29161654.08 -29161653.89 -29161653.66 0.0088 0.0053
 Uranus -84554-12-04 05:30 J -29161588.30 -29161588.27 -29161588.20 0.0131 0.0128
 Saturn -84553-02-16 13:54 J -29161514.09 -29161513.92 -29161513.73 0.0273 0.0178
 Jupiter -84553-09-23 22:18 J -29161293.75 -29161293.57 -29161293.39 0.0505 0.0327
 Neptune -84553-10-01 04:47 J -29161286.54 -29161286.30 -29161286.04 0.0088 0.0028
 Uranus -84553-12-07 08:08 J -29161219.21 -29161219.16 -29161219.07 0.0131 0.0126
 Saturn -84552-02-27 03:35 J -29161137.38 -29161137.35 -29161137.29 0.0271 0.0266
 Neptune -84552-10-03 18:56 J -29160918.97 -29160918.71 -29160918.44 0.0088 0.0004

Uranus -84552-12-11 11:01 J -29160850.12 -29160850.04 -29160849.93 0.0131 0.0122
 Neptune -84551-10-06 08:37 J -29160551.39 -29160551.14 -29160550.87 0.0088 0.0021
 Uranus -84551-12-15 13:25 J -29160481.04 -29160480.94 -29160480.82 0.0132 0.0118
 Pluto -84550-07-07 15:20 J -29160277.09 -29160276.86 -29160276.60 0.0067 0.0028
 Neptune -84550-10-08 22:18 J -29160183.79 -29160183.57 -29160183.34 0.0088 0.0046
 Uranus -84550-12-19 16:04 J -29160111.96 -29160111.83 -29160111.71 0.0132 0.0113
 Neptune -84549-10-10 11:30 J -29159816.16 -29159816.02 -29159815.84 0.0088 0.0070
 Uranus -84549-12-22 17:44 J -29159742.88 -29159742.76 -29159742.60 0.0132 0.0109
 Uranus -84548-12-26 20:23 J -29159373.80 -29159373.65 -29159373.49 0.0132 0.0103
 Jupiter -84547-03-19 12:13 J -29159291.09 -29159290.99 -29159290.86 0.0523 0.0448
 Uranus -84547-12-30 21:49 J -29159004.74 -29159004.59 -29159004.40 0.0133 0.0097
 Uranus -84545-01-04 00:13 J -29158635.66 -29158635.49 -29158635.30 0.0133 0.0090
 Uranus -84544-01-07 02:08 J -29158266.58 -29158266.41 -29158266.20 0.0133 0.0084
 Uranus -84543-01-11 04:47 J -29157897.49 -29157897.30 -29157897.08 0.0134 0.0076
 Uranus -84542-01-15 07:25 J -29157528.39 -29157528.19 -29157527.96 0.0134 0.0069
 Saturn -84542-06-25 20:37 J -29157366.74 -29157366.64 -29157366.52 0.0278 0.0248
 Uranus -84541-01-19 10:47 J -29157159.26 -29157159.05 -29157158.82 0.0135 0.0060
 Saturn -84541-07-08 13:40 J -29156988.14 -29156987.93 -29156987.71 0.0281 0.0142
 Jupiter -84541-09-28 16:04 J -29156906.07 -29156905.83 -29156905.59 0.0507 0.0062
 Uranus -84540-01-22 14:23 J -29156790.12 -29156789.90 -29156789.67 0.0135 0.0051
 Saturn -84540-07-22 15:49 J -29156609.09 -29156608.84 -29156608.59 0.0283 0.0023
 Uranus -84539-01-26 18:28 J -29156420.95 -29156420.73 -29156420.49 0.0135 0.0043
 Saturn -84539-08-06 02:08 J -29156229.64 -29156229.41 -29156229.17 0.0286 0.0103
 Uranus -84538-01-30 23:16 J -29156051.77 -29156051.53 -29156051.29 0.0136 0.0033
 Saturn -84538-08-20 19:11 J -29155849.85 -29155849.70 -29155849.54 0.0288 0.0228
 Uranus -84537-02-04 04:32 J -29155682.55 -29155682.31 -29155682.06 0.0137 0.0024
 Uranus -84536-02-07 10:47 J -29155313.29 -29155313.05 -29155312.80 0.0137 0.0014
 Uranus -84535-02-11 17:44 J -29154944.01 -29154943.76 -29154943.52 0.0138 0.0004
 Jupiter -84535-03-24 04:47 J -29154903.52 -29154903.30 -29154903.09 0.0521 0.0163
 Mars -84535-06-11 21:06 J -29154823.73 -29154823.62 -29154823.50 0.1597 0.1264

Uranus	-84534-02-16 01:11 J	-29154574.70	-29154574.45	-29154574.21	0.0138	0.0007
Uranus	-84533-02-20 09:20 J	-29154205.35	-29154205.11	-29154204.86	0.0139	0.0017
Uranus	-84532-02-23 18:13 J	-29153835.97	-29153835.74	-29153835.49	0.0139	0.0029
Uranus	-84531-02-28 04:32 J	-29153466.54	-29153466.31	-29153466.07	0.0140	0.0038
Uranus	-84530-03-04 15:20 J	-29153097.09	-29153096.86	-29153096.62	0.0141	0.0049
Uranus	-84529-03-08 03:20 J	-29152727.57	-29152727.36	-29152727.13	0.0141	0.0060
Jupiter	-84529-10-03 12:42 J	-29152518.18	-29152517.97	-29152517.75	0.0509	0.0212
Uranus	-84528-03-12 16:18 J	-29152358.02	-29152357.82	-29152357.59	0.0142	0.0070
Saturn	-84527-01-06 14:08 J	-29152058.08	-29152057.91	-29152057.72	0.0280	0.0182
Uranus	-84527-03-17 06:42 J	-29151988.42	-29151988.22	-29151988.01	0.0143	0.0080
Saturn	-84526-01-18 23:01 J	-29151680.77	-29151680.54	-29151680.31	0.0277	0.0074
Uranus	-84526-03-21 21:49 J	-29151618.77	-29151618.59	-29151618.38	0.0143	0.0090
Saturn	-84525-01-31 00:13 J	-29151303.73	-29151303.49	-29151303.25	0.0275	0.0033
Uranus	-84525-03-25 14:37 J	-29151249.06	-29151248.89	-29151248.70	0.0144	0.0099
Saturn	-84524-02-10 19:25 J	-29150926.89	-29150926.69	-29150926.47	0.0273	0.0135
Uranus	-84524-03-30 08:37 J	-29150879.30	-29150879.14	-29150878.97	0.0144	0.0108
Saturn	-84523-02-22 10:18 J	-29150550.19	-29150550.07	-29150549.93	0.0271	0.0227
Jupiter	-84523-03-28 21:35 J	-29150515.82	-29150515.60	-29150515.38	0.0519	0.0120
Uranus	-84523-04-04 03:35 J	-29150509.49	-29150509.35	-29150509.19	0.0145	0.0116
Uranus	-84522-04-08 23:30 J	-29150139.62	-29150139.52	-29150139.37	0.0145	0.0125
Uranus	-84521-04-12 21:06 J	-29149769.71	-29149769.62	-29149769.50	0.0146	0.0131
Uranus	-84520-04-17 19:40 J	-29149399.75	-29149399.68	-29149399.58	0.0146	0.0137
Uranus	-84519-04-22 18:56 J	-29149029.74	-29149029.71	-29149029.63	0.0146	0.0143
Uranus	-84518-04-27 20:08 J	-29148659.67	-29148659.66	-29148659.64	0.0147	0.0146
Jupiter	-84517-10-08 11:01 J	-29148130.10	-29148130.04	-29148129.97	0.0512	0.0491
Saturn	-84512-07-02 12:56 J	-29146402.14	-29146401.96	-29146401.77	0.0279	0.0190
Jupiter	-84511-04-02 12:13 J	-29146128.13	-29146127.99	-29146127.83	0.0517	0.0393
Uranus	-84511-06-01 01:54 J	-29146068.47	-29146068.42	-29146068.37	0.0147	0.0144
Saturn	-84511-07-16 10:18 J	-29146023.31	-29146023.07	-29146022.82	0.0282	0.0077
Uranus	-84510-06-06 08:37 J	-29145698.20	-29145698.14	-29145698.03	0.0147	0.0140

Saturn -84510-07-30 16:47 J -29145644.05 -29145643.80 -29145643.55 0.0284 0.0046
 Uranus -84509-06-10 16:18 J -29145327.91 -29145327.82 -29145327.70 0.0147 0.0133
 Saturn -84509-08-13 06:28 J -29145264.42 -29145264.23 -29145264.02 0.0286 0.0171
 Uranus -84508-06-16 00:13 J -29144957.61 -29144957.49 -29144957.35 0.0147 0.0126
 Uranus -84507-06-21 07:54 J -29144587.30 -29144587.17 -29144587.00 0.0146 0.0118
 Uranus -84506-06-26 15:49 J -29144216.99 -29144216.84 -29144216.65 0.0146 0.0109
 Uranus -84505-06-30 23:16 J -29143846.70 -29143846.53 -29143846.32 0.0146 0.0100
 Uranus -84504-07-06 06:42 J -29143476.40 -29143476.22 -29143475.99 0.0145 0.0090
 Mars -84503-06-20 04:32 J -29143127.47 -29143127.31 -29143127.14 0.1608 0.0820
 Uranus -84503-07-11 14:08 J -29143106.12 -29143105.91 -29143105.68 0.0145 0.0078
 Uranus -84502-07-16 20:37 J -29142735.86 -29142735.64 -29142735.40 0.0144 0.0067
 Uranus -84501-07-21 02:37 J -29142365.62 -29142365.39 -29142365.14 0.0144 0.0055
 Uranus -84500-07-26 07:54 J -29141995.41 -29141995.17 -29141994.91 0.0143 0.0043
 Uranus -84499-07-31 12:56 J -29141625.22 -29141624.96 -29141624.70 0.0143 0.0031
 Saturn -84498-01-01 05:59 J -29141471.38 -29141471.25 -29141471.10 0.0282 0.0227
 Uranus -84498-08-05 16:47 J -29141255.06 -29141254.80 -29141254.54 0.0142 0.0019
 Saturn -84497-01-13 19:40 J -29141093.89 -29141093.68 -29141093.46 0.0279 0.0118
 Uranus -84497-08-09 19:54 J -29140884.93 -29140884.67 -29140884.41 0.0141 0.0007
 Mars -84497-12-25 07:11 J -29140747.36 -29140747.20 -29140747.04 0.1932 0.1124
 Saturn -84496-01-25 01:25 J -29140716.68 -29140716.44 -29140716.20 0.0277 0.0010
 Uranus -84496-08-14 22:18 J -29140514.83 -29140514.57 -29140514.31 0.0141 0.0005
 Saturn -84495-02-05 23:59 J -29140339.71 -29140339.50 -29140339.27 0.0275 0.0096
 Uranus -84495-08-19 23:44 J -29140144.77 -29140144.51 -29140144.25 0.0140 0.0016
 Saturn -84494-02-17 17:44 J -29139962.92 -29139962.76 -29139962.59 0.0273 0.0192
 Uranus -84494-08-24 23:59 J -29139774.76 -29139774.50 -29139774.24 0.0139 0.0028
 Uranus -84493-08-28 23:01 J -29139404.78 -29139404.54 -29139404.28 0.0139 0.0039
 Uranus -84492-09-02 21:06 J -29139034.85 -29139034.62 -29139034.36 0.0138 0.0050
 Uranus -84491-09-07 17:59 J -29138664.97 -29138664.75 -29138664.50 0.0138 0.0060
 Uranus -84490-09-12 13:54 J -29138295.14 -29138294.92 -29138294.68 0.0137 0.0069
 Uranus -84489-09-16 08:37 J -29137925.36 -29137925.14 -29137924.93 0.0137 0.0078

Uranus	-84488-09-21 01:54 J	-29137555.61	-29137555.42	-29137555.21	0.0136	0.0086
Uranus	-84487-09-25 18:13 J	-29137185.92	-29137185.74	-29137185.54	0.0136	0.0094
Uranus	-84486-09-30 09:20 J	-29136816.27	-29136816.11	-29136815.92	0.0135	0.0101
Uranus	-84485-10-03 23:16 J	-29136446.66	-29136446.53	-29136446.35	0.0135	0.0108
Uranus	-84484-10-08 12:56 J	-29136077.08	-29136076.96	-29136076.81	0.0134	0.0113
Saturn	-84483-06-27 05:30 J	-29135815.39	-29135815.27	-29135815.12	0.0278	0.0232
Uranus	-84483-10-13 00:56 J	-29135707.56	-29135707.46	-29135707.32	0.0134	0.0119
Saturn	-84482-07-10 23:01 J	-29135436.76	-29135436.54	-29135436.31	0.0281	0.0125
Uranus	-84482-10-17 12:28 J	-29135338.06	-29135337.98	-29135337.87	0.0133	0.0123
Saturn	-84481-07-24 01:40 J	-29135057.69	-29135057.43	-29135057.18	0.0283	0.0006
Uranus	-84481-10-20 22:47 J	-29134968.60	-29134968.55	-29134968.46	0.0133	0.0127
Saturn	-84480-08-07 12:13 J	-29134678.21	-29134677.99	-29134677.76	0.0286	0.0121
Uranus	-84480-10-25 08:23 J	-29134599.17	-29134599.15	-29134599.08	0.0133	0.0131
Saturn	-84479-08-22 05:44 J	-29134298.39	-29134298.26	-29134298.13	0.0288	0.0244
Neptune	-84472-03-23 21:20 J	-29131892.71	-29131892.61	-29131892.44	0.0089	0.0075
Neptune	-84471-03-26 06:56 J	-29131525.40	-29131525.21	-29131524.99	0.0089	0.0051
Uranus	-84471-11-30 12:13 J	-29131275.99	-29131275.99	-29131275.97	0.0131	0.0131
Neptune	-84470-03-28 16:18 J	-29131158.05	-29131157.82	-29131157.57	0.0089	0.0027
Jupiter	-84470-09-23 22:04 J	-29130978.74	-29130978.58	-29130978.41	0.0505	0.0363
Uranus	-84470-12-04 15:06 J	-29130906.90	-29130906.87	-29130906.80	0.0131	0.0129
Saturn	-84470-12-27 03:20 J	-29130884.41	-29130884.36	-29130884.28	0.0282	0.0272
Neptune	-84469-03-30 02:08 J	-29130790.66	-29130790.41	-29130790.16	0.0089	0.0003
Uranus	-84469-12-07 17:44 J	-29130537.81	-29130537.76	-29130537.66	0.0131	0.0126
Saturn	-84468-01-07 20:23 J	-29130506.84	-29130506.65	-29130506.45	0.0280	0.0166
Neptune	-84468-04-01 11:16 J	-29130423.27	-29130423.03	-29130422.78	0.0089	0.0021
Uranus	-84468-12-11 20:37 J	-29130168.71	-29130168.64	-29130168.52	0.0131	0.0122
Saturn	-84467-01-20 04:47 J	-29130129.53	-29130129.30	-29130129.06	0.0277	0.0058
Neptune	-84467-04-03 20:52 J	-29130055.84	-29130055.63	-29130055.40	0.0089	0.0045
Uranus	-84467-12-15 23:16 J	-29129799.64	-29129799.53	-29129799.41	0.0132	0.0117
Saturn	-84466-02-01 06:13 J	-29129752.48	-29129752.24	-29129752.01	0.0275	0.0049

Neptune -84466-04-06 06:28 J -29129688.37 -29129688.23 -29129688.06 0.0089 0.0069
 Uranus -84466-12-20 01:25 J -29129430.55 -29129430.44 -29129430.29 0.0132 0.0112
 Saturn -84465-02-13 01:11 J -29129375.63 -29129375.45 -29129375.24 0.0273 0.0150
 Uranus -84465-12-23 03:20 J -29129061.48 -29129061.36 -29129061.19 0.0132 0.0107
 Pluto -84464-01-09 19:40 J -29129043.79 -29129043.68 -29129043.51 0.0078 0.0065
 Saturn -84464-02-23 16:04 J -29128998.92 -29128998.83 -29128998.71 0.0271 0.0241
 Jupiter -84464-03-18 19:25 J -29128975.79 -29128975.69 -29128975.60 0.0524 0.0473
 Uranus -84464-12-27 05:44 J -29128692.41 -29128692.26 -29128692.09 0.0132 0.0101
 Uranus -84463-12-31 07:25 J -29128323.35 -29128323.19 -29128323.00 0.0133 0.0095
 Uranus -84461-01-04 09:49 J -29127954.27 -29127954.09 -29127953.90 0.0133 0.0087
 Uranus -84460-01-07 11:44 J -29127585.19 -29127585.01 -29127584.80 0.0133 0.0080
 Uranus -84459-01-11 14:23 J -29127216.10 -29127215.90 -29127215.68 0.0134 0.0073
 Uranus -84458-01-15 17:01 J -29126847.00 -29126846.79 -29126846.56 0.0134 0.0064
 Jupiter -84458-09-28 18:28 J -29126590.97 -29126590.73 -29126590.50 0.0507 0.0094
 Uranus -84457-01-19 20:08 J -29126477.87 -29126477.66 -29126477.42 0.0134 0.0056
 Uranus -84456-01-22 23:59 J -29126108.73 -29126108.50 -29126108.27 0.0135 0.0047
 Mars -84456-06-14 00:13 J -29125966.67 -29125966.49 -29125966.32 0.1598 0.0648
 Uranus -84455-01-27 04:04 J -29125739.56 -29125739.33 -29125739.09 0.0135 0.0038
 Uranus -84454-01-31 08:37 J -29125370.37 -29125370.14 -29125369.89 0.0136 0.0029
 Saturn -84454-06-21 11:30 J -29125229.05 -29125229.02 -29125228.96 0.0277 0.0272
 Uranus -84453-02-04 14:08 J -29125001.15 -29125000.91 -29125000.66 0.0136 0.0019
 Saturn -84453-07-04 00:13 J -29124850.68 -29124850.49 -29124850.29 0.0280 0.0172
 Uranus -84452-02-07 20:08 J -29124631.90 -29124631.66 -29124631.41 0.0137 0.0009
 Jupiter -84452-03-23 11:59 J -29124588.21 -29124588.00 -29124587.79 0.0522 0.0191
 Saturn -84452-07-17 21:49 J -29124471.83 -29124471.59 -29124471.33 0.0282 0.0058
 Uranus -84451-02-12 02:52 J -29124262.62 -29124262.38 -29124262.13 0.0138 0.0003
 Saturn -84451-08-01 04:32 J -29124092.55 -29124092.31 -29124092.06 0.0284 0.0066
 Uranus -84450-02-16 10:04 J -29123893.32 -29123893.08 -29123892.83 0.0138 0.0012
 Saturn -84450-08-15 18:42 J -29123712.90 -29123712.72 -29123712.53 0.0287 0.0190
 Uranus -84449-02-20 18:13 J -29123523.98 -29123523.74 -29123523.49 0.0139 0.0023

Uranus	-84448-02-24 03:06 J	-29123154.60	-29123154.37	-29123154.12	0.0139	0.0033
Uranus	-84447-02-28 12:56 J	-29122785.19	-29122784.96	-29122784.72	0.0140	0.0044
Uranus	-84446-03-04 23:59 J	-29122415.73	-29122415.50	-29122415.27	0.0141	0.0054
Jupiter	-84446-10-03 17:44 J	-29122202.98	-29122202.76	-29122202.53	0.0509	0.0185
Uranus	-84445-03-08 11:59 J	-29122046.22	-29122046.00	-29122045.78	0.0141	0.0065
Uranus	-84444-03-13 00:42 J	-29121676.67	-29121676.47	-29121676.25	0.0142	0.0075
Uranus	-84443-03-17 14:52 J	-29121307.07	-29121306.88	-29121306.67	0.0142	0.0085
Uranus	-84442-03-22 06:13 J	-29120937.42	-29120937.24	-29120937.05	0.0143	0.0095
Uranus	-84441-03-25 22:47 J	-29120567.71	-29120567.55	-29120567.37	0.0144	0.0104
Jupiter	-84440-03-27 22:47 J	-29120200.78	-29120200.55	-29120200.33	0.0519	0.0076
Uranus	-84440-03-30 16:47 J	-29120197.95	-29120197.80	-29120197.65	0.0144	0.0112
Saturn	-84439-01-02 12:56 J	-29119920.11	-29119919.96	-29119919.80	0.0282	0.0212
Uranus	-84439-04-04 11:30 J	-29119828.14	-29119828.02	-29119827.87	0.0145	0.0121
Saturn	-84438-01-15 01:54 J	-29119542.64	-29119542.42	-29119542.19	0.0279	0.0103
Uranus	-84438-04-09 07:40 J	-29119458.28	-29119458.18	-29119458.05	0.0145	0.0128
Saturn	-84437-01-27 07:11 J	-29119165.44	-29119165.20	-29119164.96	0.0277	0.0007
Uranus	-84437-04-13 05:01 J	-29119088.37	-29119088.29	-29119088.19	0.0146	0.0135
Saturn	-84436-02-07 05:44 J	-29118788.47	-29118788.26	-29118788.04	0.0275	0.0111
Uranus	-84436-04-18 03:20 J	-29118718.42	-29118718.36	-29118718.29	0.0146	0.0140
Saturn	-84435-02-18 23:16 J	-29118411.68	-29118411.53	-29118411.37	0.0273	0.0206
Uranus	-84435-04-23 02:37 J	-29118348.40	-29118348.39	-29118348.35	0.0146	0.0146
Jupiter	-84434-10-08 16:04 J	-29117814.92	-29117814.83	-29117814.72	0.0511	0.0462
Jupiter	-84428-04-01 11:16 J	-29115813.19	-29115813.03	-29115812.85	0.0517	0.0343
Uranus	-84427-06-01 09:06 J	-29115387.17	-29115387.12	-29115387.06	0.0147	0.0144
Uranus	-84426-06-06 16:04 J	-29115016.90	-29115016.83	-29115016.73	0.0147	0.0138
Uranus	-84425-06-10 23:16 J	-29114646.62	-29114646.53	-29114646.40	0.0147	0.0132
Uranus	-84424-06-16 07:25 J	-29114276.32	-29114276.19	-29114276.05	0.0147	0.0124
Mars	-84424-06-22 08:23 J	-29114270.22	-29114270.15	-29114270.07	0.1610	0.1476
Saturn	-84424-06-28 17:16 J	-29114263.93	-29114263.78	-29114263.62	0.0278	0.0215
Uranus	-84423-06-21 15:06 J	-29113906.01	-29113905.87	-29113905.70	0.0146	0.0116

Saturn	-84423-07-12 11:16 J	-29113885.25	-29113885.03	-29113884.78	0.0281	0.0107
Uranus	-84422-06-26 23:01 J	-29113535.71	-29113535.54	-29113535.36	0.0146	0.0106
Saturn	-84422-07-26 14:37 J	-29113506.14	-29113505.89	-29113505.63	0.0283	0.0015
Uranus	-84421-07-01 06:42 J	-29113165.41	-29113165.22	-29113165.02	0.0146	0.0096
Saturn	-84421-08-09 01:54 J	-29113126.64	-29113126.42	-29113126.20	0.0286	0.0139
Uranus	-84420-07-06 13:54 J	-29112795.12	-29112794.92	-29112794.70	0.0145	0.0085
Saturn	-84420-08-23 19:25 J	-29112746.79	-29112746.69	-29112746.58	0.0288	0.0261
Uranus	-84419-07-11 21:06 J	-29112424.83	-29112424.62	-29112424.39	0.0145	0.0074
Uranus	-84418-07-17 03:35 J	-29112054.57	-29112054.35	-29112054.10	0.0144	0.0063
Uranus	-84417-07-21 09:35 J	-29111684.33	-29111684.10	-29111683.84	0.0144	0.0051
Uranus	-84416-07-26 15:20 J	-29111314.11	-29111313.86	-29111313.60	0.0143	0.0038
Uranus	-84415-07-31 20:23 J	-29110943.90	-29110943.65	-29110943.39	0.0143	0.0026
Uranus	-84414-08-06 00:28 J	-29110573.74	-29110573.48	-29110573.22	0.0142	0.0014
Uranus	-84413-08-10 03:49 J	-29110203.60	-29110203.34	-29110203.07	0.0141	0.0002
Uranus	-84412-08-15 06:13 J	-29109833.50	-29109833.24	-29109832.97	0.0141	0.0011
Uranus	-84411-08-20 07:40 J	-29109463.43	-29109463.18	-29109462.91	0.0140	0.0023
Saturn	-84411-12-28 11:59 J	-29109333.09	-29109333.00	-29109332.89	0.0282	0.0255
Uranus	-84410-08-25 08:08 J	-29109093.41	-29109093.16	-29109092.90	0.0140	0.0034
Saturn	-84409-01-10 04:18 J	-29108955.52	-29108955.32	-29108955.11	0.0280	0.0149
Uranus	-84409-08-29 07:11 J	-29108723.44	-29108723.20	-29108722.94	0.0139	0.0045
Saturn	-84408-01-21 12:28 J	-29108578.22	-29108577.98	-29108577.74	0.0277	0.0040
Uranus	-84408-09-03 05:30 J	-29108353.50	-29108353.27	-29108353.02	0.0138	0.0056
Saturn	-84407-02-02 13:25 J	-29108201.18	-29108200.94	-29108200.71	0.0275	0.0065
Uranus	-84407-09-08 02:37 J	-29107983.62	-29107983.39	-29107983.16	0.0138	0.0065
Saturn	-84406-02-14 08:23 J	-29107824.34	-29107824.15	-29107823.96	0.0273	0.0164
Uranus	-84406-09-12 22:18 J	-29107613.79	-29107613.57	-29107613.35	0.0137	0.0075
Saturn	-84405-02-25 23:01 J	-29107447.61	-29107447.54	-29107447.44	0.0271	0.0254
Uranus	-84405-09-16 17:01 J	-29107244.00	-29107243.79	-29107243.58	0.0137	0.0083
Uranus	-84404-09-21 10:18 J	-29106874.25	-29106874.07	-29106873.86	0.0136	0.0092
Uranus	-84403-09-26 02:37 J	-29106504.55	-29106504.39	-29106504.20	0.0136	0.0099

Uranus	-84402-09-30 17:44 J	-29106134.89	-29106134.76	-29106134.57	0.0135	0.0106
Uranus	-84401-10-04 08:37 J	-29105765.28	-29105765.14	-29105765.00	0.0135	0.0112
Uranus	-84400-10-08 22:04 J	-29105395.70	-29105395.58	-29105395.45	0.0134	0.0118
Uranus	-84399-10-13 10:04 J	-29105026.16	-29105026.08	-29105025.96	0.0134	0.0123
Uranus	-84398-10-17 22:04 J	-29104656.66	-29104656.58	-29104656.51	0.0133	0.0127
Uranus	-84397-10-21 08:23 J	-29104287.19	-29104287.15	-29104287.10	0.0133	0.0130
Saturn	-84395-06-23 00:56 J	-29103677.55	-29103677.46	-29103677.36	0.0277	0.0256
Saturn	-84394-07-06 13:54 J	-29103299.11	-29103298.92	-29103298.70	0.0280	0.0154
Saturn	-84393-07-19 12:28 J	-29102920.23	-29102919.98	-29102919.73	0.0282	0.0038
Saturn	-84392-08-02 19:40 J	-29102540.92	-29102540.68	-29102540.44	0.0285	0.0085
Saturn	-84391-08-17 09:49 J	-29102161.25	-29102161.09	-29102160.91	0.0287	0.0208
Neptune	-84391-09-26 08:23 J	-29102121.15	-29102121.15	-29102121.14	0.0088	0.0088
Neptune	-84390-09-28 22:18 J	-29101753.74	-29101753.57	-29101753.38	0.0088	0.0064
Neptune	-84389-09-30 12:13 J	-29101386.21	-29101385.99	-29101385.74	0.0088	0.0039
Neptune	-84388-10-03 02:37 J	-29101018.65	-29101018.39	-29101018.13	0.0088	0.0015
Jupiter	-84387-09-23 01:11 J	-29100663.59	-29100663.45	-29100663.29	0.0504	0.0393
Neptune	-84387-10-05 16:18 J	-29100651.07	-29100650.82	-29100650.55	0.0088	0.0011
Neptune	-84386-10-08 06:13 J	-29100283.47	-29100283.24	-29100282.99	0.0088	0.0035
Uranus	-84386-12-05 00:28 J	-29100225.51	-29100225.48	-29100225.40	0.0131	0.0129
Neptune	-84385-10-09 19:40 J	-29099915.86	-29099915.68	-29099915.47	0.0088	0.0059
Uranus	-84385-12-08 03:35 J	-29099856.41	-29099856.35	-29099856.26	0.0131	0.0125
Neptune	-84384-10-12 09:20 J	-29099548.17	-29099548.11	-29099548.00	0.0088	0.0084
Uranus	-84384-12-12 06:13 J	-29099487.32	-29099487.24	-29099487.12	0.0131	0.0121
Uranus	-84383-12-16 08:37 J	-29099118.24	-29099118.14	-29099118.00	0.0132	0.0116
Uranus	-84382-12-20 10:47 J	-29098749.16	-29098749.05	-29098748.89	0.0132	0.0111
Jupiter	-84381-03-17 20:23 J	-29098660.68	-29098660.65	-29098660.61	0.0524	0.0516
Uranus	-84381-12-23 13:11 J	-29098380.09	-29098379.95	-29098379.79	0.0132	0.0104
Saturn	-84380-01-03 21:06 J	-29098368.78	-29098368.62	-29098368.44	0.0281	0.0196
Uranus	-84380-12-27 15:06 J	-29098011.02	-29098010.87	-29098010.69	0.0132	0.0099
Saturn	-84379-01-16 09:35 J	-29097991.33	-29097991.10	-29097990.87	0.0279	0.0086

Uranus -84379-12-31 16:47 J -29097641.96 -29097641.80 -29097641.60 0.0133 0.0092
 Saturn -84378-01-28 14:08 J -29097614.15 -29097613.91 -29097613.67 0.0277 0.0023
 Uranus -84377-01-04 18:56 J -29097272.88 -29097272.71 -29097272.50 0.0133 0.0085
 Saturn -84377-02-09 12:13 J -29097237.19 -29097236.99 -29097236.77 0.0275 0.0126
 Mars -84377-06-16 02:52 J -29097109.57 -29097109.38 -29097109.19 0.1600 0.0019
 Uranus -84376-01-07 21:06 J -29096903.80 -29096903.62 -29096903.39 0.0133 0.0078
 Saturn -84376-02-20 05:30 J -29096860.39 -29096860.27 -29096860.11 0.0273 0.0220
 Uranus -84375-01-12 00:13 J -29096534.70 -29096534.49 -29096534.28 0.0134 0.0069
 Jupiter -84375-09-27 22:18 J -29096275.80 -29096275.57 -29096275.34 0.0507 0.0124
 Uranus -84374-01-16 02:37 J -29096165.60 -29096165.39 -29096165.16 0.0134 0.0061
 Uranus -84373-01-20 05:59 J -29095796.47 -29095796.25 -29095796.01 0.0134 0.0052
 Uranus -84372-01-23 09:35 J -29095427.33 -29095427.10 -29095426.86 0.0135 0.0043
 Uranus -84371-01-27 13:54 J -29095058.15 -29095057.92 -29095057.67 0.0135 0.0034
 Uranus -84370-01-31 18:42 J -29094688.96 -29094688.72 -29094688.48 0.0136 0.0024
 Uranus -84369-02-05 00:13 J -29094319.74 -29094319.49 -29094319.25 0.0136 0.0014
 Jupiter -84369-03-22 10:04 J -29094273.28 -29094273.08 -29094272.88 0.0522 0.0241
 Uranus -84368-02-08 05:59 J -29093950.49 -29093950.25 -29093950.00 0.0137 0.0004
 Uranus -84367-02-12 12:42 J -29093581.22 -29093580.97 -29093580.73 0.0138 0.0007
 Uranus -84366-02-16 19:54 J -29093211.92 -29093211.67 -29093211.43 0.0138 0.0017
 Uranus -84365-02-21 04:04 J -29092842.57 -29092842.33 -29092842.09 0.0139 0.0028
 Saturn -84365-06-30 06:13 J -29092712.41 -29092712.24 -29092712.06 0.0279 0.0199
 Uranus -84364-02-24 12:56 J -29092473.20 -29092472.96 -29092472.73 0.0139 0.0039
 Saturn -84364-07-14 01:11 J -29092333.68 -29092333.45 -29092333.20 0.0281 0.0088
 Uranus -84363-02-28 22:47 J -29092103.78 -29092103.55 -29092103.32 0.0140 0.0049
 Saturn -84363-07-28 05:16 J -29091954.52 -29091954.28 -29091954.02 0.0284 0.0034
 Jupiter -84363-10-02 16:04 J -29091888.06 -29091887.83 -29091887.60 0.0508 0.0144
 Uranus -84362-03-05 09:20 J -29091734.32 -29091734.11 -29091733.87 0.0141 0.0060
 Saturn -84362-08-11 17:16 J -29091574.99 -29091574.78 -29091574.57 0.0286 0.0157
 Uranus -84361-03-08 21:20 J -29091364.81 -29091364.61 -29091364.38 0.0141 0.0070
 Saturn -84361-08-25 11:16 J -29091195.09 -29091195.03 -29091194.96 0.0288 0.0277

Uranus	-84360-03-13 10:18 J	-29090995.26	-29090995.07	-29090994.86	0.0142	0.0080
Uranus	-84359-03-18 00:13 J	-29090625.66	-29090625.49	-29090625.28	0.0142	0.0091
Uranus	-84358-03-22 16:04 J	-29090256.00	-29090255.83	-29090255.65	0.0143	0.0099
Uranus	-84357-03-26 08:37 J	-29089886.29	-29089886.14	-29089885.97	0.0144	0.0109
Jupiter	-84357-03-27 00:28 J	-29089885.71	-29089885.48	-29089885.25	0.0520	0.0036
Uranus	-84356-03-31 02:08 J	-29089516.54	-29089516.41	-29089516.25	0.0144	0.0117
Uranus	-84355-04-04 21:20 J	-29089146.73	-29089146.61	-29089146.48	0.0145	0.0125
Uranus	-84354-04-09 17:16 J	-29088776.87	-29088776.78	-29088776.67	0.0145	0.0132
Uranus	-84353-04-13 14:08 J	-29088406.96	-29088406.91	-29088406.82	0.0146	0.0139
Uranus	-84352-04-18 12:28 J	-29088037.00	-29088036.98	-29088036.92	0.0146	0.0144
Saturn	-84352-12-29 23:01 J	-29087781.67	-29087781.54	-29087781.42	0.0282	0.0239
Jupiter	-84351-10-07 12:28 J	-29087500.11	-29087499.98	-29087499.83	0.0510	0.0415
Saturn	-84350-01-11 14:08 J	-29087404.11	-29087403.91	-29087403.69	0.0280	0.0132
Saturn	-84349-01-23 21:35 J	-29087026.83	-29087026.60	-29087026.36	0.0277	0.0024
Saturn	-84348-02-03 22:04 J	-29086649.81	-29086649.58	-29086649.36	0.0275	0.0081
Saturn	-84347-02-15 16:47 J	-29086272.98	-29086272.80	-29086272.62	0.0273	0.0178
Saturn	-84346-02-27 07:25 J	-29085896.23	-29085896.19	-29085896.15	0.0271	0.0266
Jupiter	-84345-03-31 16:04 J	-29085498.01	-29085497.83	-29085497.65	0.0518	0.0311
Uranus	-84343-06-01 18:13 J	-29084705.78	-29084705.74	-29084705.66	0.0147	0.0143
Uranus	-84342-06-07 01:25 J	-29084335.51	-29084335.44	-29084335.33	0.0147	0.0137
Uranus	-84341-06-11 08:52 J	-29083965.23	-29083965.13	-29083964.99	0.0147	0.0130
Uranus	-84340-06-16 16:47 J	-29083594.93	-29083594.80	-29083594.65	0.0147	0.0122
Uranus	-84339-06-22 00:42 J	-29083224.63	-29083224.47	-29083224.30	0.0146	0.0113
Uranus	-84338-06-27 08:08 J	-29082854.33	-29082854.16	-29082853.96	0.0146	0.0103
Uranus	-84337-07-01 15:35 J	-29082484.03	-29082483.85	-29082483.63	0.0146	0.0093
Saturn	-84336-06-24 15:20 J	-29082125.99	-29082125.86	-29082125.74	0.0278	0.0239
Uranus	-84336-07-06 23:01 J	-29082113.74	-29082113.54	-29082113.31	0.0145	0.0082
Saturn	-84335-07-08 05:16 J	-29081747.50	-29081747.28	-29081747.06	0.0280	0.0135
Uranus	-84335-07-12 06:13 J	-29081743.46	-29081743.24	-29081743.00	0.0145	0.0070
Uranus	-84334-07-17 12:28 J	-29081373.20	-29081372.98	-29081372.72	0.0144	0.0059

Saturn	-84334-07-22 04:32 J	-29081368.56	-29081368.31	-29081368.06	0.0282	0.0019
Uranus	-84333-07-21 18:56 J	-29081002.95	-29081002.71	-29081002.45	0.0144	0.0046
Saturn	-84333-08-04 12:13 J	-29080989.22	-29080988.99	-29080988.75	0.0285	0.0104
Uranus	-84332-07-27 00:42 J	-29080632.72	-29080632.47	-29080632.22	0.0143	0.0033
Saturn	-84332-08-19 03:06 J	-29080609.51	-29080609.37	-29080609.21	0.0287	0.0226
Uranus	-84331-08-01 05:44 J	-29080262.52	-29080262.26	-29080262.00	0.0143	0.0021
Mars	-84330-06-11 02:37 J	-29079948.48	-29079948.39	-29079948.31	0.1592	0.1416
Uranus	-84330-08-06 09:49 J	-29079892.35	-29079892.09	-29079891.82	0.0142	0.0008
Uranus	-84329-08-10 13:11 J	-29079522.21	-29079521.95	-29079521.68	0.0141	0.0005
Uranus	-84328-08-15 15:35 J	-29079152.10	-29079151.85	-29079151.58	0.0141	0.0017
Uranus	-84327-08-20 17:16 J	-29078782.03	-29078781.78	-29078781.52	0.0140	0.0028
Uranus	-84326-08-25 17:30 J	-29078412.02	-29078411.77	-29078411.52	0.0140	0.0040
Uranus	-84325-08-29 16:32 J	-29078042.04	-29078041.81	-29078041.55	0.0139	0.0051
Uranus	-84324-09-03 14:37 J	-29077672.11	-29077671.89	-29077671.64	0.0138	0.0062
Uranus	-84323-09-08 11:44 J	-29077302.23	-29077302.01	-29077301.78	0.0138	0.0071
Uranus	-84322-09-13 07:25 J	-29076932.39	-29076932.19	-29076931.97	0.0137	0.0080
Saturn	-84321-01-06 06:56 J	-29076817.39	-29076817.21	-29076817.02	0.0281	0.0179
Uranus	-84321-09-17 02:08 J	-29076562.60	-29076562.41	-29076562.20	0.0137	0.0089
Saturn	-84320-01-17 18:13 J	-29076439.96	-29076439.74	-29076439.50	0.0279	0.0070
Uranus	-84320-09-21 19:40 J	-29076192.84	-29076192.68	-29076192.48	0.0136	0.0097
Saturn	-84319-01-29 22:04 J	-29076062.81	-29076062.58	-29076062.34	0.0276	0.0039
Uranus	-84319-09-26 11:59 J	-29075823.14	-29075823.00	-29075822.81	0.0136	0.0105
Saturn	-84318-02-10 19:54 J	-29075685.87	-29075685.67	-29075685.46	0.0274	0.0140
Uranus	-84318-10-01 03:35 J	-29075453.48	-29075453.35	-29075453.18	0.0135	0.0111
Saturn	-84317-02-22 12:56 J	-29075309.08	-29075308.96	-29075308.83	0.0273	0.0232
Uranus	-84317-10-04 18:13 J	-29075083.85	-29075083.74	-29075083.60	0.0135	0.0117
Uranus	-84316-10-09 07:54 J	-29074714.26	-29074714.17	-29074714.05	0.0134	0.0123
Uranus	-84315-10-13 20:08 J	-29074344.72	-29074344.66	-29074344.57	0.0134	0.0127
Uranus	-84314-10-18 07:40 J	-29073975.20	-29073975.18	-29073975.12	0.0133	0.0131
Neptune	-84308-03-23 09:49 J	-29071992.13	-29071992.09	-29071991.99	0.0089	0.0085

Neptune -84307-03-25 19:11 J -29071624.86 -29071624.70 -29071624.50 0.0089 0.0061
 Neptune -84306-03-28 05:01 J -29071257.52 -29071257.29 -29071257.06 0.0089 0.0037
 Saturn -84306-07-02 20:08 J -29071160.85 -29071160.66 -29071160.47 0.0279 0.0181
 Neptune -84305-03-29 13:54 J -29070890.16 -29070889.92 -29070889.66 0.0089 0.0014
 Pluto -84305-07-07 10:04 J -29070790.29 -29070790.08 -29070789.84 0.0066 0.0037
 Saturn -84305-07-15 16:04 J -29070782.07 -29070781.83 -29070781.59 0.0281 0.0069
 Neptune -84304-03-31 23:30 J -29070522.76 -29070522.52 -29070522.26 0.0089 0.0010
 Pluto -84304-07-09 01:54 J -29070423.50 -29070423.42 -29070423.29 0.0067 0.0061
 Saturn -84304-07-29 20:52 J -29070402.87 -29070402.63 -29070402.38 0.0284 0.0052
 Jupiter -84304-09-21 23:44 J -29070348.63 -29070348.51 -29070348.38 0.0504 0.0427
 Neptune -84303-04-03 08:52 J -29070155.35 -29070155.13 -29070154.89 0.0089 0.0034
 Saturn -84303-08-13 09:35 J -29070023.30 -29070023.10 -29070022.90 0.0286 0.0175
 Neptune -84302-04-05 18:13 J -29069787.91 -29069787.74 -29069787.53 0.0089 0.0058
 Uranus -84302-12-05 11:16 J -29069544.07 -29069544.03 -29069543.96 0.0131 0.0128
 Neptune -84301-04-07 03:49 J -29069420.41 -29069420.34 -29069420.22 0.0089 0.0082
 Uranus -84301-12-08 14:08 J -29069174.97 -29069174.91 -29069174.81 0.0131 0.0124
 Uranus -84300-12-12 17:01 J -29068805.87 -29068805.79 -29068805.67 0.0131 0.0120
 Uranus -84299-12-16 19:11 J -29068436.80 -29068436.70 -29068436.56 0.0132 0.0115
 Mars -84298-06-19 05:30 J -29068252.44 -29068252.27 -29068252.09 0.1602 0.0612
 Uranus -84298-12-20 21:35 J -29068067.72 -29068067.60 -29068067.44 0.0132 0.0109
 Uranus -84297-12-23 23:30 J -29067698.66 -29067698.52 -29067698.34 0.0132 0.0103
 Uranus -84296-12-28 01:25 J -29067329.59 -29067329.44 -29067329.25 0.0132 0.0097
 Uranus -84294-01-01 03:20 J -29066960.52 -29066960.36 -29066960.15 0.0133 0.0090
 Uranus -84293-01-05 05:44 J -29066591.44 -29066591.26 -29066591.05 0.0133 0.0082
 Saturn -84293-12-31 10:18 J -29066230.22 -29066230.07 -29066229.92 0.0282 0.0221
 Uranus -84292-01-08 07:54 J -29066222.36 -29066222.17 -29066221.94 0.0133 0.0075
 Jupiter -84292-09-26 18:56 J -29065960.93 -29065960.71 -29065960.48 0.0505 0.0165
 Mars -84292-12-20 23:16 J -29065875.71 -29065875.53 -29065875.34 0.1942 0.0703
 Uranus -84291-01-12 10:47 J -29065853.26 -29065853.05 -29065852.82 0.0134 0.0066
 Saturn -84291-01-13 00:28 J -29065852.69 -29065852.48 -29065852.25 0.0279 0.0115

Uranus -84290-01-16 13:40 J -29065484.15 -29065483.93 -29065483.70 0.0134 0.0057
 Saturn -84290-01-25 06:56 J -29065475.44 -29065475.21 -29065474.97 0.0277 0.0008
 Uranus -84289-01-20 16:47 J -29065115.01 -29065114.80 -29065114.55 0.0134 0.0049
 Saturn -84289-02-06 06:42 J -29065098.44 -29065098.22 -29065097.99 0.0275 0.0097
 Uranus -84288-01-23 20:37 J -29064745.86 -29064745.64 -29064745.39 0.0135 0.0039
 Saturn -84288-02-17 00:56 J -29064721.62 -29064721.46 -29064721.28 0.0273 0.0193
 Uranus -84287-01-28 01:11 J -29064376.69 -29064376.45 -29064376.21 0.0135 0.0029
 Uranus -84286-02-01 05:59 J -29064007.49 -29064007.25 -29064007.00 0.0136 0.0019
 Jupiter -84286-03-22 12:42 J -29063958.16 -29063957.97 -29063957.77 0.0523 0.0277
 Uranus -84285-02-05 11:30 J -29063638.27 -29063638.02 -29063637.77 0.0136 0.0009
 Uranus -84284-02-08 17:16 J -29063269.03 -29063268.78 -29063268.53 0.0137 0.0002
 Uranus -84283-02-12 23:44 J -29062899.75 -29062899.51 -29062899.26 0.0138 0.0013
 Uranus -84282-02-17 06:56 J -29062530.45 -29062530.21 -29062529.96 0.0138 0.0023
 Uranus -84281-02-21 15:06 J -29062161.10 -29062160.87 -29062160.62 0.0139 0.0034
 Uranus -84280-02-24 23:59 J -29061791.72 -29061791.50 -29061791.26 0.0139 0.0045
 Jupiter -84280-10-01 14:23 J -29061573.13 -29061572.90 -29061572.66 0.0508 0.0102
 Uranus -84279-03-01 10:04 J -29061422.30 -29061422.08 -29061421.85 0.0140 0.0055
 Uranus -84278-03-05 20:37 J -29061052.84 -29061052.64 -29061052.40 0.0141 0.0066
 Uranus -84277-03-09 09:06 J -29060683.32 -29060683.12 -29060682.91 0.0141 0.0076
 Saturn -84277-06-26 04:47 J -29060574.43 -29060574.30 -29060574.13 0.0278 0.0223
 Uranus -84276-03-13 21:49 J -29060313.77 -29060313.59 -29060313.38 0.0142 0.0086
 Saturn -84276-07-09 20:08 J -29060195.88 -29060195.66 -29060195.42 0.0280 0.0117
 Uranus -84275-03-18 12:13 J -29059944.16 -29059943.99 -29059943.79 0.0142 0.0096
 Saturn -84275-07-23 20:37 J -29059816.90 -29059816.64 -29059816.39 0.0283 0.0004
 Uranus -84274-03-23 03:49 J -29059574.50 -29059574.34 -29059574.17 0.0143 0.0105
 Jupiter -84274-03-27 05:16 J -29059570.51 -29059570.28 -29059570.05 0.0521 0.0004
 Saturn -84274-08-07 05:01 J -29059437.51 -29059437.29 -29059437.06 0.0285 0.0123
 Uranus -84273-03-26 20:23 J -29059204.79 -29059204.65 -29059204.49 0.0144 0.0114
 Saturn -84273-08-20 20:23 J -29059057.77 -29059057.65 -29059057.51 0.0287 0.0244
 Uranus -84272-03-31 14:08 J -29058835.03 -29058834.91 -29058834.78 0.0144 0.0122

Uranus	-84271-04-05 08:52 J	-29058465.23	-29058465.13	-29058465.01	0.0145	0.0130
Uranus	-84270-04-10 04:32 J	-29058095.37	-29058095.31	-29058095.21	0.0145	0.0137
Uranus	-84269-04-14 01:54 J	-29057725.45	-29057725.42	-29057725.36	0.0146	0.0143
Jupiter	-84268-10-06 13:25 J	-29057185.10	-29057184.94	-29057184.78	0.0510	0.0376
Saturn	-84264-12-25 23:16 J	-29055643.60	-29055643.53	-29055643.45	0.0283	0.0268
Saturn	-84262-01-07 17:44 J	-29055265.95	-29055265.76	-29055265.56	0.0281	0.0162
Jupiter	-84262-03-31 17:30 J	-29055182.96	-29055182.77	-29055182.57	0.0518	0.0270
Saturn	-84261-01-20 04:18 J	-29054888.55	-29054888.32	-29054888.08	0.0278	0.0053
Saturn	-84260-01-31 07:11 J	-29054511.43	-29054511.20	-29054510.96	0.0276	0.0054
Saturn	-84259-02-12 04:04 J	-29054134.52	-29054134.33	-29054134.12	0.0274	0.0154
Uranus	-84259-06-02 05:30 J	-29054024.32	-29054024.27	-29054024.20	0.0147	0.0143
Saturn	-84258-02-23 20:23 J	-29053757.74	-29053757.65	-29053757.54	0.0272	0.0244
Uranus	-84258-06-07 12:28 J	-29053654.06	-29053653.98	-29053653.86	0.0147	0.0136
Uranus	-84257-06-11 20:08 J	-29053283.78	-29053283.66	-29053283.54	0.0147	0.0128
Uranus	-84256-06-17 03:20 J	-29052913.49	-29052913.36	-29052913.19	0.0147	0.0120
Uranus	-84255-06-22 11:01 J	-29052543.19	-29052543.04	-29052542.85	0.0147	0.0111
Uranus	-84254-06-27 18:42 J	-29052172.89	-29052172.72	-29052172.52	0.0146	0.0100
Uranus	-84253-07-02 02:23 J	-29051802.60	-29051802.40	-29051802.19	0.0146	0.0089
Uranus	-84252-07-07 09:49 J	-29051432.31	-29051432.09	-29051431.87	0.0145	0.0078
Mars	-84251-06-13 03:49 J	-29051091.51	-29051091.34	-29051091.18	0.1594	0.0814
Uranus	-84251-07-12 16:32 J	-29051062.02	-29051061.81	-29051061.56	0.0145	0.0066
Uranus	-84250-07-17 23:16 J	-29050691.76	-29050691.53	-29050691.27	0.0144	0.0054
Uranus	-84249-07-22 05:44 J	-29050321.51	-29050321.26	-29050321.01	0.0144	0.0041
Saturn	-84248-06-20 21:20 J	-29049987.68	-29049987.61	-29049987.53	0.0277	0.0264
Uranus	-84248-07-27 11:16 J	-29049951.28	-29049951.03	-29049950.76	0.0143	0.0028
Saturn	-84247-07-04 09:06 J	-29049609.32	-29049609.12	-29049608.91	0.0279	0.0164
Uranus	-84247-08-01 16:32 J	-29049581.07	-29049580.81	-29049580.55	0.0143	0.0015
Saturn	-84246-07-18 05:59 J	-29049230.50	-29049230.25	-29049230.00	0.0282	0.0051
Uranus	-84246-08-06 20:37 J	-29049210.91	-29049210.64	-29049210.38	0.0142	0.0003
Saturn	-84245-07-31 11:44 J	-29048851.25	-29048851.01	-29048850.76	0.0284	0.0070

Uranus	-84245-08-10 23:59 J	-29048840.76	-29048840.50	-29048840.24	0.0141	0.0010
Saturn	-84244-08-15 01:11 J	-29048471.63	-29048471.45	-29048471.26	0.0286	0.0192
Uranus	-84244-08-16 02:23 J	-29048470.66	-29048470.40	-29048470.14	0.0141	0.0022
Uranus	-84243-08-21 03:49 J	-29048100.59	-29048100.34	-29048100.09	0.0140	0.0034
Uranus	-84242-08-26 04:04 J	-29047730.58	-29047730.33	-29047730.08	0.0140	0.0046
Uranus	-84241-08-30 03:06 J	-29047360.60	-29047360.37	-29047360.12	0.0139	0.0057
Uranus	-84240-09-04 01:11 J	-29046990.67	-29046990.45	-29046990.21	0.0138	0.0067
Uranus	-84239-09-08 22:04 J	-29046620.79	-29046620.58	-29046620.35	0.0138	0.0077
Uranus	-84238-09-13 17:44 J	-29046250.95	-29046250.76	-29046250.54	0.0137	0.0086
Uranus	-84237-09-17 12:28 J	-29045881.15	-29045880.98	-29045880.77	0.0137	0.0095
Uranus	-84236-09-22 06:28 J	-29045511.39	-29045511.23	-29045511.05	0.0136	0.0102
Uranus	-84235-09-26 22:32 J	-29045141.69	-29045141.56	-29045141.38	0.0136	0.0110
Uranus	-84234-10-01 14:08 J	-29044772.02	-29044771.91	-29044771.75	0.0135	0.0116
Saturn	-84233-01-02 21:49 J	-29044678.75	-29044678.59	-29044678.42	0.0282	0.0204
Uranus	-84233-10-05 05:01 J	-29044402.39	-29044402.29	-29044402.17	0.0135	0.0122
Saturn	-84232-01-14 11:16 J	-29044301.25	-29044301.03	-29044300.81	0.0279	0.0097
Uranus	-84232-10-09 18:13 J	-29044032.79	-29044032.74	-29044032.63	0.0134	0.0127
Saturn	-84231-01-26 16:32 J	-29043924.05	-29043923.81	-29043923.57	0.0277	0.0011
Uranus	-84231-10-14 06:42 J	-29043663.24	-29043663.22	-29043663.15	0.0134	0.0132
Saturn	-84230-02-07 15:35 J	-29043547.07	-29043546.85	-29043546.63	0.0274	0.0112
Saturn	-84229-02-19 09:20 J	-29043170.26	-29043170.11	-29043169.95	0.0272	0.0205
Neptune	-84226-09-28 05:01 J	-29041853.42	-29041853.29	-29041853.14	0.0088	0.0075
Neptune	-84225-09-29 18:56 J	-29041485.91	-29041485.71	-29041485.47	0.0088	0.0051
Neptune	-84224-10-02 09:20 J	-29041118.36	-29041118.11	-29041117.86	0.0088	0.0026
Neptune	-84223-10-04 23:16 J	-29040750.79	-29040750.53	-29040750.26	0.0088	0.0002
Neptune	-84222-10-07 12:56 J	-29040383.21	-29040382.96	-29040382.70	0.0088	0.0023
Jupiter	-84221-09-20 22:32 J	-29040033.65	-29040033.56	-29040033.47	0.0503	0.0465
Neptune	-84221-10-09 02:52 J	-29040015.59	-29040015.38	-29040015.15	0.0088	0.0048
Neptune	-84220-10-11 16:47 J	-29039647.95	-29039647.80	-29039647.65	0.0088	0.0072
Mars	-84219-06-21 09:06 J	-29039395.24	-29039395.12	-29039395.00	0.1604	0.1264

Pluto -84218-01-12 09:35 J -29039190.33 -29039190.10 -29039189.84 0.0078 0.0015
 Saturn -84218-06-28 18:28 J -29039022.90 -29039022.73 -29039022.56 0.0278 0.0206
 Uranus -84218-12-05 22:04 J -29038862.64 -29038862.58 -29038862.53 0.0131 0.0128
 Saturn -84217-07-11 10:47 J -29038644.29 -29038644.05 -29038643.82 0.0281 0.0098
 Uranus -84217-12-09 00:42 J -29038493.54 -29038493.47 -29038493.38 0.0131 0.0124
 Saturn -84216-07-25 11:59 J -29038265.25 -29038265.00 -29038264.74 0.0283 0.0021
 Uranus -84216-12-13 03:06 J -29038124.46 -29038124.37 -29038124.25 0.0131 0.0119
 Saturn -84215-08-08 21:20 J -29037885.82 -29037885.61 -29037885.38 0.0285 0.0143
 Uranus -84215-12-17 05:30 J -29037755.39 -29037755.27 -29037755.14 0.0132 0.0113
 Saturn -84214-08-23 13:25 J -29037506.03 -29037505.94 -29037505.82 0.0287 0.0261
 Uranus -84214-12-21 07:40 J -29037386.31 -29037386.18 -29037386.02 0.0132 0.0107
 Uranus -84213-12-24 09:35 J -29037017.25 -29037017.10 -29037016.93 0.0132 0.0101
 Mars -84213-12-24 13:40 J -29037017.10 -29037016.93 -29037016.77 0.1939 0.1012 *
 Uranus -84212-12-28 11:44 J -29036648.18 -29036648.01 -29036647.83 0.0132 0.0094
 Uranus -84210-01-01 13:11 J -29036279.12 -29036278.95 -29036278.74 0.0133 0.0087
 Uranus -84209-01-05 15:35 J -29035910.03 -29035909.85 -29035909.63 0.0133 0.0079
 Jupiter -84209-09-25 19:25 J -29035645.90 -29035645.69 -29035645.46 0.0505 0.0201
 Uranus -84208-01-08 18:13 J -29035540.95 -29035540.74 -29035540.53 0.0133 0.0070
 Uranus -84207-01-12 20:37 J -29035171.85 -29035171.64 -29035171.41 0.0134 0.0062
 Uranus -84206-01-16 23:44 J -29034802.73 -29034802.51 -29034802.28 0.0134 0.0053
 Uranus -84205-01-21 03:06 J -29034433.59 -29034433.37 -29034433.12 0.0134 0.0044
 Saturn -84205-12-27 10:47 J -29034092.15 -29034092.05 -29034091.93 0.0282 0.0252
 Uranus -84204-01-24 06:56 J -29034064.44 -29034064.21 -29034063.96 0.0135 0.0035
 Saturn -84203-01-09 04:18 J -29033714.52 -29033714.32 -29033714.11 0.0280 0.0145
 Uranus -84203-01-28 11:30 J -29033695.26 -29033695.02 -29033694.78 0.0135 0.0024
 Jupiter -84203-03-21 15:49 J -29033643.02 -29033642.84 -29033642.66 0.0523 0.0313
 Saturn -84202-01-21 13:40 J -29033337.16 -29033336.93 -29033336.69 0.0278 0.0037
 Uranus -84202-02-01 16:04 J -29033326.07 -29033325.83 -29033325.58 0.0136 0.0014
 Saturn -84201-02-02 15:49 J -29032960.07 -29032959.84 -29032959.61 0.0276 0.0069
 Uranus -84201-02-05 21:35 J -29032956.85 -29032956.60 -29032956.36 0.0136 0.0004

Uranus	-84200-02-09 03:20 J	-29032587.61	-29032587.36	-29032587.11	0.0137	0.0007
Saturn	-84200-02-13 11:59 J	-29032583.19	-29032583.00	-29032582.81	0.0274	0.0167
Uranus	-84199-02-13 09:49 J	-29032218.33	-29032218.09	-29032217.84	0.0138	0.0018
Saturn	-84199-02-25 03:35 J	-29032206.43	-29032206.35	-29032206.27	0.0272	0.0255
Uranus	-84198-02-17 17:01 J	-29031849.03	-29031848.79	-29031848.54	0.0138	0.0028
Uranus	-84197-02-22 01:25 J	-29031479.68	-29031479.44	-29031479.20	0.0139	0.0039
Jupiter	-84197-09-30 16:32 J	-29031258.04	-29031257.81	-29031257.57	0.0507	0.0070
Uranus	-84196-02-25 10:18 J	-29031110.30	-29031110.07	-29031109.84	0.0139	0.0050
Uranus	-84195-03-01 20:08 J	-29030740.87	-29030740.66	-29030740.43	0.0140	0.0061
Uranus	-84194-03-06 07:11 J	-29030371.40	-29030371.20	-29030370.98	0.0141	0.0071
Uranus	-84193-03-09 19:25 J	-29030001.88	-29030001.69	-29030001.48	0.0141	0.0081
Uranus	-84192-03-14 08:52 J	-29029632.32	-29029632.13	-29029631.94	0.0142	0.0091
Uranus	-84191-03-18 23:01 J	-29029262.70	-29029262.54	-29029262.35	0.0142	0.0101
Jupiter	-84191-03-26 05:44 J	-29029255.49	-29029255.26	-29029255.03	0.0521	0.0040
Uranus	-84190-03-23 14:37 J	-29028893.04	-29028892.89	-29028892.73	0.0143	0.0110
Uranus	-84189-03-27 07:11 J	-29028523.32	-29028523.20	-29028523.05	0.0144	0.0120
Saturn	-84189-06-22 07:25 J	-29028436.29	-29028436.19	-29028436.08	0.0277	0.0249
Uranus	-84188-04-01 00:42 J	-29028153.56	-29028153.47	-29028153.33	0.0144	0.0128
Saturn	-84188-07-05 20:08 J	-29028057.86	-29028057.66	-29028057.44	0.0279	0.0148
Uranus	-84187-04-05 19:40 J	-29027783.75	-29027783.68	-29027783.57	0.0145	0.0135
Saturn	-84187-07-19 18:13 J	-29027678.99	-29027678.74	-29027678.49	0.0282	0.0033
Uranus	-84186-04-10 15:49 J	-29027413.88	-29027413.84	-29027413.77	0.0145	0.0141
Saturn	-84186-08-03 00:42 J	-29027299.71	-29027299.47	-29027299.23	0.0284	0.0088
Saturn	-84185-08-16 15:06 J	-29026920.04	-29026919.87	-29026919.70	0.0287	0.0209
Jupiter	-84185-10-05 11:59 J	-29026870.17	-29026870.00	-29026869.81	0.0509	0.0340
Jupiter	-84179-03-30 17:59 J	-29024867.96	-29024867.75	-29024867.55	0.0519	0.0229
Uranus	-84176-05-28 11:30 J	-29023713.02	-29023713.02	-29023713.02	0.0147	0.0147
Uranus	-84175-06-02 17:44 J	-29023342.81	-29023342.76	-29023342.68	0.0147	0.0142
Saturn	-84174-01-04 08:37 J	-29023127.31	-29023127.14	-29023126.95	0.0281	0.0186
Uranus	-84174-06-08 00:56 J	-29022972.56	-29022972.46	-29022972.36	0.0147	0.0135

Saturn -84173-01-16 21:06 J -29022749.85 -29022749.62 -29022749.39 0.0279 0.0079
 Uranus -84173-06-12 08:08 J -29022602.28 -29022602.16 -29022602.02 0.0147 0.0126
 Saturn -84172-01-28 01:40 J -29022372.66 -29022372.43 -29022372.19 0.0276 0.0027
 Mars -84172-06-15 06:28 J -29022234.42 -29022234.23 -29022234.04 0.1596 0.0203
 Uranus -84172-06-17 15:20 J -29022231.99 -29022231.86 -29022231.68 0.0147 0.0118
 Saturn -84171-02-08 23:59 J -29021995.71 -29021995.50 -29021995.29 0.0274 0.0126
 Uranus -84171-06-22 23:01 J -29021861.70 -29021861.54 -29021861.35 0.0147 0.0108
 Saturn -84170-02-20 16:47 J -29021618.93 -29021618.80 -29021618.64 0.0272 0.0219
 Uranus -84170-06-28 06:56 J -29021491.40 -29021491.21 -29021491.01 0.0146 0.0097
 Uranus -84169-07-02 14:23 J -29021121.10 -29021120.90 -29021120.68 0.0146 0.0085
 Uranus -84168-07-07 21:35 J -29020750.81 -29020750.60 -29020750.36 0.0145 0.0074
 Jupiter -84167-04-04 08:52 J -29020480.18 -29020480.13 -29020480.07 0.0517 0.0498
 Uranus -84167-07-13 05:01 J -29020380.52 -29020380.29 -29020380.05 0.0145 0.0061
 Uranus -84166-07-18 11:30 J -29020010.26 -29020010.02 -29020009.77 0.0144 0.0048
 Uranus -84165-07-22 17:44 J -29019640.00 -29019639.76 -29019639.49 0.0144 0.0036
 Uranus -84164-07-27 23:44 J -29019269.77 -29019269.51 -29019269.25 0.0143 0.0023
 Uranus -84163-08-02 04:47 J -29018899.56 -29018899.30 -29018899.04 0.0143 0.0009
 Uranus -84162-08-07 08:52 J -29018529.39 -29018529.13 -29018528.87 0.0142 0.0003
 Uranus -84161-08-11 12:13 J -29018159.25 -29018158.99 -29018158.73 0.0141 0.0016
 Uranus -84160-08-16 14:23 J -29017789.15 -29017788.90 -29017788.64 0.0141 0.0029
 Saturn -84159-06-30 05:01 J -29017471.46 -29017471.29 -29017471.10 0.0279 0.0190
 Uranus -84159-08-21 15:49 J -29017419.09 -29017418.84 -29017418.59 0.0140 0.0041
 Saturn -84158-07-13 22:32 J -29017092.80 -29017092.56 -29017092.32 0.0281 0.0080
 Uranus -84158-08-26 15:35 J -29017049.08 -29017048.85 -29017048.59 0.0140 0.0053
 Saturn -84157-07-27 00:56 J -29016713.71 -29016713.46 -29016713.21 0.0283 0.0038
 Uranus -84157-08-30 14:52 J -29016679.10 -29016678.88 -29016678.63 0.0139 0.0063
 Saturn -84156-08-10 11:01 J -29016334.24 -29016334.04 -29016333.82 0.0286 0.0160
 Uranus -84156-09-04 12:42 J -29016309.17 -29016308.97 -29016308.73 0.0138 0.0074
 Saturn -84155-08-25 04:04 J -29015954.39 -29015954.33 -29015954.26 0.0288 0.0276
 Uranus -84155-09-09 09:35 J -29015939.30 -29015939.10 -29015938.88 0.0138 0.0083

Uranus	-84154-09-14 05:44 J	-29015569.45	-29015569.26	-29015569.07	0.0137	0.0092
Uranus	-84153-09-17 23:59 J	-29015199.65	-29015199.50	-29015199.30	0.0137	0.0101
Uranus	-84152-09-22 17:44 J	-29014829.90	-29014829.76	-29014829.58	0.0136	0.0108
Uranus	-84151-09-27 10:32 J	-29014460.19	-29014460.06	-29014459.91	0.0135	0.0115
Uranus	-84150-10-02 02:08 J	-29014090.51	-29014090.41	-29014090.29	0.0135	0.0121
Uranus	-84149-10-05 16:32 J	-29013720.88	-29013720.81	-29013720.71	0.0134	0.0127
Uranus	-84148-10-10 05:59 J	-29013351.27	-29013351.25	-29013351.18	0.0134	0.0132
Saturn	-84146-12-29 21:49 J	-29012540.71	-29012540.59	-29012540.44	0.0282	0.0234
Saturn	-84144-01-10 14:23 J	-29012163.11	-29012162.90	-29012162.68	0.0280	0.0128
Saturn	-84143-01-22 22:32 J	-29011785.80	-29011785.56	-29011785.32	0.0277	0.0020
Neptune	-84143-03-25 06:13 J	-29011724.36	-29011724.24	-29011724.07	0.0089	0.0072
Saturn	-84142-02-03 23:30 J	-29011408.75	-29011408.52	-29011408.29	0.0275	0.0084
Neptune	-84142-03-27 15:49 J	-29011357.04	-29011356.84	-29011356.62	0.0089	0.0048
Saturn	-84141-02-15 18:42 J	-29011031.89	-29011031.72	-29011031.54	0.0273	0.0180
Neptune	-84141-03-29 00:56 J	-29010989.68	-29010989.46	-29010989.20	0.0089	0.0025
Saturn	-84140-02-26 09:35 J	-29010655.13	-29010655.10	-29010655.04	0.0272	0.0266
Neptune	-84140-03-31 10:32 J	-29010622.31	-29010622.06	-29010621.80	0.0089	0.0002
Neptune	-84139-04-02 19:54 J	-29010254.90	-29010254.67	-29010254.42	0.0089	0.0023
Neptune	-84138-04-05 05:44 J	-29009887.48	-29009887.26	-29009887.05	0.0089	0.0046
Jupiter	-84138-09-21 01:25 J	-29009718.48	-29009718.44	-29009718.39	0.0503	0.0492
Neptune	-84137-04-06 14:52 J	-29009520.02	-29009519.88	-29009519.71	0.0089	0.0070
Uranus	-84134-12-06 08:37 J	-29008181.16	-29008181.14	-29008181.06	0.0131	0.0129
Uranus	-84133-12-09 11:30 J	-29007812.08	-29007812.02	-29007811.91	0.0131	0.0123
Uranus	-84132-12-13 14:23 J	-29007443.00	-29007442.90	-29007442.78	0.0131	0.0118
Uranus	-84131-12-17 16:18 J	-29007073.94	-29007073.82	-29007073.68	0.0132	0.0112
Saturn	-84130-06-24 15:20 J	-29006884.99	-29006884.86	-29006884.73	0.0277	0.0234
Uranus	-84130-12-21 18:42 J	-29006704.86	-29006704.72	-29006704.57	0.0132	0.0105
Saturn	-84129-07-07 05:01 J	-29006506.51	-29006506.29	-29006506.07	0.0280	0.0131
Uranus	-84129-12-24 20:08 J	-29006335.80	-29006335.66	-29006335.47	0.0132	0.0099
Saturn	-84128-07-21 04:04 J	-29006127.58	-29006127.33	-29006127.08	0.0282	0.0016

Uranus	-84128-12-28 22:18 J	-29005966.74	-29005966.57	-29005966.38	0.0132	0.0092
Saturn	-84127-08-04 11:30 J	-29005748.25	-29005748.02	-29005747.78	0.0285	0.0105
Uranus	-84126-01-02 00:28 J	-29005597.67	-29005597.48	-29005597.28	0.0133	0.0084
Saturn	-84126-08-19 02:37 J	-29005368.55	-29005368.39	-29005368.24	0.0287	0.0224
Jupiter	-84126-09-25 20:37 J	-29005330.85	-29005330.64	-29005330.42	0.0504	0.0228
Uranus	-84125-01-06 02:37 J	-29005228.58	-29005228.39	-29005228.17	0.0133	0.0076
Mars	-84125-06-09 07:40 J	-29005073.21	-29005073.18	-29005073.15	0.1589	0.1568
Uranus	-84124-01-09 05:01 J	-29004859.50	-29004859.29	-29004859.07	0.0133	0.0068
Uranus	-84123-01-13 07:40 J	-29004490.39	-29004490.18	-29004489.95	0.0134	0.0059
Uranus	-84122-01-17 10:47 J	-29004121.28	-29004121.05	-29004120.82	0.0134	0.0049
Uranus	-84121-01-21 14:23 J	-29003752.14	-29003751.90	-29003751.66	0.0134	0.0040
Uranus	-84120-01-24 17:59 J	-29003382.99	-29003382.75	-29003382.50	0.0135	0.0030
Jupiter	-84120-03-20 15:20 J	-29003328.02	-29003327.86	-29003327.69	0.0524	0.0356
Uranus	-84119-01-28 22:18 J	-29003013.82	-29003013.57	-29003013.33	0.0135	0.0020
Uranus	-84118-02-02 02:52 J	-29002644.63	-29002644.38	-29002644.13	0.0136	0.0009
Uranus	-84117-02-06 08:08 J	-29002275.41	-29002275.16	-29002274.91	0.0136	0.0001
Saturn	-84117-12-23 21:35 J	-29001953.65	-29001953.60	-29001953.52	0.0284	0.0273
Uranus	-84116-02-09 13:54 J	-29001906.17	-29001905.92	-29001905.68	0.0137	0.0012
Saturn	-84115-01-05 17:59 J	-29001575.94	-29001575.75	-29001575.56	0.0281	0.0168
Uranus	-84115-02-13 20:23 J	-29001536.89	-29001536.65	-29001536.40	0.0138	0.0023
Saturn	-84114-01-18 05:30 J	-29001198.50	-29001198.27	-29001198.04	0.0279	0.0062
Uranus	-84114-02-18 03:49 J	-29001167.58	-29001167.34	-29001167.10	0.0138	0.0034
Jupiter	-84114-09-30 16:47 J	-29000943.03	-29000942.80	-29000942.56	0.0506	0.0038
Saturn	-84113-01-30 09:20 J	-29000821.35	-29000821.11	-29000820.88	0.0276	0.0043
Uranus	-84113-02-22 11:44 J	-29000798.23	-29000798.01	-29000797.77	0.0139	0.0045
Saturn	-84112-02-10 06:28 J	-29000444.42	-29000444.23	-29000444.01	0.0274	0.0141
Uranus	-84112-02-25 20:37 J	-29000428.85	-29000428.64	-29000428.40	0.0139	0.0056
Saturn	-84111-02-21 22:47 J	-29000067.66	-29000067.55	-29000067.41	0.0272	0.0230
Uranus	-84111-03-02 06:56 J	-29000059.42	-29000059.21	-29000058.99	0.0140	0.0066
Uranus	-84110-03-06 17:44 J	-28999689.95	-28999689.76	-28999689.54	0.0141	0.0077

Uranus	-84109-03-10 06:13 J	-28999320.42	-28999320.24	-28999320.04	0.0141	0.0087
Uranus	-84108-03-14 19:25 J	-28998950.86	-28998950.69	-28998950.50	0.0142	0.0097
Jupiter	-84108-03-25 07:40 J	-28998940.40	-28998940.18	-28998939.95	0.0522	0.0076
Uranus	-84107-03-19 10:04 J	-28998581.24	-28998581.08	-28998580.91	0.0142	0.0107
Uranus	-84106-03-24 01:11 J	-28998211.57	-28998211.45	-28998211.29	0.0143	0.0116
Uranus	-84105-03-27 17:44 J	-28997841.86	-28997841.76	-28997841.62	0.0144	0.0125
Uranus	-84104-04-01 11:30 J	-28997472.10	-28997472.02	-28997471.91	0.0144	0.0133
Uranus	-84103-04-06 06:13 J	-28997102.28	-28997102.24	-28997102.15	0.0145	0.0140
Jupiter	-84102-10-05 11:44 J	-28996555.19	-28996555.01	-28996554.81	0.0508	0.0302
Saturn	-84101-06-18 04:18 J	-28996298.37	-28996298.32	-28996298.27	0.0276	0.0270
Saturn	-84100-07-01 13:11 J	-28995920.14	-28995919.95	-28995919.75	0.0279	0.0174
Saturn	-84099-07-15 07:25 J	-28995541.43	-28995541.19	-28995540.94	0.0281	0.0064
Saturn	-84098-07-29 10:47 J	-28995162.30	-28995162.05	-28995161.81	0.0284	0.0055
Saturn	-84097-08-11 21:35 J	-28994782.78	-28994782.60	-28994782.39	0.0286	0.0176
Jupiter	-84096-03-30 00:28 J	-28994552.68	-28994552.48	-28994552.26	0.0520	0.0201
Mars	-84093-06-17 08:37 J	-28993377.33	-28993377.14	-28993376.96	0.1597	0.0426
Uranus	-84091-06-03 05:01 J	-28992661.34	-28992661.29	-28992661.20	0.0147	0.0142
Uranus	-84090-06-08 12:13 J	-28992291.08	-28992290.99	-28992290.87	0.0147	0.0134
Uranus	-84089-06-12 19:11 J	-28991920.81	-28991920.70	-28991920.54	0.0147	0.0126
Uranus	-84088-06-18 03:06 J	-28991550.52	-28991550.37	-28991550.20	0.0147	0.0115
Uranus	-84087-06-23 10:32 J	-28991180.22	-28991180.06	-28991179.86	0.0147	0.0105
Saturn	-84087-12-31 06:56 J	-28990989.35	-28990989.21	-28990989.04	0.0282	0.0217
Uranus	-84086-06-28 18:13 J	-28990809.92	-28990809.74	-28990809.53	0.0146	0.0094
Saturn	-84085-01-12 22:32 J	-28990611.78	-28990611.56	-28990611.34	0.0279	0.0111
Uranus	-84085-07-03 01:40 J	-28990439.62	-28990439.43	-28990439.19	0.0146	0.0082
Saturn	-84084-01-24 05:44 J	-28990234.50	-28990234.26	-28990234.02	0.0277	0.0005
Jupiter	-84084-04-03 15:06 J	-28990164.96	-28990164.87	-28990164.77	0.0517	0.0470
Uranus	-84084-07-08 09:20 J	-28990069.32	-28990069.11	-28990068.87	0.0145	0.0070
Saturn	-84083-02-05 05:44 J	-28989857.48	-28989857.26	-28989857.03	0.0275	0.0098
Uranus	-84083-07-13 16:32 J	-28989699.04	-28989698.81	-28989698.56	0.0145	0.0057

Saturn	-84082-02-17 00:28 J	-28989480.64	-28989480.48	-28989480.31	0.0273	0.0192
Uranus	-84082-07-18 23:30 J	-28989328.77	-28989328.52	-28989328.27	0.0144	0.0044
Uranus	-84081-07-23 05:44 J	-28988958.51	-28988958.26	-28988958.00	0.0144	0.0031
Uranus	-84080-07-28 11:30 J	-28988588.28	-28988588.02	-28988587.76	0.0143	0.0017
Uranus	-84079-08-02 16:32 J	-28988218.07	-28988217.81	-28988217.54	0.0143	0.0005
Uranus	-84078-08-07 20:37 J	-28987847.90	-28987847.64	-28987847.38	0.0142	0.0009
Uranus	-84077-08-11 23:59 J	-28987477.76	-28987477.50	-28987477.24	0.0141	0.0022
Uranus	-84076-08-17 02:08 J	-28987107.66	-28987107.41	-28987107.15	0.0141	0.0035
Uranus	-84075-08-22 03:06 J	-28986737.61	-28986737.37	-28986737.11	0.0140	0.0047
Uranus	-84074-08-27 03:20 J	-28986367.59	-28986367.36	-28986367.12	0.0140	0.0058
Uranus	-84073-08-31 02:23 J	-28985997.62	-28985997.40	-28985997.16	0.0139	0.0069
Uranus	-84072-09-04 23:59 J	-28985627.69	-28985627.50	-28985627.26	0.0138	0.0080
Saturn	-84071-06-25 19:54 J	-28985333.82	-28985333.67	-28985333.51	0.0278	0.0219
Uranus	-84071-09-09 21:06 J	-28985257.81	-28985257.62	-28985257.41	0.0138	0.0089
Saturn	-84070-07-09 10:18 J	-28984955.29	-28984955.07	-28984954.83	0.0280	0.0115
Uranus	-84070-09-14 16:47 J	-28984887.96	-28984887.80	-28984887.60	0.0137	0.0098
Saturn	-84069-07-22 10:18 J	-28984576.32	-28984576.07	-28984575.81	0.0282	0.0004
Uranus	-84069-09-18 11:59 J	-28984518.16	-28984518.00	-28984517.83	0.0137	0.0106
Saturn	-84068-08-05 18:28 J	-28984196.95	-28984196.73	-28984196.49	0.0285	0.0121
Uranus	-84068-09-23 05:44 J	-28984148.40	-28984148.26	-28984148.11	0.0136	0.0113
Saturn	-84067-08-20 10:18 J	-28983817.21	-28983817.07	-28983816.93	0.0287	0.0239
Uranus	-84067-09-27 21:49 J	-28983778.68	-28983778.59	-28983778.45	0.0135	0.0121
Uranus	-84066-10-02 13:40 J	-28983409.00	-28983408.93	-28983408.82	0.0135	0.0126
Uranus	-84065-10-06 04:18 J	-28983039.36	-28983039.32	-28983039.26	0.0134	0.0132
Neptune	-84062-09-27 10:47 J	-28981953.09	-28981953.05	-28981952.97	0.0088	0.0086
Neptune	-84061-09-29 00:56 J	-28981585.63	-28981585.46	-28981585.25	0.0088	0.0062
Neptune	-84060-10-01 15:06 J	-28981218.09	-28981217.87	-28981217.61	0.0088	0.0038
Pluto	-84059-07-09 18:28 J	-28980936.99	-28980936.73	-28980936.46	0.0067	0.0010
Neptune	-84059-10-04 05:01 J	-28980850.54	-28980850.29	-28980850.02	0.0088	0.0013
Neptune	-84058-10-06 19:11 J	-28980482.96	-28980482.70	-28980482.43	0.0088	0.0012

Saturn -84058-12-26 05:44 J -28980402.35 -28980402.26 -28980402.15 0.0283 0.0256
 Neptune -84057-10-08 09:06 J -28980115.36 -28980115.12 -28980114.88 0.0088 0.0036
 Saturn -84056-01-07 01:25 J -28980024.64 -28980024.44 -28980024.24 0.0281 0.0151
 Neptune -84056-10-10 22:04 J -28979747.74 -28979747.58 -28979747.36 0.0088 0.0061
 Saturn -84055-01-19 11:59 J -28979647.23 -28979647.00 -28979646.76 0.0278 0.0045
 Neptune -84055-10-13 12:28 J -28979380.06 -28979379.98 -28979379.90 0.0088 0.0084
 Saturn -84054-01-31 15:06 J -28979270.10 -28979269.87 -28979269.63 0.0276 0.0059
 Saturn -84053-02-12 11:44 J -28978893.20 -28978893.01 -28978892.81 0.0274 0.0155
 Saturn -84052-02-23 03:20 J -28978516.46 -28978516.36 -28978516.24 0.0272 0.0242
 Uranus -84050-12-06 19:25 J -28977499.73 -28977499.69 -28977499.61 0.0131 0.0128
 Uranus -84049-12-09 22:04 J -28977130.65 -28977130.58 -28977130.47 0.0131 0.0122
 Uranus -84048-12-14 00:13 J -28976761.58 -28976761.49 -28976761.35 0.0131 0.0117
 Uranus -84047-12-18 02:08 J -28976392.52 -28976392.41 -28976392.25 0.0132 0.0111
 Mars -84046-06-12 08:52 J -28976216.28 -28976216.13 -28976215.98 0.1590 0.0978
 Uranus -84046-12-22 04:32 J -28976023.45 -28976023.31 -28976023.14 0.0132 0.0104
 Uranus -84045-12-25 05:59 J -28975654.39 -28975654.25 -28975654.05 0.0132 0.0097
 Uranus -84044-12-29 08:08 J -28975285.33 -28975285.16 -28975284.96 0.0132 0.0090
 Jupiter -84043-09-24 22:47 J -28975015.75 -28975015.55 -28975015.34 0.0504 0.0259
 Uranus -84042-01-02 10:04 J -28974916.26 -28974916.08 -28974915.86 0.0132 0.0082
 Saturn -84042-06-20 08:37 J -28974747.22 -28974747.14 -28974747.03 0.0276 0.0256
 Uranus -84041-01-06 12:28 J -28974547.18 -28974546.98 -28974546.76 0.0133 0.0073
 Saturn -84041-07-02 18:28 J -28974368.93 -28974368.73 -28974368.52 0.0279 0.0158
 Uranus -84040-01-09 14:37 J -28974178.09 -28974177.89 -28974177.66 0.0133 0.0064
 Saturn -84040-07-16 13:40 J -28973990.18 -28973989.93 -28973989.68 0.0281 0.0047
 Uranus -84039-01-13 17:16 J -28973808.99 -28973808.78 -28973808.54 0.0133 0.0055
 Saturn -84039-07-30 17:30 J -28973611.01 -28973610.77 -28973610.52 0.0284 0.0072
 Uranus -84038-01-17 20:08 J -28973439.88 -28973439.66 -28973439.41 0.0134 0.0046
 Saturn -84038-08-14 05:16 J -28973231.45 -28973231.28 -28973231.08 0.0286 0.0192
 Uranus -84037-01-21 23:44 J -28973070.74 -28973070.51 -28973070.27 0.0134 0.0036
 Jupiter -84037-03-19 22:47 J -28973012.70 -28973012.55 -28973012.39 0.0525 0.0381

Uranus	-84036-01-25 03:06 J	-28972701.60	-28972701.37	-28972701.12	0.0135	0.0026
Uranus	-84035-01-29 07:11 J	-28972332.44	-28972332.20	-28972331.95	0.0135	0.0016
Uranus	-84034-02-02 11:59 J	-28971963.25	-28971963.00	-28971962.76	0.0136	0.0005
Uranus	-84033-02-06 17:01 J	-28971594.04	-28971593.79	-28971593.54	0.0136	0.0006
Uranus	-84032-02-09 22:32 J	-28971224.80	-28971224.56	-28971224.31	0.0137	0.0017
Uranus	-84031-02-14 05:16 J	-28970855.52	-28970855.28	-28970855.04	0.0138	0.0028
Jupiter	-84031-09-29 19:40 J	-28970627.92	-28970627.68	-28970627.44	0.0506	0.0010
Uranus	-84030-02-18 12:13 J	-28970486.22	-28970485.99	-28970485.74	0.0138	0.0039
Uranus	-84029-02-22 20:23 J	-28970116.87	-28970116.65	-28970116.41	0.0139	0.0050
Uranus	-84028-02-26 05:30 J	-28969747.49	-28969747.27	-28969747.04	0.0139	0.0061
Saturn	-84027-01-01 14:23 J	-28969438.07	-28969437.90	-28969437.73	0.0281	0.0200
Uranus	-84027-03-02 15:49 J	-28969378.05	-28969377.84	-28969377.63	0.0140	0.0071
Saturn	-84026-01-14 04:47 J	-28969060.52	-28969060.30	-28969060.07	0.0279	0.0094
Uranus	-84026-03-07 03:06 J	-28969008.57	-28969008.37	-28969008.17	0.0141	0.0082
Saturn	-84025-01-26 11:16 J	-28968683.27	-28968683.03	-28968682.79	0.0277	0.0012
Uranus	-84025-03-10 15:06 J	-28968639.05	-28968638.87	-28968638.68	0.0141	0.0092
Jupiter	-84025-03-24 15:49 J	-28968625.06	-28968624.84	-28968624.61	0.0523	0.0099
Saturn	-84024-02-06 10:47 J	-28968306.27	-28968306.05	-28968305.84	0.0274	0.0112
Uranus	-84024-03-15 04:32 J	-28968269.48	-28968269.31	-28968269.14	0.0142	0.0102
Saturn	-84023-02-18 04:32 J	-28967929.47	-28967929.31	-28967929.15	0.0272	0.0204
Uranus	-84023-03-19 18:56 J	-28967899.86	-28967899.71	-28967899.56	0.0142	0.0112
Uranus	-84022-03-24 09:49 J	-28967530.20	-28967530.09	-28967529.94	0.0143	0.0121
Uranus	-84021-03-28 02:23 J	-28967160.48	-28967160.40	-28967160.27	0.0144	0.0130
Uranus	-84020-04-01 19:54 J	-28966790.72	-28966790.67	-28966790.57	0.0144	0.0138
Uranus	-84019-04-06 15:06 J	-28966420.88	-28966420.87	-28966420.83	0.0145	0.0144
Jupiter	-84019-10-04 17:30 J	-28966239.97	-28966239.77	-28966239.57	0.0508	0.0278
Mars	-84014-06-20 10:18 J	-28964520.21	-28964520.07	-28964519.92	0.1599	0.1050
Jupiter	-84013-03-29 06:56 J	-28964237.42	-28964237.21	-28964236.99	0.0520	0.0173
Saturn	-84012-06-26 22:18 J	-28963782.74	-28963782.57	-28963782.40	0.0278	0.0204
Saturn	-84011-07-10 13:25 J	-28963404.17	-28963403.94	-28963403.71	0.0280	0.0099

Saturn	-84010-07-24 13:54 J	-28963025.17	-28963024.92	-28963024.67	0.0283	0.0016
Saturn	-84009-08-06 22:47 J	-28962645.77	-28962645.55	-28962645.32	0.0285	0.0135
Uranus	-84008-05-29 08:23 J	-28962350.15	-28962350.15	-28962350.12	0.0148	0.0147
Saturn	-84008-08-21 14:37 J	-28962266.00	-28962265.89	-28962265.76	0.0287	0.0252
Mars	-84008-12-19 23:30 J	-28962145.69	-28962145.52	-28962145.34	0.1948	0.0974
Uranus	-84007-06-03 14:52 J	-28961979.94	-28961979.88	-28961979.78	0.0148	0.0141
Uranus	-84006-06-08 21:49 J	-28961609.68	-28961609.59	-28961609.45	0.0147	0.0133
Uranus	-84005-06-13 05:44 J	-28961239.40	-28961239.26	-28961239.12	0.0147	0.0123
Uranus	-84004-06-18 13:11 J	-28960869.09	-28960868.95	-28960868.77	0.0147	0.0113
Uranus	-84003-06-23 20:52 J	-28960498.80	-28960498.63	-28960498.43	0.0147	0.0102
Uranus	-84002-06-29 04:47 J	-28960128.49	-28960128.30	-28960128.08	0.0146	0.0091
Jupiter	-84001-04-02 17:30 J	-28959849.89	-28959849.77	-28959849.64	0.0519	0.0435
Uranus	-84001-07-03 12:42 J	-28959758.18	-28959757.97	-28959757.74	0.0146	0.0078

84TH MILLENNIUM BCE

This is a list of transits of Earth in the 84th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-84000-07-08 20:23 J	-28959387.87	-28959387.65	-28959387.41	0.0145	0.0065		
Uranus	-83999-07-14 03:49 J	-28959017.57	-28959017.34	-28959017.09	0.0145	0.0052		
Saturn	-83999-12-27 10:47 J	-28958851.16	-28958851.05	-28958850.91	0.0283	0.0239		
Uranus	-83998-07-19 10:47 J	-28958647.29	-28958647.05	-28958646.79	0.0144	0.0039		
Saturn	-83997-01-09 06:13 J	-28958473.45	-28958473.24	-28958473.03	0.0281	0.0134		
Uranus	-83997-07-23 17:30 J	-28958277.03	-28958276.77	-28958276.51	0.0144	0.0025		

Saturn -83996-01-20 16:18 J -28958096.06 -28958095.82 -28958095.58 0.0278 0.0029
 Uranus -83996-07-28 23:16 J -28957906.79 -28957906.53 -28957906.27 0.0143 0.0012
 Saturn -83995-02-01 18:42 J -28957718.94 -28957718.72 -28957718.48 0.0276 0.0074
 Uranus -83995-08-03 04:18 J -28957536.58 -28957536.32 -28957536.06 0.0143 0.0002
 Saturn -83994-02-13 15:06 J -28957342.05 -28957341.87 -28957341.68 0.0273 0.0168
 Uranus -83994-08-08 08:23 J -28957166.41 -28957166.15 -28957165.89 0.0142 0.0015
 Saturn -83993-02-25 06:13 J -28956965.31 -28956965.24 -28956965.14 0.0271 0.0253
 Uranus -83993-08-12 11:30 J -28956796.27 -28956796.02 -28956795.75 0.0142 0.0029
 Uranus -83992-08-17 13:40 J -28956426.17 -28956425.93 -28956425.67 0.0141 0.0041
 Uranus -83991-08-22 15:06 J -28956056.11 -28956055.87 -28956055.63 0.0140 0.0053
 Uranus -83990-08-27 14:52 J -28955686.10 -28955685.88 -28955685.63 0.0140 0.0065
 Uranus -83989-08-31 14:08 J -28955316.12 -28955315.91 -28955315.68 0.0139 0.0075
 Uranus -83988-09-05 11:59 J -28954946.19 -28954946.00 -28954945.78 0.0138 0.0086
 Uranus -83987-09-10 09:06 J -28954576.30 -28954576.12 -28954575.92 0.0138 0.0095
 Uranus -83986-09-15 05:01 J -28954206.45 -28954206.29 -28954206.11 0.0137 0.0104
 Uranus -83985-09-18 23:59 J -28953836.64 -28953836.50 -28953836.34 0.0137 0.0112
 Uranus -83984-09-23 17:30 J -28953466.88 -28953466.77 -28953466.63 0.0136 0.0119
 Saturn -83983-06-21 10:47 J -28953196.16 -28953196.05 -28953195.92 0.0276 0.0241
 Uranus -83983-09-28 10:18 J -28953097.15 -28953097.07 -28953096.96 0.0135 0.0126
 Saturn -83982-07-04 20:37 J -28952817.84 -28952817.64 -28952817.41 0.0279 0.0143
 Uranus -83982-10-03 01:40 J -28952727.46 -28952727.43 -28952727.35 0.0135 0.0132
 Saturn -83981-07-17 16:32 J -28952439.06 -28952438.81 -28952438.56 0.0282 0.0031
 Saturn -83980-07-31 21:06 J -28952059.85 -28952059.62 -28952059.37 0.0284 0.0087
 Neptune -83979-03-24 17:16 J -28951823.87 -28951823.78 -28951823.69 0.0089 0.0082
 Saturn -83979-08-15 09:20 J -28951680.27 -28951680.11 -28951679.92 0.0287 0.0206
 Neptune -83978-03-27 02:23 J -28951456.58 -28951456.40 -28951456.20 0.0089 0.0059
 Neptune -83977-03-28 11:30 J -28951089.24 -28951089.02 -28951088.78 0.0089 0.0036
 Neptune -83976-03-30 21:06 J -28950721.87 -28950721.62 -28950721.37 0.0089 0.0012
 Neptune -83975-04-02 06:28 J -28950354.47 -28950354.23 -28950353.97 0.0089 0.0011
 Neptune -83974-04-04 15:35 J -28949987.07 -28949986.85 -28949986.61 0.0089 0.0035

Neptune -83973-04-06 01:11 J -28949619.63 -28949619.45 -28949619.25 0.0089 0.0058
 Pluto -83972-01-13 20:08 J -28949336.88 -28949336.66 -28949336.41 0.0078 0.0026
 Neptune -83972-04-08 10:18 J -28949252.14 -28949252.07 -28949251.95 0.0089 0.0082
 Saturn -83968-01-02 19:11 J -28947886.88 -28947886.70 -28947886.52 0.0281 0.0183
 Saturn -83967-01-15 09:06 J -28947509.35 -28947509.12 -28947508.89 0.0279 0.0078
 Mars -83967-06-14 10:18 J -28947359.26 -28947359.07 -28947358.88 0.1591 0.0373
 Saturn -83966-01-27 14:52 J -28947132.11 -28947131.88 -28947131.64 0.0276 0.0027
 Uranus -83966-12-07 06:56 J -28946818.25 -28946818.21 -28946818.13 0.0131 0.0127
 Saturn -83965-02-08 13:54 J -28946755.13 -28946754.92 -28946754.71 0.0274 0.0126
 Uranus -83965-12-10 09:20 J -28946449.19 -28946449.11 -28946449.00 0.0131 0.0122
 Saturn -83964-02-19 06:56 J -28946378.35 -28946378.21 -28946378.06 0.0272 0.0216
 Uranus -83964-12-14 11:44 J -28946080.11 -28946080.01 -28946079.88 0.0131 0.0116
 Uranus -83963-12-18 14:08 J -28945711.05 -28945710.91 -28945710.77 0.0131 0.0109
 Uranus -83962-12-22 16:04 J -28945341.98 -28945341.83 -28945341.67 0.0132 0.0102
 Uranus -83961-12-25 17:30 J -28944972.92 -28944972.77 -28944972.58 0.0132 0.0095
 Jupiter -83960-09-24 05:30 J -28944700.47 -28944700.27 -28944700.07 0.0504 0.0277
 Uranus -83960-12-29 19:25 J -28944603.86 -28944603.69 -28944603.48 0.0132 0.0087
 Uranus -83958-01-02 21:35 J -28944234.79 -28944234.60 -28944234.39 0.0132 0.0079
 Uranus -83957-01-06 23:44 J -28943865.71 -28943865.51 -28943865.29 0.0133 0.0070
 Uranus -83956-01-10 01:54 J -28943496.63 -28943496.42 -28943496.19 0.0133 0.0061
 Uranus -83955-01-14 04:32 J -28943127.52 -28943127.31 -28943127.07 0.0133 0.0052
 Uranus -83954-01-18 07:25 J -28942758.41 -28942758.19 -28942757.94 0.0134 0.0042
 Jupiter -83954-03-20 06:56 J -28942697.35 -28942697.21 -28942697.06 0.0525 0.0403
 Uranus -83953-01-22 10:47 J -28942389.29 -28942389.05 -28942388.81 0.0134 0.0032
 Saturn -83953-06-27 22:18 J -28942231.74 -28942231.57 -28942231.38 0.0278 0.0190
 Uranus -83952-01-25 14:08 J -28942020.15 -28942019.91 -28942019.66 0.0135 0.0021
 Saturn -83952-07-11 13:54 J -28941853.15 -28941852.92 -28941852.67 0.0280 0.0085
 Uranus -83951-01-29 18:13 J -28941650.99 -28941650.74 -28941650.50 0.0135 0.0011
 Saturn -83951-07-25 15:06 J -28941474.12 -28941473.87 -28941473.62 0.0283 0.0031
 Uranus -83950-02-02 22:32 J -28941281.81 -28941281.56 -28941281.32 0.0136 0.0001

Saturn	-83950-08-09 00:13 J	-28941094.69	-28941094.49	-28941094.27	0.0285	0.0150
Uranus	-83949-02-07 03:35 J	-28940912.60	-28940912.35	-28940912.10	0.0136	0.0011
Saturn	-83949-08-22 17:01 J	-28940714.88	-28940714.79	-28940714.69	0.0287	0.0265
Uranus	-83948-02-10 09:06 J	-28940543.37	-28940543.12	-28940542.88	0.0137	0.0022
Jupiter	-83948-09-29 03:20 J	-28940312.60	-28940312.36	-28940312.12	0.0505	0.0009
Uranus	-83947-02-14 15:35 J	-28940174.09	-28940173.85	-28940173.61	0.0138	0.0033
Uranus	-83946-02-18 22:32 J	-28939804.78	-28939804.56	-28939804.32	0.0138	0.0044
Uranus	-83945-02-23 06:42 J	-28939435.44	-28939435.22	-28939434.99	0.0139	0.0055
Uranus	-83944-02-26 15:35 J	-28939066.05	-28939065.85	-28939065.62	0.0139	0.0066
Uranus	-83943-03-03 01:54 J	-28938696.62	-28938696.42	-28938696.21	0.0140	0.0077
Uranus	-83942-03-07 12:42 J	-28938327.15	-28938326.97	-28938326.76	0.0141	0.0088
Jupiter	-83942-03-24 18:28 J	-28938309.95	-28938309.73	-28938309.51	0.0523	0.0135
Uranus	-83941-03-11 00:56 J	-28937957.62	-28937957.46	-28937957.27	0.0141	0.0098
Uranus	-83940-03-15 13:54 J	-28937588.06	-28937587.92	-28937587.74	0.0142	0.0108
Saturn	-83940-12-28 14:08 J	-28937300.05	-28937299.91	-28937299.76	0.0283	0.0223
Uranus	-83939-03-20 04:18 J	-28937218.45	-28937218.32	-28937218.17	0.0142	0.0118
Saturn	-83938-01-10 09:06 J	-28936922.34	-28936922.12	-28936921.91	0.0281	0.0118
Uranus	-83938-03-24 19:40 J	-28936848.79	-28936848.68	-28936848.56	0.0143	0.0126
Saturn	-83937-01-22 18:42 J	-28936544.96	-28936544.72	-28936544.48	0.0278	0.0013
Uranus	-83937-03-28 11:44 J	-28936479.07	-28936479.01	-28936478.90	0.0144	0.0135
Saturn	-83936-02-02 20:52 J	-28936167.85	-28936167.63	-28936167.40	0.0276	0.0088
Uranus	-83936-04-02 05:44 J	-28936109.30	-28936109.26	-28936109.21	0.0144	0.0142
Jupiter	-83936-10-04 00:28 J	-28935924.68	-28935924.48	-28935924.27	0.0507	0.0259
Saturn	-83935-02-14 16:47 J	-28935790.98	-28935790.80	-28935790.62	0.0273	0.0181
Saturn	-83934-02-26 07:25 J	-28935414.23	-28935414.19	-28935414.12	0.0271	0.0264
Jupiter	-83930-03-29 10:18 J	-28933922.29	-28933922.07	-28933921.85	0.0522	0.0140
Mars	-83929-12-23 17:01 J	-28933286.97	-28933286.79	-28933286.61	0.1945	0.0828
Uranus	-83924-05-29 17:16 J	-28931668.78	-28931668.78	-28931668.75	0.0148	0.0148
Saturn	-83924-06-22 11:01 J	-28931645.16	-28931645.04	-28931644.88	0.0276	0.0228
Uranus	-83923-06-03 23:44 J	-28931298.57	-28931298.51	-28931298.42	0.0148	0.0140

Saturn	-83923-07-05 21:20 J	-28931266.82	-28931266.61	-28931266.37	0.0279	0.0128
Uranus	-83922-06-09 07:11 J	-28930928.31	-28930928.20	-28930928.08	0.0148	0.0131
Saturn	-83922-07-19 17:44 J	-28930888.01	-28930887.76	-28930887.51	0.0282	0.0016
Uranus	-83921-06-13 14:23 J	-28930558.03	-28930557.90	-28930557.74	0.0147	0.0122
Saturn	-83921-08-01 22:47 J	-28930508.78	-28930508.55	-28930508.31	0.0284	0.0102
Uranus	-83920-06-18 22:04 J	-28930187.73	-28930187.58	-28930187.39	0.0147	0.0111
Saturn	-83920-08-16 11:30 J	-28930129.17	-28930129.02	-28930128.85	0.0287	0.0219
Uranus	-83919-06-24 05:59 J	-28929817.42	-28929817.25	-28929817.05	0.0147	0.0100
Jupiter	-83918-04-03 03:20 J	-28929534.48	-28929534.36	-28929534.21	0.0519	0.0416
Uranus	-83918-06-29 14:08 J	-28929447.11	-28929446.91	-28929446.69	0.0146	0.0087
Uranus	-83917-07-03 22:18 J	-28929076.79	-28929076.57	-28929076.34	0.0146	0.0074
Uranus	-83916-07-09 05:59 J	-28928706.47	-28928706.25	-28928706.00	0.0146	0.0062
Uranus	-83915-07-14 13:25 J	-28928336.17	-28928335.94	-28928335.68	0.0145	0.0048
Uranus	-83914-07-19 20:52 J	-28927965.88	-28927965.63	-28927965.38	0.0145	0.0034
Uranus	-83913-07-24 03:35 J	-28927595.61	-28927595.35	-28927595.09	0.0144	0.0020
Uranus	-83912-07-29 09:20 J	-28927225.38	-28927225.11	-28927224.85	0.0143	0.0006
Uranus	-83911-08-03 14:23 J	-28926855.16	-28926854.90	-28926854.64	0.0143	0.0008
Saturn	-83911-12-22 22:32 J	-28926713.62	-28926713.56	-28926713.48	0.0284	0.0271
Uranus	-83910-08-08 18:28 J	-28926484.98	-28926484.73	-28926484.46	0.0142	0.0022
Saturn	-83909-01-04 21:35 J	-28926335.79	-28926335.60	-28926335.40	0.0281	0.0168
Uranus	-83909-08-12 21:49 J	-28926114.83	-28926114.59	-28926114.33	0.0142	0.0035
Saturn	-83908-01-16 11:01 J	-28925958.27	-28925958.04	-28925957.80	0.0279	0.0062
Uranus	-83908-08-17 23:59 J	-28925744.73	-28925744.50	-28925744.24	0.0141	0.0047
Saturn	-83907-01-28 16:32 J	-28925581.04	-28925580.81	-28925580.57	0.0276	0.0042
Uranus	-83907-08-23 01:11 J	-28925374.67	-28925374.45	-28925374.19	0.0140	0.0060
Saturn	-83906-02-09 15:06 J	-28925204.07	-28925203.87	-28925203.66	0.0274	0.0139
Uranus	-83906-08-28 01:54 J	-28925004.65	-28925004.42	-28925004.19	0.0140	0.0070
Saturn	-83905-02-21 07:40 J	-28924827.30	-28924827.18	-28924827.04	0.0272	0.0227
Uranus	-83905-09-01 00:56 J	-28924634.66	-28924634.46	-28924634.23	0.0139	0.0081
Uranus	-83904-09-05 23:01 J	-28924264.72	-28924264.54	-28924264.33	0.0138	0.0091

Uranus	-83903-09-10 20:08 J	-28923894.82	-28923894.66	-28923894.46	0.0138	0.0101
Uranus	-83902-09-15 16:32 J	-28923524.96	-28923524.81	-28923524.65	0.0137	0.0109
Uranus	-83901-09-19 11:16 J	-28923155.14	-28923155.03	-28923154.88	0.0137	0.0118
Uranus	-83900-09-24 05:01 J	-28922785.37	-28922785.29	-28922785.17	0.0136	0.0125
Uranus	-83899-09-28 21:35 J	-28922415.64	-28922415.60	-28922415.51	0.0136	0.0132
Neptune	-83897-09-28 05:16 J	-28921685.40	-28921685.28	-28921685.11	0.0088	0.0074
Neptune	-83896-09-30 19:11 J	-28921317.89	-28921317.70	-28921317.45	0.0088	0.0050
Saturn	-83895-06-16 15:06 J	-28921058.91	-28921058.87	-28921058.80	0.0275	0.0267
Neptune	-83895-10-03 09:35 J	-28920950.34	-28920950.10	-28920949.83	0.0088	0.0025
Saturn	-83894-06-29 21:06 J	-28920680.80	-28920680.62	-28920680.42	0.0278	0.0175
Neptune	-83894-10-05 23:59 J	-28920582.77	-28920582.50	-28920582.24	0.0088	0.0002
Saturn	-83893-07-12 12:56 J	-28920302.20	-28920301.96	-28920301.71	0.0280	0.0069
Neptune	-83893-10-07 13:25 J	-28920215.18	-28920214.94	-28920214.68	0.0088	0.0024
Saturn	-83892-07-26 14:08 J	-28919923.16	-28919922.91	-28919922.66	0.0283	0.0046
Neptune	-83892-10-10 03:06 J	-28919847.58	-28919847.37	-28919847.13	0.0088	0.0048
Saturn	-83891-08-09 23:30 J	-28919543.71	-28919543.52	-28919543.30	0.0285	0.0165
Neptune	-83891-10-12 16:47 J	-28919479.94	-28919479.80	-28919479.63	0.0088	0.0072
Saturn	-83890-08-24 16:47 J	-28919163.86	-28919163.80	-28919163.73	0.0288	0.0277
Mars	-83888-06-16 11:44 J	-28918502.20	-28918502.01	-28918501.82	0.1593	0.0239
Uranus	-83882-12-07 18:42 J	-28916136.77	-28916136.72	-28916136.65	0.0131	0.0126
Uranus	-83881-12-10 21:20 J	-28915767.71	-28915767.61	-28915767.51	0.0131	0.0121
Saturn	-83881-12-29 14:52 J	-28915749.04	-28915748.88	-28915748.72	0.0283	0.0209
Uranus	-83880-12-14 23:01 J	-28915398.64	-28915398.54	-28915398.39	0.0131	0.0115
Saturn	-83879-01-11 09:20 J	-28915371.33	-28915371.11	-28915370.88	0.0281	0.0103
Uranus	-83879-12-19 01:11 J	-28915029.57	-28915029.45	-28915029.29	0.0131	0.0108
Saturn	-83878-01-23 19:11 J	-28914993.94	-28914993.70	-28914993.46	0.0278	0.0003
Uranus	-83878-12-23 03:35 J	-28914660.51	-28914660.35	-28914660.18	0.0132	0.0100
Saturn	-83877-02-04 21:06 J	-28914616.84	-28914616.62	-28914616.40	0.0276	0.0102
Jupiter	-83877-09-23 15:35 J	-28914385.05	-28914384.85	-28914384.66	0.0503	0.0288
Uranus	-83877-12-26 04:47 J	-28914291.45	-28914291.30	-28914291.10	0.0132	0.0093

Saturn	-83876-02-15 16:47 J	-28914239.96	-28914239.80	-28914239.63	0.0273	0.0193
Uranus	-83876-12-30 07:11 J	-28913922.38	-28913922.20	-28913922.00	0.0132	0.0084
Uranus	-83874-01-03 09:06 J	-28913553.31	-28913553.12	-28913552.90	0.0132	0.0076
Uranus	-83873-01-07 11:16 J	-28913184.24	-28913184.03	-28913183.81	0.0133	0.0067
Uranus	-83872-01-10 13:40 J	-28912815.15	-28912814.93	-28912814.70	0.0133	0.0057
Uranus	-83871-01-14 16:18 J	-28912446.05	-28912445.82	-28912445.59	0.0133	0.0048
Jupiter	-83871-03-19 09:35 J	-28912382.22	-28912382.10	-28912381.98	0.0526	0.0440
Uranus	-83870-01-18 18:42 J	-28912076.95	-28912076.72	-28912076.47	0.0134	0.0038
Uranus	-83869-01-22 21:49 J	-28911707.83	-28911707.59	-28911707.34	0.0134	0.0027
Uranus	-83868-01-26 00:56 J	-28911338.70	-28911338.46	-28911338.21	0.0135	0.0017
Uranus	-83867-01-30 05:01 J	-28910969.54	-28910969.29	-28910969.04	0.0135	0.0006
Uranus	-83866-02-03 09:20 J	-28910600.36	-28910600.11	-28910599.87	0.0136	0.0005
Uranus	-83865-02-07 14:08 J	-28910231.16	-28910230.91	-28910230.67	0.0136	0.0016
Saturn	-83865-06-23 10:18 J	-28910094.22	-28910094.07	-28910093.91	0.0276	0.0214
Jupiter	-83865-09-28 09:20 J	-28909997.35	-28909997.11	-28909996.87	0.0504	0.0032
Uranus	-83864-02-10 19:40 J	-28909861.92	-28909861.68	-28909861.44	0.0137	0.0027
Saturn	-83864-07-06 20:52 J	-28909715.85	-28909715.63	-28909715.40	0.0279	0.0113
Uranus	-83863-02-15 01:54 J	-28909492.65	-28909492.42	-28909492.18	0.0137	0.0038
Saturn	-83863-07-20 17:16 J	-28909337.03	-28909336.78	-28909336.53	0.0282	0.0004
Uranus	-83862-02-19 09:06 J	-28909123.35	-28909123.12	-28909122.89	0.0138	0.0049
Saturn	-83862-08-03 22:32 J	-28908957.78	-28908957.56	-28908957.32	0.0284	0.0116
Uranus	-83861-02-23 17:01 J	-28908754.00	-28908753.79	-28908753.56	0.0139	0.0061
Saturn	-83861-08-17 11:59 J	-28908578.14	-28908578.00	-28908577.84	0.0287	0.0232
Uranus	-83860-02-27 02:08 J	-28908384.62	-28908384.41	-28908384.19	0.0139	0.0072
Uranus	-83859-03-03 11:59 J	-28908015.18	-28908015.00	-28908014.79	0.0140	0.0083
Jupiter	-83859-03-24 04:04 J	-28907994.54	-28907994.33	-28907994.11	0.0524	0.0156
Uranus	-83858-03-07 22:47 J	-28907645.71	-28907645.55	-28907645.35	0.0141	0.0094
Uranus	-83857-03-11 11:01 J	-28907276.20	-28907276.04	-28907275.87	0.0141	0.0103
Uranus	-83856-03-16 00:13 J	-28906906.64	-28906906.49	-28906906.35	0.0142	0.0113
Uranus	-83855-03-20 13:54 J	-28906537.03	-28906536.92	-28906536.78	0.0142	0.0123

Uranus	-83854-03-25 05:01 J	-28906167.38	-28906167.29	-28906167.18	0.0143	0.0131
Uranus	-83853-03-28 21:35 J	-28905797.65	-28905797.60	-28905797.54	0.0144	0.0139
Jupiter	-83853-10-03 06:13 J	-28905609.45	-28905609.24	-28905609.03	0.0507	0.0233
Saturn	-83852-12-24 00:13 J	-28905162.58	-28905162.49	-28905162.38	0.0284	0.0256
Saturn	-83850-01-05 23:01 J	-28904784.73	-28904784.54	-28904784.33	0.0281	0.0152
Saturn	-83849-01-18 12:28 J	-28904407.22	-28904406.98	-28904406.74	0.0279	0.0046
Saturn	-83848-01-29 17:30 J	-28904030.00	-28904029.77	-28904029.53	0.0276	0.0056
Saturn	-83847-02-10 15:35 J	-28903653.04	-28903652.85	-28903652.65	0.0274	0.0152
Jupiter	-83847-03-28 22:18 J	-28903606.78	-28903606.57	-28903606.34	0.0522	0.0127
Saturn	-83846-02-22 08:08 J	-28903276.26	-28903276.16	-28903276.04	0.0272	0.0238
Mars	-83841-06-10 14:37 J	-28901341.02	-28901340.89	-28901340.75	0.1587	0.1133
Jupiter	-83841-10-08 04:32 J	-28901221.33	-28901221.31	-28901221.28	0.0509	0.0505
Uranus	-83840-05-30 02:37 J	-28900987.40	-28900987.39	-28900987.36	0.0148	0.0147
Uranus	-83839-06-04 09:06 J	-28900617.19	-28900617.12	-28900617.02	0.0148	0.0139
Uranus	-83838-06-09 16:18 J	-28900246.93	-28900246.82	-28900246.69	0.0148	0.0130
Uranus	-83837-06-13 23:44 J	-28899876.64	-28899876.51	-28899876.35	0.0147	0.0120
Saturn	-83836-06-17 13:40 J	-28899508.02	-28899507.93	-28899507.83	0.0275	0.0254
Uranus	-83836-06-19 07:54 J	-28899506.34	-28899506.17	-28899505.99	0.0147	0.0109
Jupiter	-83835-04-02 13:54 J	-28899219.05	-28899218.92	-28899218.76	0.0519	0.0398
Uranus	-83835-06-24 15:35 J	-28899136.03	-28899135.85	-28899135.64	0.0147	0.0097
Saturn	-83835-06-30 19:25 J	-28899129.88	-28899129.69	-28899129.48	0.0278	0.0161
Uranus	-83834-06-29 23:44 J	-28898765.70	-28898765.51	-28898765.28	0.0146	0.0085
Saturn	-83834-07-14 11:30 J	-28898751.27	-28898751.02	-28898750.77	0.0280	0.0054
Uranus	-83833-07-04 08:08 J	-28898395.38	-28898395.16	-28898394.92	0.0146	0.0071
Saturn	-83833-07-27 12:42 J	-28898372.21	-28898371.97	-28898371.72	0.0283	0.0061
Uranus	-83832-07-09 16:04 J	-28898025.06	-28898024.83	-28898024.58	0.0146	0.0057
Saturn	-83832-08-10 22:47 J	-28897992.74	-28897992.55	-28897992.35	0.0285	0.0177
Uranus	-83831-07-14 23:59 J	-28897654.75	-28897654.50	-28897654.25	0.0145	0.0043
Uranus	-83830-07-20 06:56 J	-28897284.45	-28897284.21	-28897283.94	0.0145	0.0030
Uranus	-83829-07-24 13:40 J	-28896914.18	-28896913.93	-28896913.66	0.0144	0.0015

Uranus	-83828-07-29 19:54 J	-28896543.94	-28896543.67	-28896543.41	0.0144	0.0003
Uranus	-83827-08-04 00:56 J	-28896173.72	-28896173.46	-28896173.20	0.0143	0.0014
Uranus	-83826-08-09 05:01 J	-28895803.54	-28895803.29	-28895803.02	0.0142	0.0028
Uranus	-83825-08-13 08:52 J	-28895433.38	-28895433.13	-28895432.88	0.0142	0.0040
Uranus	-83824-08-18 10:47 J	-28895063.28	-28895063.05	-28895062.80	0.0141	0.0053
Uranus	-83823-08-23 12:28 J	-28894693.21	-28894692.98	-28894692.74	0.0140	0.0065
Uranus	-83822-08-28 12:42 J	-28894323.17	-28894322.97	-28894322.74	0.0140	0.0077
Saturn	-83822-12-31 13:54 J	-28894198.08	-28894197.92	-28894197.73	0.0284	0.0195
Uranus	-83821-09-01 12:13 J	-28893953.18	-28893952.99	-28893952.77	0.0139	0.0087
Saturn	-83820-01-12 08:37 J	-28893820.37	-28893820.14	-28893819.91	0.0281	0.0088
Uranus	-83820-09-06 10:32 J	-28893583.23	-28893583.06	-28893582.86	0.0138	0.0098
Saturn	-83819-01-24 18:28 J	-28893442.97	-28893442.73	-28893442.49	0.0278	0.0018
Uranus	-83819-09-11 07:54 J	-28893213.32	-28893213.17	-28893212.99	0.0138	0.0107
Saturn	-83818-02-05 20:08 J	-28893065.86	-28893065.66	-28893065.43	0.0276	0.0117
Uranus	-83818-09-16 04:04 J	-28892843.45	-28892843.33	-28892843.17	0.0137	0.0116
Saturn	-83817-02-17 15:49 J	-28892688.99	-28892688.84	-28892688.68	0.0273	0.0206
Uranus	-83817-09-19 23:01 J	-28892473.62	-28892473.54	-28892473.40	0.0137	0.0124
Uranus	-83816-09-24 17:01 J	-28892103.85	-28892103.79	-28892103.70	0.0136	0.0131
Neptune	-83814-03-26 11:59 J	-28891556.14	-28891556.00	-28891555.84	0.0089	0.0070
Neptune	-83813-03-27 21:06 J	-28891188.82	-28891188.62	-28891188.40	0.0089	0.0047
Pluto	-83813-07-11 04:47 J	-28891083.54	-28891083.30	-28891083.04	0.0067	0.0024
Neptune	-83812-03-30 06:28 J	-28890821.46	-28890821.23	-28890820.98	0.0089	0.0024
Neptune	-83811-04-01 16:04 J	-28890454.08	-28890453.83	-28890453.58	0.0089	0.0001
Neptune	-83810-04-04 01:11 J	-28890086.68	-28890086.45	-28890086.19	0.0089	0.0023
Neptune	-83809-04-05 10:47 J	-28889719.26	-28889719.05	-28889718.83	0.0089	0.0046
Mars	-83809-06-18 14:08 J	-28889645.07	-28889644.91	-28889644.75	0.1594	0.0862
Neptune	-83808-04-07 19:54 J	-28889351.80	-28889351.67	-28889351.49	0.0089	0.0070
Saturn	-83806-06-25 09:35 J	-28888543.27	-28888543.10	-28888542.93	0.0276	0.0200
Saturn	-83805-07-07 20:23 J	-28888164.88	-28888164.65	-28888164.41	0.0279	0.0099
Saturn	-83804-07-21 16:47 J	-28887786.05	-28887785.80	-28887785.54	0.0282	0.0014

Saturn	-83803-08-04 22:18 J	-28887406.79	-28887406.57	-28887406.34	0.0284	0.0130
Saturn	-83802-08-19 11:44 J	-28887027.13	-28887027.01	-28887026.87	0.0287	0.0245
Uranus	-83798-12-08 07:11 J	-28885455.24	-28885455.20	-28885455.11	0.0131	0.0127
Uranus	-83797-12-11 10:04 J	-28885086.18	-28885086.08	-28885085.98	0.0131	0.0120
Uranus	-83796-12-15 11:59 J	-28884717.10	-28884717.00	-28884716.85	0.0131	0.0114
Uranus	-83795-12-19 14:37 J	-28884348.03	-28884347.89	-28884347.74	0.0131	0.0106
Jupiter	-83794-09-23 21:35 J	-28884069.79	-28884069.60	-28884069.41	0.0502	0.0310
Uranus	-83794-12-23 16:04 J	-28883978.97	-28883978.83	-28883978.64	0.0132	0.0099
Saturn	-83793-12-25 00:13 J	-28883611.60	-28883611.49	-28883611.35	0.0284	0.0242
Uranus	-83793-12-26 18:28 J	-28883609.91	-28883609.73	-28883609.54	0.0132	0.0090
Uranus	-83792-12-30 20:08 J	-28883240.83	-28883240.66	-28883240.44	0.0132	0.0082
Saturn	-83791-01-06 23:16 J	-28883233.74	-28883233.53	-28883233.32	0.0281	0.0137
Uranus	-83790-01-03 22:47 J	-28882871.76	-28882871.55	-28882871.34	0.0132	0.0073
Saturn	-83790-01-19 12:42 J	-28882856.21	-28882855.97	-28882855.74	0.0279	0.0032
Uranus	-83789-01-08 00:42 J	-28882502.68	-28882502.47	-28882502.24	0.0133	0.0064
Saturn	-83789-01-31 17:30 J	-28882479.00	-28882478.77	-28882478.54	0.0276	0.0070
Uranus	-83788-01-11 02:52 J	-28882133.59	-28882133.38	-28882133.14	0.0133	0.0054
Saturn	-83788-02-11 15:35 J	-28882102.04	-28882101.85	-28882101.66	0.0274	0.0165
Jupiter	-83788-03-18 21:35 J	-28882066.71	-28882066.60	-28882066.49	0.0527	0.0453
Uranus	-83787-01-15 05:30 J	-28881764.50	-28881764.27	-28881764.03	0.0133	0.0044
Saturn	-83787-02-23 08:08 J	-28881725.25	-28881725.16	-28881725.07	0.0272	0.0249
Uranus	-83786-01-19 07:54 J	-28881395.39	-28881395.17	-28881394.91	0.0134	0.0034
Uranus	-83785-01-23 11:01 J	-28881026.28	-28881026.04	-28881025.79	0.0134	0.0023
Uranus	-83784-01-26 14:23 J	-28880657.14	-28880656.90	-28880656.65	0.0135	0.0012
Uranus	-83783-01-30 18:13 J	-28880287.98	-28880287.74	-28880287.49	0.0135	0.0003
Uranus	-83782-02-03 22:32 J	-28879918.80	-28879918.56	-28879918.31	0.0136	0.0010
Jupiter	-83782-09-28 17:44 J	-28879681.99	-28879681.76	-28879681.52	0.0504	0.0049
Uranus	-83781-02-08 03:35 J	-28879549.59	-28879549.35	-28879549.10	0.0136	0.0021
Uranus	-83780-02-11 09:06 J	-28879180.36	-28879180.12	-28879179.88	0.0137	0.0033
Uranus	-83779-02-15 15:20 J	-28878811.08	-28878810.86	-28878810.61	0.0137	0.0044

Uranus -83778-02-19 22:47 J -28878441.77 -28878441.55 -28878441.32 0.0138 0.0055
 Uranus -83777-02-24 06:42 J -28878072.42 -28878072.22 -28878071.99 0.0139 0.0067
 Saturn -83777-06-18 12:28 J -28877957.09 -28877956.98 -28877956.85 0.0275 0.0240
 Uranus -83776-02-27 16:04 J -28877703.03 -28877702.83 -28877702.62 0.0139 0.0078
 Jupiter -83776-03-23 15:20 J -28877679.08 -28877678.86 -28877678.65 0.0524 0.0172
 Saturn -83776-07-01 18:28 J -28877578.94 -28877578.73 -28877578.52 0.0278 0.0146
 Uranus -83775-03-04 01:40 J -28877333.60 -28877333.43 -28877333.22 0.0140 0.0089
 Saturn -83775-07-15 10:18 J -28877200.32 -28877200.07 -28877199.82 0.0280 0.0040
 Uranus -83774-03-08 12:56 J -28876964.13 -28876963.96 -28876963.79 0.0141 0.0099
 Saturn -83774-07-29 11:44 J -28876821.25 -28876821.01 -28876820.77 0.0283 0.0075
 Uranus -83773-03-12 00:28 J -28876594.62 -28876594.48 -28876594.31 0.0141 0.0110
 Saturn -83773-08-11 21:35 J -28876441.77 -28876441.60 -28876441.40 0.0285 0.0192
 Uranus -83772-03-16 13:25 J -28876225.06 -28876224.94 -28876224.80 0.0142 0.0119
 Uranus -83771-03-21 03:06 J -28875855.45 -28875855.37 -28875855.24 0.0142 0.0129
 Uranus -83770-03-25 17:59 J -28875485.79 -28875485.75 -28875485.65 0.0143 0.0137
 Jupiter -83770-10-03 17:01 J -28875294.01 -28875293.79 -28875293.58 0.0506 0.0223
 Jupiter -83764-03-28 02:23 J -28873291.63 -28873291.40 -28873291.18 0.0522 0.0091
 Saturn -83764-12-19 09:06 J -28873025.15 -28873025.12 -28873025.09 0.0286 0.0283
 Saturn -83762-01-01 13:25 J -28872647.12 -28872646.94 -28872646.75 0.0284 0.0180
 Mars -83762-06-13 15:20 J -28872484.03 -28872483.86 -28872483.68 0.1588 0.0543
 Saturn -83761-01-14 07:54 J -28872269.40 -28872269.17 -28872268.94 0.0281 0.0073
 Saturn -83760-01-25 17:44 J -28871892.00 -28871891.76 -28871891.52 0.0278 0.0032
 Saturn -83759-02-06 19:40 J -28871514.89 -28871514.68 -28871514.47 0.0276 0.0130
 Saturn -83758-02-18 14:52 J -28871138.01 -28871137.88 -28871137.72 0.0273 0.0218
 Jupiter -83758-10-08 14:37 J -28870905.94 -28870905.89 -28870905.82 0.0508 0.0491
 Uranus -83756-05-30 14:37 J -28870305.90 -28870305.89 -28870305.84 0.0148 0.0147
 Uranus -83755-06-04 21:20 J -28869935.69 -28869935.61 -28869935.51 0.0148 0.0138
 Uranus -83754-06-10 04:18 J -28869565.42 -28869565.32 -28869565.17 0.0148 0.0129
 Uranus -83753-06-14 12:13 J -28869195.14 -28869194.99 -28869194.83 0.0147 0.0118
 Jupiter -83752-04-01 17:01 J -28868903.95 -28868903.79 -28868903.62 0.0520 0.0361

Uranus	-83752-06-19 19:54 J	-28868824.83	-28868824.67	-28868824.48	0.0147	0.0106
Uranus	-83751-06-25 04:04 J	-28868454.52	-28868454.33	-28868454.12	0.0147	0.0094
Uranus	-83750-06-30 12:42 J	-28868084.19	-28868083.97	-28868083.76	0.0146	0.0081
Uranus	-83749-07-04 20:23 J	-28867713.86	-28867713.65	-28867713.40	0.0146	0.0067
Uranus	-83748-07-10 04:47 J	-28867343.54	-28867343.30	-28867343.06	0.0146	0.0053
Saturn	-83747-06-26 09:20 J	-28866992.28	-28866992.11	-28866991.91	0.0276	0.0186
Uranus	-83747-07-15 12:13 J	-28866973.24	-28866972.99	-28866972.74	0.0145	0.0038
Saturn	-83746-07-09 20:37 J	-28866613.88	-28866613.64	-28866613.40	0.0279	0.0084
Uranus	-83746-07-20 19:25 J	-28866602.94	-28866602.69	-28866602.43	0.0145	0.0024
Saturn	-83745-07-22 17:16 J	-28866235.03	-28866234.78	-28866234.52	0.0282	0.0029
Uranus	-83745-07-25 01:54 J	-28866232.67	-28866232.42	-28866232.15	0.0144	0.0010
Uranus	-83744-07-30 07:40 J	-28865862.44	-28865862.18	-28865861.91	0.0144	0.0006
Saturn	-83744-08-05 22:47 J	-28865855.76	-28865855.55	-28865855.32	0.0284	0.0145
Uranus	-83743-08-04 12:56 J	-28865492.22	-28865491.96	-28865491.70	0.0143	0.0019
Saturn	-83743-08-20 12:42 J	-28865476.07	-28865475.97	-28865475.85	0.0287	0.0258
Uranus	-83742-08-09 17:01 J	-28865122.04	-28865121.79	-28865121.53	0.0142	0.0033
Uranus	-83741-08-13 20:08 J	-28864751.89	-28864751.66	-28864751.39	0.0142	0.0047
Uranus	-83740-08-18 22:47 J	-28864381.78	-28864381.55	-28864381.30	0.0141	0.0059
Uranus	-83739-08-24 00:13 J	-28864011.70	-28864011.49	-28864011.25	0.0140	0.0072
Uranus	-83738-08-29 00:56 J	-28863641.66	-28863641.46	-28863641.24	0.0140	0.0083
Uranus	-83737-09-02 00:42 J	-28863271.66	-28863271.47	-28863271.27	0.0139	0.0094
Uranus	-83736-09-06 23:01 J	-28862901.70	-28862901.54	-28862901.36	0.0138	0.0104
Uranus	-83735-09-11 20:23 J	-28862531.78	-28862531.65	-28862531.48	0.0138	0.0113
Uranus	-83734-09-16 16:47 J	-28862161.91	-28862161.80	-28862161.67	0.0137	0.0122
Saturn	-83734-12-27 00:56 J	-28862060.59	-28862060.46	-28862060.31	0.0284	0.0228
Uranus	-83733-09-20 11:59 J	-28861792.08	-28861792.00	-28861791.91	0.0137	0.0129
Neptune	-83733-09-27 08:23 J	-28861785.19	-28861785.15	-28861785.05	0.0088	0.0086
Saturn	-83732-01-07 23:30 J	-28861682.73	-28861682.52	-28861682.30	0.0281	0.0123
Uranus	-83732-09-25 05:44 J	-28861422.26	-28861422.26	-28861422.24	0.0136	0.0136
Neptune	-83732-09-29 23:01 J	-28861417.71	-28861417.54	-28861417.33	0.0088	0.0062

Saturn -83731-01-20 12:56 J -28861305.20 -28861304.96 -28861304.72 0.0279 0.0017
 Neptune -83731-10-02 13:11 J -28861050.17 -28861049.95 -28861049.69 0.0088 0.0038
 Saturn -83730-02-01 17:44 J -28860927.98 -28860927.76 -28860927.53 0.0276 0.0085
 Mars -83730-06-21 15:49 J -28860787.90 -28860787.84 -28860787.77 0.1596 0.1485
 Neptune -83730-10-05 03:35 J -28860682.61 -28860682.35 -28860682.08 0.0088 0.0013
 Saturn -83729-02-13 15:35 J -28860551.02 -28860550.85 -28860550.66 0.0274 0.0178
 Neptune -83729-10-06 17:30 J -28860315.03 -28860314.77 -28860314.50 0.0088 0.0011
 Saturn -83728-02-24 08:08 J -28860174.22 -28860174.16 -28860174.09 0.0272 0.0260
 Neptune -83728-10-09 06:56 J -28859947.44 -28859947.21 -28859946.95 0.0088 0.0035
 Pluto -83727-01-14 10:04 J -28859850.13 -28859850.08 -28859849.97 0.0078 0.0075
 Neptune -83727-10-11 21:06 J -28859579.81 -28859579.62 -28859579.42 0.0088 0.0059
 Pluto -83726-01-16 10:32 J -28859483.07 -28859483.06 -28859483.02 0.0078 0.0077
 Neptune -83726-10-14 10:18 J -28859212.14 -28859212.07 -28859211.96 0.0088 0.0083
 Mars -83724-12-18 20:23 J -28858415.80 -28858415.65 -28858415.50 0.1953 0.1323
 Saturn -83718-06-20 13:25 J -28856406.08 -28856405.94 -28856405.80 0.0275 0.0226
 Saturn -83717-07-02 19:25 J -28856027.91 -28856027.69 -28856027.47 0.0278 0.0131
 Saturn -83716-07-16 11:16 J -28855649.28 -28855649.03 -28855648.78 0.0280 0.0024
 Saturn -83715-07-30 12:42 J -28855270.21 -28855269.97 -28855269.73 0.0283 0.0090
 Saturn -83714-08-13 22:47 J -28854890.71 -28854890.55 -28854890.37 0.0286 0.0206
 Uranus -83714-12-08 20:08 J -28854773.72 -28854773.66 -28854773.58 0.0131 0.0125
 Uranus -83713-12-11 22:18 J -28854404.65 -28854404.57 -28854404.44 0.0131 0.0120
 Uranus -83712-12-16 01:25 J -28854035.57 -28854035.44 -28854035.31 0.0131 0.0112
 Jupiter -83711-09-23 07:40 J -28853754.36 -28853754.18 -28853753.99 0.0502 0.0321
 Uranus -83711-12-20 03:06 J -28853666.51 -28853666.37 -28853666.20 0.0131 0.0105
 Uranus -83710-12-24 05:01 J -28853297.44 -28853297.29 -28853297.10 0.0132 0.0097
 Uranus -83709-12-27 07:11 J -28852928.37 -28852928.20 -28852928.00 0.0132 0.0088
 Uranus -83708-12-31 09:20 J -28852559.30 -28852559.11 -28852558.90 0.0132 0.0079
 Uranus -83706-01-04 11:30 J -28852190.22 -28852190.02 -28852189.80 0.0132 0.0070
 Uranus -83705-01-08 13:40 J -28851821.15 -28851820.93 -28851820.70 0.0133 0.0060
 Jupiter -83705-03-18 00:56 J -28851751.54 -28851751.46 -28851751.37 0.0527 0.0488

Saturn -83705-12-20 08:23 J -28851474.21 -28851474.15 -28851474.07 0.0286 0.0271
 Uranus -83704-01-11 15:35 J -28851452.07 -28851451.85 -28851451.60 0.0133 0.0050
 Saturn -83703-01-02 12:42 J -28851096.15 -28851095.97 -28851095.76 0.0284 0.0167
 Uranus -83703-01-15 18:13 J -28851082.97 -28851082.74 -28851082.50 0.0133 0.0040
 Saturn -83702-01-15 07:25 J -28850718.42 -28850718.19 -28850717.95 0.0281 0.0059
 Uranus -83702-01-19 20:52 J -28850713.87 -28850713.63 -28850713.39 0.0134 0.0029
 Uranus -83701-01-23 23:44 J -28850344.75 -28850344.51 -28850344.26 0.0134 0.0018
 Saturn -83701-01-27 17:16 J -28850341.02 -28850340.78 -28850340.55 0.0278 0.0046
 Uranus -83700-01-27 03:06 J -28849975.62 -28849975.37 -28849975.12 0.0135 0.0007
 Saturn -83700-02-07 18:56 J -28849963.91 -28849963.71 -28849963.50 0.0276 0.0143
 Uranus -83699-01-31 06:56 J -28849606.46 -28849606.21 -28849605.96 0.0135 0.0004
 Saturn -83699-02-19 14:23 J -28849587.01 -28849586.90 -28849586.76 0.0273 0.0231
 Jupiter -83699-09-28 04:32 J -28849366.55 -28849366.31 -28849366.07 0.0504 0.0060
 Uranus -83698-02-04 11:16 J -28849237.27 -28849237.03 -28849236.78 0.0136 0.0015
 Uranus -83697-02-08 16:18 J -28848868.06 -28848867.82 -28848867.58 0.0136 0.0027
 Uranus -83696-02-11 21:49 J -28848498.82 -28848498.59 -28848498.35 0.0137 0.0038
 Uranus -83695-02-16 04:32 J -28848129.54 -28848129.31 -28848129.08 0.0137 0.0050
 Uranus -83694-02-20 11:30 J -28847760.23 -28847760.02 -28847759.79 0.0138 0.0061
 Uranus -83693-02-24 19:40 J -28847390.87 -28847390.68 -28847390.45 0.0139 0.0073
 Jupiter -83693-03-22 16:47 J -28847364.00 -28847363.80 -28847363.59 0.0525 0.0214
 Uranus -83692-02-28 05:01 J -28847021.48 -28847021.29 -28847021.09 0.0139 0.0084
 Uranus -83691-03-04 15:06 J -28846652.05 -28846651.87 -28846651.69 0.0140 0.0094
 Uranus -83690-03-09 01:11 J -28846282.59 -28846282.45 -28846282.26 0.0141 0.0106
 Uranus -83689-03-12 13:11 J -28845913.07 -28845912.95 -28845912.79 0.0141 0.0116
 Saturn -83689-06-14 09:35 J -28845819.16 -28845819.10 -28845819.01 0.0274 0.0262
 Uranus -83688-03-17 02:08 J -28845543.51 -28845543.41 -28845543.28 0.0142 0.0125
 Saturn -83688-06-27 11:01 J -28845441.23 -28845441.04 -28845440.84 0.0276 0.0172
 Uranus -83687-03-21 16:18 J -28845173.89 -28845173.82 -28845173.73 0.0142 0.0134
 Saturn -83687-07-10 22:32 J -28845062.81 -28845062.56 -28845062.32 0.0279 0.0069
 Jupiter -83687-10-02 22:04 J -28844978.80 -28844978.58 -28844978.36 0.0505 0.0197

Uranus	-83686-03-26 06:56 J	-28844804.22	-28844804.21	-28844804.16	0.0143	0.0142
Saturn	-83686-07-24 19:25 J	-28844683.94	-28844683.69	-28844683.44	0.0282	0.0043
Saturn	-83685-08-07 01:25 J	-28844304.65	-28844304.44	-28844304.23	0.0284	0.0159
Saturn	-83684-08-21 15:06 J	-28843924.93	-28843924.87	-28843924.77	0.0287	0.0271
Mars	-83683-06-15 16:47 J	-28843627.00	-28843626.80	-28843626.61	0.1589	0.0075
Jupiter	-83681-03-27 10:18 J	-28842976.30	-28842976.07	-28842975.85	0.0523	0.0067
Jupiter	-83675-10-07 18:42 J	-28840590.82	-28840590.72	-28840590.62	0.0508	0.0460
Saturn	-83675-12-28 02:52 J	-28840509.53	-28840509.38	-28840509.22	0.0284	0.0213
Saturn	-83673-01-10 01:11 J	-28840131.67	-28840131.45	-28840131.23	0.0282	0.0107
Saturn	-83672-01-21 14:23 J	-28839754.14	-28839753.90	-28839753.66	0.0279	0.0002
Uranus	-83672-05-31 04:04 J	-28839624.35	-28839624.33	-28839624.28	0.0148	0.0146
Saturn	-83671-02-02 19:11 J	-28839376.91	-28839376.70	-28839376.47	0.0276	0.0099
Uranus	-83671-06-05 10:47 J	-28839254.13	-28839254.05	-28839253.95	0.0148	0.0137
Saturn	-83670-02-14 17:01 J	-28838999.95	-28838999.79	-28838999.61	0.0274	0.0191
Uranus	-83670-06-10 17:59 J	-28838883.87	-28838883.75	-28838883.61	0.0148	0.0127
Saturn	-83669-02-26 09:35 J	-28838623.11	-28838623.10	-28838623.08	0.0272	0.0271
Jupiter	-83669-04-01 04:04 J	-28838588.50	-28838588.33	-28838588.16	0.0521	0.0344
Uranus	-83669-06-15 01:40 J	-28838513.58	-28838513.43	-28838513.26	0.0147	0.0116
Uranus	-83668-06-20 10:04 J	-28838143.26	-28838143.08	-28838142.90	0.0147	0.0104
Uranus	-83667-06-25 17:44 J	-28837772.95	-28837772.76	-28837772.54	0.0147	0.0091
Uranus	-83666-07-01 02:23 J	-28837402.61	-28837402.40	-28837402.17	0.0146	0.0077
Uranus	-83665-07-05 10:18 J	-28837032.29	-28837032.07	-28837031.82	0.0146	0.0064
Uranus	-83664-07-10 18:13 J	-28836661.97	-28836661.74	-28836661.48	0.0146	0.0049
Uranus	-83663-07-16 02:08 J	-28836291.66	-28836291.41	-28836291.15	0.0145	0.0034
Uranus	-83662-07-21 09:20 J	-28835921.37	-28835921.11	-28835920.85	0.0145	0.0019
Uranus	-83661-07-25 15:49 J	-28835551.10	-28835550.84	-28835550.58	0.0144	0.0004
Uranus	-83660-07-30 21:35 J	-28835180.86	-28835180.60	-28835180.34	0.0144	0.0011
Saturn	-83659-06-21 16:04 J	-28834854.98	-28834854.83	-28834854.66	0.0275	0.0213
Uranus	-83659-08-05 02:52 J	-28834810.64	-28834810.38	-28834810.12	0.0143	0.0025
Saturn	-83658-07-04 22:18 J	-28834476.79	-28834476.57	-28834476.34	0.0278	0.0116

Uranus -83658-08-10 06:56 J -28834440.45 -28834440.21 -28834439.95 0.0142 0.0039
 Saturn -83657-07-17 14:23 J -28834098.15 -28834097.90 -28834097.65 0.0280 0.0008
 Uranus -83657-08-14 10:18 J -28834070.30 -28834070.07 -28834069.81 0.0142 0.0053
 Saturn -83656-07-31 15:49 J -28833719.07 -28833718.84 -28833718.60 0.0283 0.0106
 Uranus -83656-08-19 12:56 J -28833700.19 -28833699.96 -28833699.72 0.0141 0.0065
 Saturn -83655-08-15 02:08 J -28833339.56 -28833339.41 -28833339.24 0.0286 0.0220
 Uranus -83655-08-24 14:37 J -28833330.10 -28833329.89 -28833329.66 0.0140 0.0078
 Uranus -83654-08-29 15:20 J -28832960.05 -28832959.86 -28832959.65 0.0140 0.0089
 Uranus -83653-09-02 14:37 J -28832590.05 -28832589.89 -28832589.69 0.0139 0.0100
 Uranus -83652-09-07 13:25 J -28832220.09 -28832219.94 -28832219.77 0.0138 0.0110
 Uranus -83651-09-12 11:01 J -28831850.16 -28831850.04 -28831849.90 0.0138 0.0119
 Neptune -83650-03-25 20:37 J -28831655.71 -28831655.64 -28831655.51 0.0089 0.0082
 Uranus -83650-09-17 06:56 J -28831480.29 -28831480.21 -28831480.10 0.0137 0.0128
 Neptune -83649-03-27 05:44 J -28831288.42 -28831288.26 -28831288.05 0.0089 0.0059
 Uranus -83649-09-21 02:23 J -28831110.43 -28831110.40 -28831110.36 0.0137 0.0135
 Neptune -83648-03-29 14:52 J -28830921.09 -28830920.88 -28830920.63 0.0089 0.0036
 Neptune -83647-04-01 00:28 J -28830553.72 -28830553.48 -28830553.23 0.0089 0.0013
 Neptune -83646-04-03 09:35 J -28830186.34 -28830186.10 -28830185.84 0.0089 0.0011
 Saturn -83646-12-22 10:04 J -28829923.17 -28829923.08 -28829922.97 0.0286 0.0258
 Neptune -83645-04-04 19:11 J -28829818.92 -28829818.70 -28829818.46 0.0089 0.0034
 Mars -83645-12-22 16:32 J -28829557.00 -28829556.81 -28829556.61 0.1950 0.0565
 Saturn -83644-01-03 14:08 J -28829545.11 -28829544.91 -28829544.70 0.0284 0.0153
 Neptune -83644-04-07 04:32 J -28829451.49 -28829451.31 -28829451.10 0.0089 0.0057
 Saturn -83643-01-16 08:37 J -28829167.38 -28829167.14 -28829166.90 0.0281 0.0045
 Neptune -83643-04-09 14:23 J -28829084.00 -28829083.90 -28829083.79 0.0089 0.0080
 Saturn -83642-01-28 18:13 J -28828789.98 -28828789.74 -28828789.51 0.0278 0.0060
 Saturn -83641-02-09 19:54 J -28828412.86 -28828412.67 -28828412.47 0.0276 0.0156
 Saturn -83640-02-20 15:35 J -28828035.96 -28828035.85 -28828035.74 0.0273 0.0242
 Mars -83636-06-09 21:06 J -28826465.73 -28826465.62 -28826465.51 0.1584 0.1289
 Saturn -83630-06-16 13:40 J -28824268.02 -28824267.93 -28824267.82 0.0274 0.0249

Uranus -83630-12-09 09:35 J -28824092.15 -28824092.10 -28824092.00 0.0131 0.0126
 Saturn -83629-06-28 15:35 J -28823890.05 -28823889.85 -28823889.64 0.0276 0.0158
 Uranus -83629-12-12 12:13 J -28823723.08 -28823722.99 -28823722.86 0.0131 0.0118
 Saturn -83628-07-12 03:06 J -28823511.61 -28823511.37 -28823511.12 0.0279 0.0054
 Jupiter -83628-09-22 12:13 J -28823439.16 -28823438.99 -28823438.81 0.0501 0.0344
 Uranus -83628-12-16 14:52 J -28823354.00 -28823353.88 -28823353.74 0.0131 0.0111
 Saturn -83627-07-26 00:28 J -28823132.72 -28823132.48 -28823132.23 0.0282 0.0059
 Uranus -83627-12-20 17:01 J -28822984.93 -28822984.79 -28822984.62 0.0131 0.0103
 Saturn -83626-08-09 06:56 J -28822753.41 -28822753.21 -28822753.01 0.0285 0.0174
 Uranus -83626-12-24 18:56 J -28822615.87 -28822615.71 -28822615.52 0.0132 0.0095
 Saturn -83625-08-22 21:06 J -28822373.64 -28822373.62 -28822373.58 0.0287 0.0284
 Uranus -83625-12-27 20:52 J -28822246.80 -28822246.63 -28822246.42 0.0132 0.0086
 Uranus -83624-12-31 23:16 J -28821877.72 -28821877.53 -28821877.31 0.0132 0.0076
 Uranus -83622-01-05 01:25 J -28821508.65 -28821508.44 -28821508.22 0.0132 0.0067
 Jupiter -83622-03-18 06:28 J -28821436.26 -28821436.23 -28821436.18 0.0528 0.0518
 Uranus -83621-01-09 03:20 J -28821139.58 -28821139.36 -28821139.13 0.0133 0.0057
 Uranus -83620-01-12 05:30 J -28820770.50 -28820770.27 -28820770.03 0.0133 0.0046
 Uranus -83619-01-16 07:54 J -28820401.41 -28820401.17 -28820400.93 0.0133 0.0035
 Uranus -83618-01-20 10:32 J -28820032.30 -28820032.06 -28820031.81 0.0134 0.0025
 Uranus -83617-01-24 13:25 J -28819663.19 -28819662.94 -28819662.69 0.0134 0.0014
 Uranus -83616-01-27 16:47 J -28819294.05 -28819293.80 -28819293.55 0.0135 0.0003
 Jupiter -83616-09-27 06:56 J -28819051.44 -28819051.21 -28819050.97 0.0503 0.0090
 Saturn -83616-12-29 05:59 J -28818958.41 -28818958.25 -28818958.06 0.0284 0.0200
 Uranus -83615-01-31 20:37 J -28818924.88 -28818924.64 -28818924.39 0.0135 0.0009
 Saturn -83614-01-11 04:18 J -28818580.54 -28818580.32 -28818580.09 0.0282 0.0092
 Uranus -83614-02-05 00:56 J -28818555.70 -28818555.46 -28818555.21 0.0136 0.0021
 Saturn -83613-01-23 17:16 J -28818203.02 -28818202.78 -28818202.54 0.0279 0.0014
 Uranus -83613-02-09 05:59 J -28818186.48 -28818186.25 -28818186.00 0.0136 0.0032
 Saturn -83612-02-03 22:04 J -28817825.79 -28817825.58 -28817825.36 0.0276 0.0113
 Uranus -83612-02-12 11:44 J -28817817.23 -28817817.01 -28817816.76 0.0137 0.0044

Saturn -83611-02-15 19:40 J -28817448.82 -28817448.68 -28817448.51 0.0274 0.0204
 Uranus -83611-02-16 18:28 J -28817447.95 -28817447.73 -28817447.50 0.0137 0.0055
 Uranus -83610-02-21 01:40 J -28817078.63 -28817078.43 -28817078.20 0.0138 0.0067
 Jupiter -83610-03-23 01:40 J -28817048.63 -28817048.43 -28817048.22 0.0526 0.0235
 Uranus -83609-02-25 09:49 J -28816709.28 -28816709.09 -28816708.87 0.0139 0.0079
 Uranus -83608-02-28 18:56 J -28816339.89 -28816339.71 -28816339.51 0.0139 0.0090
 Uranus -83607-03-05 04:32 J -28815970.46 -28815970.31 -28815970.12 0.0140 0.0101
 Uranus -83606-03-09 15:49 J -28815600.99 -28815600.84 -28815600.69 0.0141 0.0111
 Uranus -83605-03-13 03:20 J -28815231.47 -28815231.36 -28815231.22 0.0141 0.0121
 Uranus -83604-03-17 16:04 J -28814861.90 -28814861.83 -28814861.71 0.0142 0.0131
 Mars -83604-06-17 17:59 J -28814769.93 -28814769.75 -28814769.58 0.1590 0.0672
 Jupiter -83604-10-02 02:52 J -28814663.60 -28814663.38 -28814663.15 0.0505 0.0171
 Uranus -83603-03-22 06:13 J -28814492.27 -28814492.24 -28814492.17 0.0142 0.0140
 Saturn -83600-06-22 21:49 J -28813303.75 -28813303.59 -28813303.40 0.0275 0.0198
 Saturn -83599-07-06 04:32 J -28812925.54 -28812925.31 -28812925.08 0.0278 0.0100
 Jupiter -83598-03-27 19:11 J -28812660.92 -28812660.70 -28812660.47 0.0523 0.0044
 Saturn -83598-07-19 20:37 J -28812546.89 -28812546.64 -28812546.38 0.0280 0.0010
 Saturn -83597-08-01 22:18 J -28812167.79 -28812167.57 -28812167.34 0.0283 0.0122
 Saturn -83596-08-16 08:37 J -28811788.27 -28811788.14 -28811787.99 0.0286 0.0235
 Jupiter -83592-10-07 01:54 J -28810275.53 -28810275.42 -28810275.30 0.0507 0.0440
 Uranus -83588-05-31 18:56 J -28808942.73 -28808942.71 -28808942.65 0.0148 0.0146
 Uranus -83587-06-06 01:40 J -28808572.51 -28808572.43 -28808572.32 0.0148 0.0136
 Saturn -83587-12-23 13:40 J -28808372.04 -28808371.93 -28808371.79 0.0286 0.0245
 Jupiter -83586-04-01 06:13 J -28808273.42 -28808273.24 -28808273.05 0.0521 0.0304
 Uranus -83586-06-11 09:20 J -28808202.24 -28808202.11 -28808201.97 0.0148 0.0125
 Saturn -83585-01-05 17:16 J -28807993.98 -28807993.78 -28807993.56 0.0284 0.0139
 Uranus -83585-06-15 16:47 J -28807831.95 -28807831.80 -28807831.62 0.0147 0.0114
 Saturn -83584-01-17 11:44 J -28807616.25 -28807616.01 -28807615.77 0.0281 0.0030
 Uranus -83584-06-21 01:11 J -28807461.64 -28807461.45 -28807461.26 0.0147 0.0101
 Saturn -83583-01-29 20:52 J -28807238.85 -28807238.63 -28807238.39 0.0278 0.0074

Uranus -83583-06-26 09:20 J -28807091.32 -28807091.11 -28807090.90 0.0147 0.0087
 Saturn -83582-02-10 22:32 J -28806861.74 -28806861.56 -28806861.36 0.0276 0.0170
 Uranus -83582-07-01 17:16 J -28806720.98 -28806720.78 -28806720.54 0.0147 0.0074
 Saturn -83581-02-22 18:13 J -28806484.82 -28806484.74 -28806484.64 0.0273 0.0254
 Uranus -83581-07-06 01:40 J -28806350.67 -28806350.43 -28806350.19 0.0146 0.0058
 Uranus -83580-07-11 09:20 J -28805980.35 -28805980.11 -28805979.85 0.0146 0.0044
 Uranus -83579-07-16 17:01 J -28805610.04 -28805609.79 -28805609.53 0.0145 0.0028
 Uranus -83578-07-22 00:13 J -28805239.75 -28805239.49 -28805239.23 0.0145 0.0013
 Uranus -83577-07-26 06:28 J -28804869.49 -28804869.23 -28804868.97 0.0144 0.0003
 Uranus -83576-07-31 12:13 J -28804499.25 -28804498.99 -28804498.73 0.0144 0.0017
 Uranus -83575-08-05 17:16 J -28804129.03 -28804128.78 -28804128.52 0.0143 0.0031
 Uranus -83574-08-10 21:35 J -28803758.84 -28803758.60 -28803758.35 0.0142 0.0045
 Uranus -83573-08-15 00:56 J -28803388.69 -28803388.46 -28803388.21 0.0142 0.0059
 Uranus -83572-08-20 03:20 J -28803018.57 -28803018.36 -28803018.12 0.0141 0.0072
 Saturn -83571-06-17 20:08 J -28802716.78 -28802716.66 -28802716.53 0.0274 0.0235
 Uranus -83571-08-25 05:01 J -28802648.48 -28802648.29 -28802648.06 0.0140 0.0085
 Saturn -83570-06-30 22:32 J -28802338.77 -28802338.56 -28802338.34 0.0276 0.0143
 Uranus -83570-08-30 05:44 J -28802278.44 -28802278.26 -28802278.06 0.0140 0.0096
 Saturn -83569-07-13 10:47 J -28801960.30 -28801960.05 -28801959.80 0.0279 0.0038
 Uranus -83569-09-03 05:30 J -28801908.43 -28801908.27 -28801908.09 0.0139 0.0106
 Pluto -83568-07-11 21:20 J -28801596.79 -28801596.61 -28801596.42 0.0066 0.0047
 Saturn -83568-07-27 08:23 J -28801581.39 -28801581.15 -28801580.90 0.0282 0.0075
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 Neptune -83568-09-29 00:56 J -28801517.59 -28801517.46 -28801517.30 0.0088 0.0074
 Pluto -83567-07-13 12:56 J -28801230.11 -28801229.96 -28801229.77 0.0067 0.0051
 Saturn -83567-08-10 15:06 J -28801202.04 -28801201.87 -28801201.67 0.0285 0.0190
 Uranus -83567-09-13 01:11 J -28801168.54 -28801168.45 -28801168.32 0.0138 0.0126
 Neptune -83567-10-01 15:20 J -28801150.06 -28801149.86 -28801149.63 0.0088 0.0050
 Uranus -83566-09-17 21:06 J -28800798.65 -28800798.62 -28800798.54 0.0137 0.0134
 Neptune -83566-10-04 05:59 J -28800782.51 -28800782.25 -28800782.00 0.0088 0.0026

Neptune -83565-10-05 19:54 J -28800414.94 -28800414.67 -28800414.41 0.0088 0.0002
 Neptune -83564-10-08 09:35 J -28800047.34 -28800047.10 -28800046.83 0.0088 0.0023
 Neptune -83563-10-10 23:44 J -28799679.73 -28799679.51 -28799679.28 0.0088 0.0046
 Neptune -83562-10-13 12:56 J -28799312.10 -28799311.96 -28799311.78 0.0088 0.0069
 Saturn -83558-12-18 04:47 J -28797785.30 -28797785.30 -28797785.29 0.0287 0.0287
 Mars -83557-06-11 21:20 J -28797608.78 -28797608.61 -28797608.43 0.1585 0.0701
 Saturn -83557-12-30 12:13 J -28797407.17 -28797406.99 -28797406.80 0.0284 0.0184
 Saturn -83555-01-12 10:04 J -28797029.31 -28797029.08 -28797028.85 0.0282 0.0077
 Saturn -83554-01-24 22:32 J -28796651.79 -28796651.56 -28796651.32 0.0279 0.0029
 Saturn -83553-02-06 03:06 J -28796274.58 -28796274.37 -28796274.16 0.0276 0.0127
 Saturn -83552-02-17 00:28 J -28795897.61 -28795897.48 -28795897.32 0.0274 0.0217
 Uranus -83546-12-09 23:16 J -28793410.59 -28793410.53 -28793410.44 0.0131 0.0124
 Jupiter -83545-09-21 15:06 J -28793124.02 -28793123.87 -28793123.71 0.0501 0.0372
 Uranus -83545-12-13 01:40 J -28793041.52 -28793041.43 -28793041.30 0.0131 0.0118
 Uranus -83544-12-17 04:18 J -28792672.45 -28792672.32 -28792672.17 0.0131 0.0109
 Uranus -83543-12-21 06:13 J -28792303.38 -28792303.24 -28792303.06 0.0131 0.0101
 Saturn -83542-06-12 09:49 J -28792130.12 -28792130.09 -28792130.05 0.0273 0.0269
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 Saturn -83541-06-24 07:11 J -28791752.38 -28791752.20 -28791752.01 0.0275 0.0183
 Uranus -83541-12-28 10:47 J -28791565.24 -28791565.05 -28791564.85 0.0132 0.0083
 Saturn -83540-07-07 14:08 J -28791374.15 -28791373.91 -28791373.67 0.0278 0.0083
 Uranus -83539-01-01 12:13 J -28791196.18 -28791195.99 -28791195.76 0.0132 0.0074
 Saturn -83539-07-21 06:56 J -28790995.46 -28790995.21 -28790994.96 0.0281 0.0026
 Uranus -83538-01-05 14:23 J -28790827.11 -28790826.90 -28790826.67 0.0132 0.0063
 Saturn -83538-08-04 08:52 J -28790616.34 -28790616.13 -28790615.90 0.0283 0.0139
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 Saturn -83537-08-17 19:54 J -28790236.79 -28790236.67 -28790236.55 0.0286 0.0250
 Uranus -83536-01-12 18:13 J -28790088.97 -28790088.74 -28790088.50 0.0133 0.0042
 Uranus -83535-01-16 20:37 J -28789719.88 -28789719.64 -28789719.40 0.0133 0.0032
 Uranus -83534-01-20 22:47 J -28789350.79 -28789350.55 -28789350.30 0.0134 0.0021

Uranus -83533-01-25 01:40 J -28788981.67 -28788981.43 -28788981.18 0.0134 0.0010
 Jupiter -83533-09-26 12:28 J -28788736.21 -28788735.98 -28788735.75 0.0503 0.0113
 Uranus -83532-01-28 05:01 J -28788612.53 -28788612.29 -28788612.04 0.0135 0.0003
 Uranus -83531-02-01 08:52 J -28788243.38 -28788243.13 -28788242.88 0.0135 0.0014
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 Uranus -83528-02-13 00:13 J -28787135.72 -28787135.49 -28787135.26 0.0137 0.0049
 Saturn -83528-12-24 20:23 J -28786820.78 -28786820.65 -28786820.50 0.0286 0.0231
 Uranus -83527-02-17 06:28 J -28786766.44 -28786766.23 -28786765.99 0.0137 0.0061
 Jupiter -83527-03-22 03:49 J -28786733.54 -28786733.34 -28786733.15 0.0525 0.0274
 Saturn -83526-01-06 23:16 J -28786442.74 -28786442.53 -28786442.31 0.0283 0.0123
 Uranus -83526-02-21 13:40 J -28786397.13 -28786396.93 -28786396.71 0.0138 0.0073
 Saturn -83525-01-19 16:47 J -28786065.04 -28786064.80 -28786064.56 0.0281 0.0016
 Uranus -83525-02-25 22:04 J -28786027.78 -28786027.58 -28786027.39 0.0139 0.0084
 Mars -83525-06-19 19:11 J -28785912.81 -28785912.70 -28785912.59 0.1592 0.1291
 Saturn -83524-01-31 01:54 J -28785687.65 -28785687.42 -28785687.19 0.0278 0.0088
 Uranus -83524-03-01 06:42 J -28785658.39 -28785658.22 -28785658.03 0.0139 0.0095
 Saturn -83523-02-12 03:06 J -28785310.53 -28785310.37 -28785310.18 0.0276 0.0183
 Uranus -83523-03-05 16:18 J -28785288.96 -28785288.82 -28785288.65 0.0140 0.0106
 Saturn -83522-02-23 23:01 J -28784933.60 -28784933.54 -28784933.49 0.0273 0.0265
 Uranus -83522-03-10 03:06 J -28784919.49 -28784919.37 -28784919.22 0.0141 0.0117
 Uranus -83521-03-13 15:06 J -28784549.97 -28784549.87 -28784549.76 0.0141 0.0126
 Jupiter -83521-10-01 08:52 J -28784348.36 -28784348.13 -28784347.90 0.0505 0.0147
 Uranus -83520-03-18 03:35 J -28784180.40 -28784180.35 -28784180.26 0.0142 0.0136
 Jupiter -83515-03-26 18:13 J -28782345.97 -28782345.74 -28782345.52 0.0524 0.0010
 Saturn -83512-06-19 05:16 J -28781165.42 -28781165.28 -28781165.13 0.0274 0.0221
 Saturn -83511-07-02 08:23 J -28780787.36 -28780787.15 -28780786.92 0.0277 0.0127
 Saturn -83510-07-15 21:20 J -28780408.86 -28780408.61 -28780408.36 0.0279 0.0021
 Saturn -83509-07-28 19:40 J -28780029.92 -28780029.68 -28780029.44 0.0282 0.0091
 Jupiter -83509-10-06 02:23 J -28779960.54 -28779960.40 -28779960.25 0.0507 0.0405

Saturn -83508-08-12 02:52 J -28779650.55 -28779650.38 -28779650.20 0.0285 0.0205
 Uranus -83504-06-01 07:40 J -28778261.22 -28778261.18 -28778261.12 0.0148 0.0145
 Jupiter -83503-03-31 09:35 J -28777958.30 -28777958.10 -28777957.91 0.0522 0.0269
 Uranus -83503-06-06 14:37 J -28777890.98 -28777890.89 -28777890.78 0.0148 0.0135
 Uranus -83502-06-11 22:04 J -28777520.70 -28777520.58 -28777520.42 0.0148 0.0124
 Uranus -83501-06-16 05:44 J -28777150.40 -28777150.26 -28777150.07 0.0148 0.0112
 Uranus -83500-06-21 14:23 J -28776780.08 -28776779.90 -28776779.70 0.0147 0.0098
 Uranus -83499-06-26 22:47 J -28776409.76 -28776409.55 -28776409.33 0.0147 0.0084
 Saturn -83499-12-19 13:40 J -28776233.99 -28776233.93 -28776233.84 0.0287 0.0272
 Uranus -83498-07-02 06:56 J -28776039.42 -28776039.21 -28776038.97 0.0147 0.0070
 Saturn -83497-01-01 20:23 J -28775855.83 -28775855.65 -28775855.45 0.0284 0.0168
 Uranus -83497-07-06 15:20 J -28775669.10 -28775668.86 -28775668.62 0.0146 0.0055
 Saturn -83496-01-13 17:44 J -28775477.99 -28775477.76 -28775477.52 0.0281 0.0061
 Uranus -83496-07-11 23:16 J -28775298.77 -28775298.53 -28775298.27 0.0146 0.0039
 Saturn -83495-01-26 05:59 J -28775100.49 -28775100.25 -28775100.02 0.0279 0.0044
 Uranus -83495-07-17 06:56 J -28774928.47 -28774928.21 -28774927.95 0.0145 0.0023
 Saturn -83494-02-07 10:04 J -28774723.29 -28774723.08 -28774722.88 0.0276 0.0142
 Uranus -83494-07-22 14:08 J -28774558.17 -28774557.91 -28774557.65 0.0145 0.0008
 Saturn -83493-02-19 07:25 J -28774346.31 -28774346.19 -28774346.06 0.0274 0.0229
 Uranus -83493-07-26 20:23 J -28774187.91 -28774187.65 -28774187.39 0.0144 0.0008
 Uranus -83492-08-01 02:08 J -28773817.66 -28773817.41 -28773817.14 0.0144 0.0023
 Uranus -83491-08-06 07:25 J -28773447.43 -28773447.19 -28773446.93 0.0143 0.0037
 Uranus -83490-08-11 11:44 J -28773077.25 -28773077.01 -28773076.76 0.0142 0.0051
 Uranus -83489-08-15 15:20 J -28772707.08 -28772706.86 -28772706.62 0.0142 0.0065
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 Uranus -83487-08-25 19:54 J -28771966.86 -28771966.67 -28771966.46 0.0140 0.0091
 Uranus -83486-08-30 20:37 J -28771596.81 -28771596.64 -28771596.45 0.0140 0.0102
 Neptune -83485-03-26 14:23 J -28771388.03 -28771387.90 -28771387.73 0.0089 0.0070
 Uranus -83485-09-03 19:54 J -28771226.80 -28771226.67 -28771226.50 0.0139 0.0113
 Neptune -83484-03-28 23:59 J -28771020.71 -28771020.50 -28771020.29 0.0089 0.0047

Uranus -83484-09-08 18:42 J -28770856.83 -28770856.72 -28770856.59 0.0139 0.0123
 Neptune -83483-03-31 08:37 J -28770653.37 -28770653.14 -28770652.89 0.0089 0.0025
 Saturn -83483-06-13 20:37 J -28770578.72 -28770578.64 -28770578.55 0.0273 0.0256
 Uranus -83483-09-13 15:49 J -28770486.89 -28770486.84 -28770486.74 0.0138 0.0132
 Neptune -83482-04-02 18:13 J -28770286.00 -28770285.74 -28770285.49 0.0089 0.0002
 Saturn -83482-06-26 18:42 J -28770200.91 -28770200.72 -28770200.52 0.0276 0.0167
 Pluto -83481-01-16 19:54 J -28769996.87 -28769996.67 -28769996.43 0.0078 0.0037
 Neptune -83481-04-04 03:06 J -28769918.60 -28769918.37 -28769918.11 0.0089 0.0022
 Saturn -83481-07-09 02:23 J -28769822.64 -28769822.40 -28769822.16 0.0278 0.0066
 Neptune -83480-04-06 12:13 J -28769551.18 -28769550.99 -28769550.75 0.0089 0.0045
 Saturn -83480-07-22 19:40 J -28769443.93 -28769443.68 -28769443.43 0.0281 0.0044
 Neptune -83479-04-08 21:49 J -28769183.73 -28769183.59 -28769183.40 0.0089 0.0068
 Saturn -83479-08-05 22:18 J -28769064.77 -28769064.57 -28769064.35 0.0283 0.0157
 Mars -83478-06-14 22:32 J -28768751.75 -28768751.56 -28768751.37 0.1586 0.0109
 Saturn -83478-08-20 09:35 J -28768685.18 -28768685.10 -28768685.00 0.0286 0.0266
 Saturn -83469-12-26 05:44 J -28765269.41 -28765269.26 -28765269.10 0.0286 0.0215
 Saturn -83467-01-08 07:54 J -28764891.39 -28764891.17 -28764890.95 0.0283 0.0108
 Saturn -83466-01-21 00:42 J -28764513.71 -28764513.47 -28764513.23 0.0280 0.0004
 Saturn -83465-02-02 09:06 J -28764136.34 -28764136.12 -28764135.89 0.0278 0.0102
 Saturn -83464-02-13 10:04 J -28763759.24 -28763759.08 -28763758.90 0.0275 0.0196
 Uranus -83463-12-06 10:18 J -28763098.07 -28763098.07 -28763098.05 0.0131 0.0131
 Jupiter -83462-09-21 19:25 J -28762808.83 -28762808.69 -28762808.54 0.0501 0.0396
 Uranus -83462-12-10 12:56 J -28762729.02 -28762728.96 -28762728.86 0.0131 0.0124
 Uranus -83461-12-13 15:49 J -28762359.94 -28762359.84 -28762359.71 0.0131 0.0116
 Uranus -83460-12-17 17:59 J -28761990.87 -28761990.75 -28761990.59 0.0131 0.0108
 Uranus -83459-12-21 20:23 J -28761621.80 -28761621.65 -28761621.47 0.0131 0.0099
 Uranus -83458-12-25 22:04 J -28761252.74 -28761252.58 -28761252.37 0.0131 0.0091
 Uranus -83457-12-29 00:13 J -28760883.67 -28760883.49 -28760883.28 0.0132 0.0081
 Uranus -83455-01-02 01:54 J -28760514.62 -28760514.42 -28760514.19 0.0132 0.0071
 Uranus -83454-01-06 03:35 J -28760145.56 -28760145.35 -28760145.12 0.0132 0.0060

Uranus -83453-01-10 05:16 J -28759776.50 -28759776.28 -28759776.04 0.0133 0.0050
 Saturn -83453-06-20 16:47 J -28759613.96 -28759613.80 -28759613.64 0.0274 0.0207
 Uranus -83452-01-13 07:25 J -28759407.42 -28759407.19 -28759406.95 0.0133 0.0039
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 Uranus -83451-01-17 09:35 J -28759038.34 -28759038.10 -28759037.85 0.0133 0.0028
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 Uranus -83450-01-21 11:59 J -28758669.24 -28758669.00 -28758668.75 0.0134 0.0017
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 Jupiter -83450-09-26 12:13 J -28758421.22 -28758420.99 -28758420.76 0.0502 0.0145
 Uranus -83449-01-25 14:52 J -28758300.13 -28758299.88 -28758299.63 0.0134 0.0005
 Saturn -83449-08-13 17:30 J -28758098.92 -28758098.77 -28758098.60 0.0285 0.0221
 Uranus -83448-01-28 18:13 J -28757930.99 -28757930.74 -28757930.49 0.0135 0.0007
 Uranus -83447-02-01 21:49 J -28757561.83 -28757561.59 -28757561.34 0.0135 0.0019
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 Jupiter -83444-03-21 04:04 J -28756418.51 -28756418.33 -28756418.14 0.0527 0.0314
 Uranus -83443-02-17 19:25 J -28756084.90 -28756084.69 -28756084.47 0.0137 0.0066
 Uranus -83442-02-22 02:37 J -28755715.59 -28755715.39 -28755715.18 0.0138 0.0078
 Uranus -83441-02-26 10:32 J -28755346.24 -28755346.06 -28755345.87 0.0139 0.0090
 Uranus -83440-03-01 18:56 J -28754976.86 -28754976.71 -28754976.52 0.0139 0.0102
 Mars -83440-12-17 15:49 J -28754685.93 -28754685.84 -28754685.74 0.1957 0.1724
 Saturn -83440-12-21 01:40 J -28754682.53 -28754682.43 -28754682.32 0.0287 0.0256
 Uranus -83439-03-06 04:47 J -28754607.43 -28754607.30 -28754607.14 0.0140 0.0112
 Saturn -83438-01-03 07:11 J -28754304.40 -28754304.20 -28754303.99 0.0284 0.0151
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 Jupiter -83438-10-01 06:56 J -28754033.45 -28754033.21 -28754032.98 0.0504 0.0109
 Saturn -83437-01-16 03:35 J -28753926.59 -28753926.35 -28753926.11 0.0281 0.0044
 Uranus -83437-03-14 03:06 J -28753868.44 -28753868.37 -28753868.27 0.0141 0.0133
 Saturn -83436-01-27 14:52 J -28753549.11 -28753548.88 -28753548.64 0.0279 0.0060

Uranus -83436-03-18 16:18 J -28753498.83 -28753498.82 -28753498.80 0.0142 0.0141
 Saturn -83435-02-08 18:13 J -28753171.92 -28753171.74 -28753171.53 0.0276 0.0156
 Saturn -83434-02-20 15:20 J -28752794.95 -28752794.86 -28752794.73 0.0274 0.0242
 Jupiter -83432-03-25 21:49 J -28752030.82 -28752030.59 -28752030.36 0.0525 0.0036
 Mars -83431-06-09 04:18 J -28751590.39 -28751590.32 -28751590.24 0.1582 0.1438
 Jupiter -83426-10-06 01:40 J -28749645.59 -28749645.43 -28749645.26 0.0506 0.0367
 Saturn -83424-06-15 08:52 J -28749027.23 -28749027.13 -28749027.00 0.0273 0.0242
 Saturn -83423-06-28 08:08 J -28748649.36 -28748649.16 -28748648.94 0.0276 0.0151
 Saturn -83422-07-11 17:01 J -28748271.04 -28748270.79 -28748270.54 0.0278 0.0048
 Saturn -83421-07-24 11:01 J -28747892.28 -28747892.04 -28747891.79 0.0281 0.0062
 Jupiter -83420-03-30 14:52 J -28747643.08 -28747642.88 -28747642.68 0.0522 0.0239
 Uranus -83420-06-01 19:54 J -28747579.70 -28747579.67 -28747579.60 0.0148 0.0145
 Saturn -83420-08-07 14:37 J -28747513.09 -28747512.89 -28747512.69 0.0284 0.0174
 Uranus -83419-06-07 03:20 J -28747209.46 -28747209.36 -28747209.25 0.0148 0.0134
 Saturn -83419-08-22 02:23 J -28747133.44 -28747133.40 -28747133.36 0.0286 0.0282
 Uranus -83418-06-12 11:01 J -28746839.18 -28746839.04 -28746838.89 0.0148 0.0122
 Uranus -83417-06-16 18:42 J -28746468.87 -28746468.72 -28746468.53 0.0148 0.0110
 Uranus -83416-06-22 03:06 J -28746098.55 -28746098.37 -28746098.16 0.0147 0.0096
 Uranus -83415-06-27 11:30 J -28745728.22 -28745728.02 -28745727.79 0.0147 0.0081
 Uranus -83414-07-02 20:08 J -28745357.88 -28745357.66 -28745357.42 0.0147 0.0066
 Uranus -83413-07-07 04:04 J -28744987.56 -28744987.33 -28744987.07 0.0146 0.0051
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 Uranus -83411-07-17 19:54 J -28744246.92 -28744246.67 -28744246.41 0.0145 0.0019
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 Saturn -83410-12-28 17:01 J -28743717.96 -28743717.79 -28743717.61 0.0285 0.0199
 Uranus -83409-07-27 09:35 J -28743506.36 -28743506.10 -28743505.83 0.0144 0.0013
 Saturn -83408-01-09 17:59 J -28743339.97 -28743339.75 -28743339.51 0.0283 0.0092
 Jupiter -83408-04-04 03:06 J -28743255.43 -28743255.37 -28743255.30 0.0520 0.0497
 Uranus -83408-08-01 15:35 J -28743136.10 -28743135.85 -28743135.59 0.0144 0.0028
 Saturn -83407-01-22 10:18 J -28742962.31 -28742962.07 -28742961.84 0.0280 0.0016

Uranus -83407-08-06 20:52 J -28742765.87 -28742765.63 -28742765.37 0.0143 0.0043
 Saturn -83406-02-03 17:30 J -28742584.98 -28742584.77 -28742584.54 0.0278 0.0117
 Uranus -83406-08-12 01:25 J -28742395.67 -28742395.44 -28742395.19 0.0142 0.0058
 Saturn -83405-02-15 17:59 J -28742207.89 -28742207.75 -28742207.59 0.0275 0.0208
 Uranus -83405-08-16 05:01 J -28742025.50 -28742025.29 -28742025.05 0.0142 0.0072
 Uranus -83404-08-21 08:08 J -28741655.36 -28741655.16 -28741654.94 0.0141 0.0085
 Neptune -83404-09-28 01:54 J -28741617.45 -28741617.42 -28741617.34 0.0088 0.0087
 Uranus -83403-08-26 10:18 J -28741285.26 -28741285.07 -28741284.88 0.0141 0.0097
 Neptune -83403-09-30 16:32 J -28741249.98 -28741249.81 -28741249.60 0.0088 0.0063
 Uranus -83402-08-31 10:18 J -28740915.21 -28740915.07 -28740914.88 0.0140 0.0109
 Neptune -83402-10-03 06:56 J -28740882.44 -28740882.21 -28740881.97 0.0088 0.0039
 Uranus -83401-09-04 10:18 J -28740545.19 -28740545.07 -28740544.92 0.0139 0.0119
 Neptune -83401-10-04 21:20 J -28740514.87 -28740514.61 -28740514.34 0.0088 0.0015
 Uranus -83400-09-09 09:06 J -28740175.22 -28740175.12 -28740175.03 0.0139 0.0129
 Neptune -83400-10-07 11:30 J -28740147.28 -28740147.02 -28740146.75 0.0088 0.0009
 Mars -83399-06-16 23:30 J -28739894.70 -28739894.52 -28739894.33 0.1587 0.0504
 Uranus -83399-09-14 06:13 J -28739805.24 -28739805.24 -28739805.23 0.0138 0.0138
 Neptune -83399-10-10 01:11 J -28739779.68 -28739779.45 -28739779.19 0.0088 0.0033
 Neptune -83398-10-12 14:37 J -28739412.07 -28739411.89 -28739411.66 0.0088 0.0057
 Neptune -83397-10-14 04:18 J -28739044.41 -28739044.32 -28739044.18 0.0088 0.0080
 Saturn -83394-06-23 05:01 J -28738062.46 -28738062.29 -28738062.10 0.0275 0.0192
 Saturn -83393-07-05 10:04 J -28737684.31 -28737684.08 -28737683.84 0.0277 0.0094
 Saturn -83392-07-19 00:42 J -28737305.72 -28737305.47 -28737305.22 0.0280 0.0014
 Saturn -83391-08-02 00:42 J -28736926.70 -28736926.47 -28736926.24 0.0282 0.0126
 Saturn -83390-08-16 09:35 J -28736547.24 -28736547.10 -28736546.96 0.0285 0.0237
 Saturn -83381-12-22 14:37 J -28733131.01 -28733130.89 -28733130.75 0.0286 0.0239
 Saturn -83379-01-04 19:25 J -28732752.90 -28732752.69 -28732752.47 0.0284 0.0134
 Jupiter -83379-09-20 17:44 J -28732493.87 -28732493.76 -28732493.63 0.0500 0.0429
 Uranus -83379-12-07 00:13 J -28732416.49 -28732416.49 -28732416.46 0.0131 0.0131
 Saturn -83378-01-17 14:37 J -28732375.12 -28732374.89 -28732374.65 0.0281 0.0027

Uranus	-83378-12-11 03:06 J	-28732047.44	-28732047.37	-28732047.27	0.0131	0.0123
Saturn	-83377-01-30 01:25 J	-28731997.67	-28731997.44	-28731997.21	0.0278	0.0076
Uranus	-83377-12-14 05:44 J	-28731678.36	-28731678.26	-28731678.13	0.0131	0.0115
Saturn	-83376-02-10 04:04 J	-28731620.51	-28731620.33	-28731620.13	0.0276	0.0170
Uranus	-83376-12-18 08:08 J	-28731309.29	-28731309.16	-28731309.00	0.0131	0.0106
Saturn	-83375-02-22 00:42 J	-28731243.55	-28731243.47	-28731243.37	0.0273	0.0253
Uranus	-83375-12-22 10:04 J	-28730940.23	-28730940.08	-28730939.90	0.0131	0.0098
Uranus	-83374-12-26 12:13 J	-28730571.17	-28730570.99	-28730570.80	0.0131	0.0088
Uranus	-83373-12-29 13:54 J	-28730202.11	-28730201.92	-28730201.71	0.0132	0.0078
Uranus	-83371-01-02 15:06 J	-28729833.07	-28729832.87	-28729832.64	0.0132	0.0068
Uranus	-83370-01-06 16:47 J	-28729464.01	-28729463.80	-28729463.56	0.0132	0.0057
Uranus	-83369-01-10 18:28 J	-28729094.95	-28729094.73	-28729094.48	0.0132	0.0047
Uranus	-83368-01-13 20:37 J	-28728725.88	-28728725.64	-28728725.40	0.0133	0.0035
Uranus	-83367-01-17 22:32 J	-28728356.80	-28728356.56	-28728356.31	0.0133	0.0024
Jupiter	-83367-09-25 11:01 J	-28728106.26	-28728106.04	-28728105.82	0.0502	0.0182
Uranus	-83366-01-22 00:42 J	-28727987.71	-28727987.47	-28727987.22	0.0134	0.0013
Uranus	-83365-01-26 03:35 J	-28727618.60	-28727618.35	-28727618.10	0.0134	0.0001
Saturn	-83365-06-16 22:04 J	-28727475.71	-28727475.58	-28727475.43	0.0274	0.0227
Uranus	-83364-01-29 06:42 J	-28727249.46	-28727249.22	-28727248.97	0.0134	0.0012
Saturn	-83364-06-29 22:32 J	-28727097.77	-28727097.56	-28727097.34	0.0276	0.0134
Uranus	-83363-02-02 10:18 J	-28726880.31	-28726880.07	-28726879.82	0.0135	0.0024
Saturn	-83363-07-13 08:23 J	-28726719.40	-28726719.15	-28726718.90	0.0279	0.0031
Uranus	-83362-02-06 14:37 J	-28726511.12	-28726510.89	-28726510.64	0.0135	0.0036
Saturn	-83362-07-27 03:20 J	-28726340.59	-28726340.36	-28726340.11	0.0281	0.0080
Uranus	-83361-02-10 19:25 J	-28726141.91	-28726141.69	-28726141.44	0.0136	0.0048
Jupiter	-83361-03-20 08:37 J	-28726103.31	-28726103.14	-28726102.97	0.0527	0.0346
Saturn	-83361-08-09 07:54 J	-28725961.36	-28725961.17	-28725960.99	0.0284	0.0191
Mars	-83361-12-21 13:54 J	-28725827.12	-28725826.92	-28725826.72	0.1955	0.0235
Uranus	-83360-02-14 00:56 J	-28725772.67	-28725772.46	-28725772.23	0.0137	0.0060
Uranus	-83359-02-18 07:25 J	-28725403.40	-28725403.19	-28725402.98	0.0137	0.0072

Uranus	-83358-02-22 13:54 J	-28725034.10	-28725033.92	-28725033.71	0.0138	0.0084
Uranus	-83357-02-26 21:20 J	-28724664.76	-28724664.61	-28724664.41	0.0138	0.0096
Uranus	-83356-03-02 06:13 J	-28724295.39	-28724295.24	-28724295.07	0.0139	0.0107
Uranus	-83355-03-06 15:35 J	-28723925.97	-28723925.85	-28723925.70	0.0140	0.0117
Jupiter	-83355-09-30 07:25 J	-28723718.42	-28723718.19	-28723717.95	0.0504	0.0076
Uranus	-83354-03-11 02:08 J	-28723556.50	-28723556.41	-28723556.29	0.0140	0.0128
Uranus	-83353-03-14 13:40 J	-28723186.96	-28723186.93	-28723186.85	0.0141	0.0137
Mars	-83352-06-11 05:01 J	-28722733.45	-28722733.29	-28722733.13	0.1582	0.0855
Saturn	-83352-12-16 20:37 J	-28722544.65	-28722544.64	-28722544.60	0.0287	0.0285
Saturn	-83351-12-30 05:59 J	-28722166.42	-28722166.25	-28722166.05	0.0285	0.0182
Saturn	-83349-01-12 06:13 J	-28721788.47	-28721788.24	-28721788.01	0.0282	0.0074
Jupiter	-83349-03-24 23:30 J	-28721715.74	-28721715.52	-28721715.29	0.0525	0.0074
Saturn	-83348-01-23 20:52 J	-28721410.86	-28721410.63	-28721410.39	0.0280	0.0032
Saturn	-83347-02-05 03:20 J	-28721033.56	-28721033.36	-28721033.14	0.0277	0.0131
Saturn	-83346-02-17 03:06 J	-28720656.51	-28720656.37	-28720656.23	0.0275	0.0220
Jupiter	-83343-10-05 03:35 J	-28719330.53	-28719330.35	-28719330.17	0.0506	0.0336
Jupiter	-83337-03-29 13:40 J	-28717328.13	-28717327.93	-28717327.71	0.0523	0.0194
Uranus	-83336-06-02 05:16 J	-28716898.31	-28716898.28	-28716898.20	0.0148	0.0145
Saturn	-83336-06-11 20:23 J	-28716888.71	-28716888.65	-28716888.58	0.0273	0.0262
Uranus	-83335-06-07 12:56 J	-28716528.06	-28716527.96	-28716527.84	0.0148	0.0133
Saturn	-83335-06-24 17:16 J	-28716510.95	-28716510.78	-28716510.57	0.0275	0.0176
Uranus	-83334-06-12 20:37 J	-28716157.78	-28716157.64	-28716157.49	0.0148	0.0121
Saturn	-83334-07-07 23:44 J	-28716132.75	-28716132.51	-28716132.27	0.0277	0.0077
Uranus	-83333-06-17 04:18 J	-28715787.47	-28715787.32	-28715787.12	0.0148	0.0108
Saturn	-83333-07-20 15:06 J	-28715754.12	-28715753.87	-28715753.62	0.0280	0.0031
Uranus	-83332-06-22 12:56 J	-28715417.15	-28715416.96	-28715416.75	0.0147	0.0093
Saturn	-83332-08-03 16:18 J	-28715375.04	-28715374.82	-28715374.60	0.0283	0.0143
Uranus	-83331-06-27 21:20 J	-28715046.81	-28715046.61	-28715046.38	0.0147	0.0079
Saturn	-83331-08-18 01:54 J	-28714995.53	-28714995.42	-28714995.30	0.0285	0.0252
Uranus	-83330-07-03 05:44 J	-28714676.48	-28714676.26	-28714676.01	0.0147	0.0063

Uranus -83329-07-07 14:23 J -28714306.14 -28714305.90 -28714305.65 0.0146 0.0047
 Uranus -83328-07-12 22:32 J -28713935.81 -28713935.56 -28713935.30 0.0146 0.0030
 Uranus -83327-07-18 06:13 J -28713565.49 -28713565.24 -28713564.97 0.0146 0.0015
 Uranus -83326-07-23 13:54 J -28713195.18 -28713194.92 -28713194.66 0.0145 0.0003
 Jupiter -83325-04-03 02:37 J -28712940.49 -28712940.39 -28712940.28 0.0521 0.0457
 Uranus -83325-07-27 20:23 J -28712824.90 -28712824.65 -28712824.38 0.0144 0.0019
 Uranus -83324-08-02 02:52 J -28712454.63 -28712454.38 -28712454.12 0.0144 0.0034
 Uranus -83323-08-07 08:23 J -28712084.38 -28712084.15 -28712083.89 0.0143 0.0049
 Pluto -83322-07-14 06:56 J -28711743.46 -28711743.21 -28711742.94 0.0066 0.0015
 Uranus -83322-08-12 13:11 J -28711714.17 -28711713.95 -28711713.70 0.0143 0.0064
 Saturn -83322-12-25 04:18 J -28711579.47 -28711579.32 -28711579.17 0.0286 0.0221
 Neptune -83321-03-25 21:49 J -28711487.66 -28711487.59 -28711487.47 0.0089 0.0082
 Uranus -83321-08-16 17:30 J -28711343.99 -28711343.77 -28711343.55 0.0142 0.0077
 Saturn -83320-01-06 07:54 J -28711201.39 -28711201.17 -28711200.95 0.0283 0.0116
 Neptune -83320-03-28 06:56 J -28711120.38 -28711120.21 -28711120.01 0.0089 0.0059
 Mars -83320-06-19 00:42 J -28711037.60 -28711037.47 -28711037.33 0.1588 0.1111
 Uranus -83320-08-21 20:37 J -28710973.84 -28710973.64 -28710973.44 0.0141 0.0091
 Saturn -83319-01-19 02:08 J -28710823.65 -28710823.41 -28710823.17 0.0281 0.0010
 Neptune -83319-03-30 16:04 J -28710753.04 -28710752.83 -28710752.59 0.0089 0.0037
 Uranus -83319-08-26 22:32 J -28710603.73 -28710603.56 -28710603.38 0.0141 0.0103
 Saturn -83318-01-31 11:44 J -28710446.24 -28710446.01 -28710445.79 0.0278 0.0091
 Neptune -83318-04-02 01:25 J -28710385.68 -28710385.44 -28710385.19 0.0089 0.0014
 Uranus -83318-08-31 23:01 J -28710233.67 -28710233.54 -28710233.37 0.0140 0.0115
 Saturn -83317-02-12 13:54 J -28710069.09 -28710068.92 -28710068.74 0.0276 0.0184
 Neptune -83317-04-03 10:32 J -28710018.31 -28710018.06 -28710017.81 0.0089 0.0009
 Uranus -83317-09-04 23:01 J -28709863.64 -28709863.54 -28709863.41 0.0139 0.0126
 Saturn -83316-02-23 09:35 J -28709692.14 -28709692.10 -28709692.03 0.0273 0.0265
 Neptune -83316-04-05 19:40 J -28709650.90 -28709650.68 -28709650.43 0.0089 0.0032
 Uranus -83316-09-09 21:49 J -28709493.64 -28709493.59 -28709493.53 0.0139 0.0135
 Neptune -83315-04-08 04:47 J -28709283.48 -28709283.30 -28709283.08 0.0089 0.0055

Neptune -83314-04-10 14:08 J -28708916.00 -28708915.91 -28708915.76 0.0089 0.0078
 Saturn -83306-06-19 10:47 J -28705924.20 -28705924.05 -28705923.88 0.0274 0.0211
 Saturn -83305-07-01 12:13 J -28705546.21 -28705545.99 -28705545.75 0.0276 0.0118
 Saturn -83304-07-14 23:16 J -28705167.78 -28705167.53 -28705167.28 0.0279 0.0013
 Saturn -83303-07-28 19:25 J -28704788.93 -28704788.69 -28704788.45 0.0282 0.0098
 Saturn -83302-08-12 00:28 J -28704409.64 -28704409.48 -28704409.30 0.0284 0.0208
 Jupiter -83296-09-19 17:59 J -28702178.83 -28702178.75 -28702178.65 0.0500 0.0462
 Uranus -83295-12-07 14:52 J -28701734.89 -28701734.88 -28701734.84 0.0131 0.0130
 Uranus -83294-12-11 17:59 J -28701365.83 -28701365.75 -28701365.65 0.0131 0.0122
 Uranus -83293-12-14 20:23 J -28700996.75 -28700996.65 -28700996.50 0.0131 0.0114
 Saturn -83293-12-18 11:01 J -28700993.12 -28700993.04 -28700992.95 0.0287 0.0268
 Uranus -83292-12-18 22:47 J -28700627.68 -28700627.55 -28700627.38 0.0131 0.0105
 Saturn -83292-12-31 18:56 J -28700614.90 -28700614.71 -28700614.50 0.0284 0.0165
 Uranus -83291-12-23 00:56 J -28700258.62 -28700258.46 -28700258.28 0.0131 0.0095
 Saturn -83290-01-13 17:44 J -28700236.99 -28700236.76 -28700236.52 0.0282 0.0057
 Uranus -83290-12-27 02:52 J -28699889.56 -28699889.38 -28699889.18 0.0131 0.0085
 Saturn -83289-01-26 07:25 J -28699859.42 -28699859.19 -28699858.95 0.0279 0.0047
 Uranus -83289-12-30 04:18 J -28699520.51 -28699520.32 -28699520.10 0.0132 0.0076
 Saturn -83288-02-06 12:56 J -28699482.16 -28699481.96 -28699481.75 0.0277 0.0145
 Uranus -83287-01-03 05:44 J -28699151.46 -28699151.26 -28699151.02 0.0132 0.0065
 Saturn -83287-02-18 11:59 J -28699105.12 -28699105.00 -28699104.87 0.0275 0.0232
 Uranus -83286-01-07 07:25 J -28698782.41 -28698782.19 -28698781.95 0.0132 0.0054
 Uranus -83285-01-11 09:06 J -28698413.35 -28698413.12 -28698412.87 0.0132 0.0043
 Uranus -83284-01-14 11:01 J -28698044.27 -28698044.04 -28698043.79 0.0133 0.0032
 Jupiter -83284-09-24 12:42 J -28697791.19 -28697790.97 -28697790.75 0.0502 0.0211
 Uranus -83283-01-18 12:56 J -28697675.20 -28697674.96 -28697674.71 0.0133 0.0020
 Uranus -83282-01-22 15:20 J -28697306.10 -28697305.86 -28697305.60 0.0133 0.0009
 Uranus -83281-01-26 18:13 J -28696936.98 -28696936.74 -28696936.49 0.0134 0.0005
 Uranus -83280-01-29 21:35 J -28696567.85 -28696567.60 -28696567.36 0.0134 0.0016
 Uranus -83279-02-03 00:56 J -28696198.69 -28696198.46 -28696198.20 0.0135 0.0029

Uranus -83278-02-07 05:16 J -28695829.50 -28695829.28 -28695829.03 0.0135 0.0042
 Jupiter -83278-03-20 08:37 J -28695788.29 -28695788.14 -28695787.98 0.0527 0.0387
 Uranus -83277-02-11 10:18 J -28695460.29 -28695460.07 -28695459.84 0.0136 0.0053
 Saturn -83277-06-13 05:59 J -28695337.34 -28695337.25 -28695337.14 0.0273 0.0248
 Uranus -83276-02-14 15:35 J -28695091.06 -28695090.85 -28695090.62 0.0137 0.0066
 Saturn -83276-06-26 04:04 J -28694959.52 -28694959.33 -28694959.11 0.0275 0.0161
 Uranus -83275-02-18 21:35 J -28694721.80 -28694721.60 -28694721.39 0.0137 0.0078
 Saturn -83275-07-09 11:44 J -28694581.26 -28694581.01 -28694580.77 0.0278 0.0060
 Uranus -83274-02-23 04:04 J -28694352.50 -28694352.33 -28694352.12 0.0138 0.0090
 Saturn -83274-07-23 04:18 J -28694202.57 -28694202.32 -28694202.07 0.0280 0.0049
 Uranus -83273-02-27 11:44 J -28693983.16 -28693983.01 -28693982.82 0.0138 0.0101
 Mars -83273-06-13 05:30 J -28693876.46 -28693876.27 -28693876.08 0.1583 0.0263
 Saturn -83273-08-05 06:13 J -28693823.44 -28693823.24 -28693823.02 0.0283 0.0160
 Uranus -83272-03-02 20:23 J -28693613.78 -28693613.65 -28693613.50 0.0139 0.0112
 Saturn -83272-08-19 17:01 J -28693443.87 -28693443.79 -28693443.70 0.0286 0.0267
 Jupiter -83272-09-29 06:56 J -28693403.45 -28693403.21 -28693402.97 0.0503 0.0044
 Uranus -83271-03-07 05:44 J -28693244.36 -28693244.26 -28693244.13 0.0140 0.0123
 Uranus -83270-03-11 16:04 J -28692874.88 -28692874.83 -28692874.73 0.0140 0.0134
 Jupiter -83266-03-24 22:04 J -28691400.80 -28691400.58 -28691400.36 0.0526 0.0117
 Saturn -83263-12-26 17:44 J -28690027.93 -28690027.76 -28690027.59 0.0286 0.0203
 Saturn -83261-01-08 20:08 J -28689649.88 -28689649.66 -28689649.43 0.0283 0.0097
 Saturn -83260-01-20 13:25 J -28689272.18 -28689271.94 -28689271.70 0.0280 0.0008
 Jupiter -83260-10-04 02:08 J -28689015.60 -28689015.41 -28689015.21 0.0505 0.0300
 Saturn -83259-02-01 21:49 J -28688894.80 -28688894.59 -28688894.36 0.0278 0.0107
 Saturn -83258-02-13 23:01 J -28688517.70 -28688517.54 -28688517.37 0.0275 0.0198
 Jupiter -83254-03-29 14:37 J -28687013.11 -28687012.89 -28687012.67 0.0524 0.0156
 Uranus -83252-06-02 18:28 J -28686216.77 -28686216.73 -28686216.66 0.0148 0.0144
 Uranus -83251-06-08 01:40 J -28685846.53 -28685846.43 -28685846.30 0.0148 0.0132
 Uranus -83250-06-13 09:20 J -28685476.25 -28685476.11 -28685475.95 0.0148 0.0119
 Uranus -83249-06-17 17:01 J -28685105.95 -28685105.79 -28685105.59 0.0148 0.0106

Uranus -83248-06-23 01:25 J -28684735.63 -28684735.44 -28684735.22 0.0147 0.0091
 Saturn -83247-06-20 21:49 J -28684372.76 -28684372.59 -28684372.42 0.0274 0.0196
 Uranus -83247-06-28 09:49 J -28684365.30 -28684365.09 -28684364.86 0.0147 0.0075
 Uranus -83246-07-03 18:28 J -28683994.96 -28683994.73 -28683994.49 0.0147 0.0059
 Saturn -83246-07-04 00:13 J -28683994.72 -28683994.49 -28683994.25 0.0277 0.0100 *
 Uranus -83245-07-08 02:37 J -28683624.63 -28683624.39 -28683624.14 0.0146 0.0042
 Saturn -83245-07-16 12:13 J -28683616.24 -28683615.99 -28683615.74 0.0279 0.0005
 Uranus -83244-07-13 10:47 J -28683254.30 -28683254.05 -28683253.79 0.0146 0.0026
 Saturn -83244-07-30 09:35 J -28683237.33 -28683237.10 -28683236.87 0.0282 0.0115
 Uranus -83243-07-18 18:42 J -28682883.98 -28682883.72 -28682883.46 0.0146 0.0009
 Saturn -83243-08-13 15:49 J -28682857.99 -28682857.84 -28682857.68 0.0285 0.0225
 Jupiter -83242-04-03 07:40 J -28682625.30 -28682625.18 -28682625.05 0.0522 0.0427
 Uranus -83242-07-24 02:08 J -28682513.67 -28682513.41 -28682513.15 0.0145 0.0007
 Uranus -83241-07-28 08:52 J -28682143.38 -28682143.13 -28682142.86 0.0144 0.0024
 Uranus -83240-08-02 15:35 J -28681773.10 -28681772.85 -28681772.60 0.0144 0.0039
 Uranus -83239-08-07 21:06 J -28681402.86 -28681402.62 -28681402.37 0.0143 0.0055
 Neptune -83239-09-29 16:47 J -28681349.91 -28681349.80 -28681349.64 0.0088 0.0076
 Uranus -83238-08-13 01:54 J -28681032.63 -28681032.42 -28681032.18 0.0143 0.0070
 Neptune -83238-10-02 07:40 J -28680982.39 -28680982.18 -28680981.96 0.0088 0.0052
 Uranus -83237-08-17 05:59 J -28680662.45 -28680662.25 -28680662.02 0.0142 0.0084
 Neptune -83237-10-03 21:49 J -28680614.83 -28680614.59 -28680614.33 0.0088 0.0028
 Uranus -83236-08-22 09:06 J -28680292.29 -28680292.12 -28680291.91 0.0141 0.0097
 Neptune -83236-10-06 12:13 J -28680247.25 -28680246.99 -28680246.72 0.0088 0.0005
 Pluto -83235-01-18 08:52 J -28680143.37 -28680143.13 -28680142.87 0.0078 0.0012
 Uranus -83235-08-27 11:16 J -28679922.18 -28679922.03 -28679921.85 0.0141 0.0110
 Neptune -83235-10-09 02:08 J -28679879.66 -28679879.41 -28679879.14 0.0088 0.0019
 Uranus -83234-09-01 11:59 J -28679552.11 -28679552.00 -28679551.85 0.0140 0.0121
 Neptune -83234-10-11 16:18 J -28679512.05 -28679511.82 -28679511.58 0.0088 0.0043
 Saturn -83234-12-21 00:28 J -28679441.59 -28679441.48 -28679441.36 0.0286 0.0251
 Uranus -83233-09-05 12:13 J -28679182.07 -28679181.99 -28679181.90 0.0139 0.0132

Neptune -83233-10-13 06:13 J -28679144.41 -28679144.24 -28679144.06 0.0088 0.0066
 Saturn -83232-01-02 07:11 J -28679063.40 -28679063.20 -28679062.99 0.0284 0.0147
 Saturn -83231-01-15 04:32 J -28678685.54 -28678685.31 -28678685.07 0.0281 0.0040
 Saturn -83230-01-27 17:01 J -28678308.02 -28678307.79 -28678307.56 0.0279 0.0063
 Saturn -83229-02-08 21:35 J -28677930.79 -28677930.60 -28677930.40 0.0276 0.0159
 Saturn -83228-02-19 19:40 J -28677553.78 -28677553.68 -28677553.57 0.0274 0.0244
 Saturn -83218-06-15 13:54 J -28673786.04 -28673785.92 -28673785.79 0.0273 0.0234
 Saturn -83217-06-27 12:56 J -28673408.16 -28673407.96 -28673407.74 0.0276 0.0145
 Saturn -83216-07-10 21:35 J -28673029.85 -28673029.60 -28673029.35 0.0278 0.0043
 Saturn -83215-07-24 15:06 J -28672651.11 -28672650.87 -28672650.62 0.0281 0.0066
 Saturn -83214-08-07 18:13 J -28672271.94 -28672271.74 -28672271.54 0.0283 0.0176
 Saturn -83213-08-21 05:30 J -28671892.31 -28671892.27 -28671892.22 0.0286 0.0281
 Jupiter -83213-09-18 19:40 J -28671863.74 -28671863.68 -28671863.63 0.0499 0.0484
 Uranus -83211-12-08 05:30 J -28671053.27 -28671053.27 -28671053.21 0.0131 0.0130
 Uranus -83210-12-12 09:06 J -28670684.21 -28670684.12 -28670684.02 0.0131 0.0121
 Uranus -83209-12-15 11:59 J -28670315.13 -28670315.00 -28670314.87 0.0131 0.0112
 Uranus -83208-12-19 13:54 J -28669946.06 -28669945.92 -28669945.75 0.0131 0.0103
 Uranus -83207-12-23 15:49 J -28669577.00 -28669576.84 -28669576.65 0.0131 0.0094
 Uranus -83206-12-27 17:30 J -28669207.95 -28669207.77 -28669207.56 0.0131 0.0083
 Saturn -83205-12-14 17:30 J -28668854.78 -28668854.77 -28668854.75 0.0288 0.0287
 Uranus -83205-12-30 19:11 J -28668838.89 -28668838.70 -28668838.47 0.0132 0.0073
 Saturn -83204-12-28 04:47 J -28668476.48 -28668476.30 -28668476.11 0.0286 0.0185
 Uranus -83203-01-03 20:37 J -28668469.85 -28668469.64 -28668469.41 0.0132 0.0062
 Uranus -83202-01-07 22:32 J -28668100.79 -28668100.56 -28668100.33 0.0132 0.0050
 Saturn -83202-01-10 06:28 J -28668098.46 -28668098.23 -28668098.00 0.0283 0.0079
 Uranus -83201-01-11 23:59 J -28667731.73 -28667731.50 -28667731.25 0.0132 0.0040
 Saturn -83201-01-22 22:47 J -28667720.79 -28667720.55 -28667720.31 0.0280 0.0025
 Jupiter -83201-09-23 13:54 J -28667476.12 -28667475.92 -28667475.70 0.0501 0.0238
 Uranus -83200-01-15 01:54 J -28667362.66 -28667362.42 -28667362.17 0.0133 0.0028
 Saturn -83200-02-03 06:13 J -28667343.45 -28667343.24 -28667343.02 0.0277 0.0123

Uranus -83199-01-19 04:04 J -28666993.57 -28666993.33 -28666993.08 0.0133 0.0016
 Saturn -83199-02-15 06:42 J -28666966.37 -28666966.22 -28666966.06 0.0275 0.0210
 Uranus -83198-01-23 06:42 J -28666624.47 -28666624.22 -28666623.97 0.0133 0.0004
 Uranus -83197-01-27 09:20 J -28666255.35 -28666255.11 -28666254.86 0.0134 0.0009
 Uranus -83196-01-30 12:42 J -28665886.21 -28665885.97 -28665885.72 0.0134 0.0021
 Uranus -83195-02-03 16:18 J -28665517.06 -28665516.82 -28665516.58 0.0135 0.0034
 Jupiter -83195-03-19 08:08 J -28665473.28 -28665473.16 -28665473.02 0.0528 0.0428
 Uranus -83194-02-07 20:23 J -28665147.87 -28665147.65 -28665147.41 0.0135 0.0046
 Mars -83194-06-16 05:44 J -28665019.45 -28665019.26 -28665019.08 0.1584 0.0332
 Uranus -83193-02-12 00:56 J -28664778.67 -28664778.46 -28664778.22 0.0136 0.0059
 Uranus -83192-02-15 06:28 J -28664409.44 -28664409.23 -28664409.01 0.0137 0.0071
 Uranus -83191-02-19 12:13 J -28664040.17 -28664039.99 -28664039.78 0.0137 0.0083
 Uranus -83190-02-23 19:11 J -28663670.87 -28663670.70 -28663670.52 0.0138 0.0095
 Uranus -83189-02-28 02:23 J -28663301.54 -28663301.40 -28663301.23 0.0138 0.0107
 Saturn -83189-06-09 11:16 J -28663199.08 -28663199.03 -28663198.97 0.0272 0.0264
 Jupiter -83189-09-28 07:11 J -28663088.44 -28663088.20 -28663087.96 0.0502 0.0010
 Uranus -83188-03-03 10:47 J -28662932.16 -28662932.05 -28662931.90 0.0139 0.0118
 Saturn -83188-06-22 05:30 J -28662821.45 -28662821.27 -28662821.07 0.0275 0.0181
 Uranus -83187-03-07 20:08 J -28662562.74 -28662562.66 -28662562.55 0.0140 0.0129
 Saturn -83187-07-05 09:06 J -28662443.36 -28662443.12 -28662442.88 0.0277 0.0084
 Uranus -83186-03-12 06:56 J -28662193.24 -28662193.21 -28662193.17 0.0140 0.0139
 Saturn -83186-07-18 21:49 J -28662064.84 -28662064.59 -28662064.34 0.0280 0.0022
 Saturn -83185-07-31 20:23 J -28661685.87 -28661685.65 -28661685.43 0.0282 0.0132
 Saturn -83184-08-15 03:20 J -28661306.48 -28661306.36 -28661306.21 0.0285 0.0240
 Jupiter -83183-03-24 03:20 J -28661085.58 -28661085.36 -28661085.14 0.0526 0.0147
 Jupiter -83177-10-03 03:20 J -28658700.56 -28658700.36 -28658700.16 0.0504 0.0267
 Saturn -83175-12-22 12:13 J -28657890.12 -28657889.99 -28657889.85 0.0286 0.0233
 Saturn -83173-01-04 17:59 J -28657511.96 -28657511.75 -28657511.53 0.0284 0.0129
 Saturn -83172-01-16 14:23 J -28657134.14 -28657133.90 -28657133.66 0.0281 0.0023
 Saturn -83171-01-29 01:25 J -28656756.66 -28656756.44 -28656756.20 0.0278 0.0080

Jupiter -83171-03-28 20:37 J -28656697.86 -28656697.64 -28656697.42 0.0524 0.0129
 Saturn -83170-02-10 05:01 J -28656379.46 -28656379.29 -28656379.09 0.0276 0.0173
 Saturn -83169-02-22 02:08 J -28656002.48 -28656002.41 -28656002.31 0.0274 0.0255
 Uranus -83168-06-03 07:25 J -28655535.24 -28655535.19 -28655535.12 0.0148 0.0143
 Uranus -83167-06-08 14:08 J -28655165.01 -28655164.91 -28655164.77 0.0148 0.0131
 Uranus -83166-06-13 21:49 J -28654794.73 -28654794.59 -28654794.42 0.0148 0.0118
 Uranus -83165-06-18 05:44 J -28654424.43 -28654424.26 -28654424.06 0.0148 0.0103
 Uranus -83164-06-23 14:08 J -28654054.11 -28654053.91 -28654053.69 0.0147 0.0088
 Uranus -83163-06-28 22:32 J -28653683.78 -28653683.56 -28653683.33 0.0147 0.0072
 Uranus -83162-07-04 06:56 J -28653313.45 -28653313.21 -28653312.97 0.0147 0.0055
 Uranus -83161-07-08 15:06 J -28652943.11 -28652942.87 -28652942.61 0.0146 0.0039
 Uranus -83160-07-13 23:30 J -28652572.77 -28652572.52 -28652572.26 0.0146 0.0022
 Jupiter -83159-04-02 11:30 J -28652310.16 -28652310.02 -28652309.87 0.0522 0.0394
 Saturn -83159-06-16 18:42 J -28652234.86 -28652234.72 -28652234.56 0.0274 0.0220
 Uranus -83159-07-19 07:11 J -28652202.45 -28652202.20 -28652201.93 0.0146 0.0006
 Saturn -83158-06-29 18:42 J -28651856.94 -28651856.72 -28651856.50 0.0276 0.0129
 Uranus -83158-07-24 15:06 J -28651832.13 -28651831.87 -28651831.61 0.0145 0.0012
 Saturn -83157-07-12 04:04 J -28651478.58 -28651478.33 -28651478.08 0.0278 0.0027
 Uranus -83157-07-28 22:04 J -28651461.84 -28651461.58 -28651461.32 0.0144 0.0029
 Neptune -83156-03-27 14:23 J -28651220.03 -28651219.90 -28651219.73 0.0089 0.0071
 Saturn -83156-07-25 22:32 J -28651099.79 -28651099.56 -28651099.31 0.0281 0.0082
 Uranus -83156-08-03 04:32 J -28651091.55 -28651091.31 -28651091.06 0.0144 0.0045
 Neptune -83155-03-29 23:16 J -28650852.72 -28650852.53 -28650852.30 0.0089 0.0049
 Uranus -83155-08-08 10:18 J -28650721.30 -28650721.07 -28650720.82 0.0143 0.0061
 Saturn -83155-08-09 02:37 J -28650720.58 -28650720.39 -28650720.20 0.0284 0.0191
 Neptune -83154-04-01 08:23 J -28650485.38 -28650485.15 -28650484.89 0.0089 0.0026
 Uranus -83154-08-13 15:06 J -28650351.08 -28650350.87 -28650350.63 0.0143 0.0076
 Neptune -83153-04-02 17:59 J -28650118.00 -28650117.75 -28650117.50 0.0089 0.0003
 Uranus -83153-08-17 19:11 J -28649980.88 -28649980.70 -28649980.47 0.0142 0.0090
 Neptune -83152-04-05 02:52 J -28649750.62 -28649750.38 -28649750.13 0.0089 0.0019

Uranus -83152-08-22 22:32 J -28649610.72 -28649610.56 -28649610.37 0.0141 0.0104
 Neptune -83151-04-07 11:59 J -28649383.21 -28649383.00 -28649382.76 0.0089 0.0042
 Uranus -83151-08-28 00:28 J -28649240.61 -28649240.48 -28649240.31 0.0141 0.0116
 Neptune -83150-04-09 21:06 J -28649015.77 -28649015.62 -28649015.43 0.0089 0.0065
 Uranus -83150-09-02 01:40 J -28648870.53 -28648870.43 -28648870.31 0.0140 0.0127
 Neptune -83149-04-11 06:56 J -28648648.25 -28648648.21 -28648648.16 0.0089 0.0087
 Uranus -83149-09-06 01:40 J -28648500.46 -28648500.43 -28648500.38 0.0139 0.0138
 Mars -83147-06-10 12:56 J -28647858.10 -28647857.96 -28647857.81 0.1580 0.1003
 Saturn -83146-12-17 03:20 J -28647303.43 -28647303.36 -28647303.27 0.0288 0.0271
 Saturn -83145-12-29 14:08 J -28646925.10 -28646924.91 -28646924.71 0.0285 0.0168
 Saturn -83143-01-11 14:52 J -28646547.11 -28646546.88 -28646546.64 0.0283 0.0062
 Saturn -83142-01-24 06:13 J -28646169.48 -28646169.24 -28646169.00 0.0280 0.0041
 Saturn -83141-02-05 12:56 J -28645792.17 -28645791.96 -28645791.75 0.0277 0.0137
 Saturn -83140-02-16 12:28 J -28645415.11 -28645414.98 -28645414.83 0.0275 0.0223
 Saturn -83130-06-11 15:35 J -28641647.93 -28641647.85 -28641647.74 0.0272 0.0251
 Saturn -83129-06-23 10:47 J -28641270.24 -28641270.05 -28641269.85 0.0275 0.0166
 Saturn -83128-07-06 15:06 J -28640892.11 -28640891.87 -28640891.63 0.0277 0.0068
 Saturn -83127-07-20 04:47 J -28640513.55 -28640513.30 -28640513.05 0.0280 0.0038
 Uranus -83127-12-08 21:06 J -28640371.65 -28640371.62 -28640371.56 0.0131 0.0129
 Saturn -83126-08-03 03:49 J -28640134.54 -28640134.34 -28640134.11 0.0283 0.0148
 Uranus -83126-12-13 00:13 J -28640002.57 -28640002.49 -28640002.38 0.0131 0.0120
 Saturn -83125-08-16 11:59 J -28639755.10 -28639755.00 -28639754.87 0.0285 0.0254
 Uranus -83125-12-16 02:37 J -28639633.50 -28639633.39 -28639633.23 0.0131 0.0111
 Uranus -83124-12-20 04:47 J -28639264.44 -28639264.30 -28639264.12 0.0131 0.0102
 Uranus -83123-12-24 06:42 J -28638895.38 -28638895.22 -28638895.02 0.0131 0.0091
 Uranus -83122-12-28 08:37 J -28638526.32 -28638526.14 -28638525.93 0.0131 0.0081
 Uranus -83121-12-31 10:18 J -28638157.27 -28638157.07 -28638156.85 0.0132 0.0070
 Uranus -83119-01-04 11:44 J -28637788.22 -28637788.01 -28637787.77 0.0132 0.0059
 Uranus -83118-01-08 13:40 J -28637419.16 -28637418.93 -28637418.69 0.0132 0.0047
 Jupiter -83118-09-23 16:47 J -28637161.00 -28637160.80 -28637160.60 0.0500 0.0265

Uranus	-83117-01-12 15:20 J	-28637050.09	-28637049.86	-28637049.61	0.0132	0.0035
Uranus	-83116-01-15 17:30 J	-28636681.01	-28636680.77	-28636680.52	0.0133	0.0023
Saturn	-83116-12-23 20:52 J	-28636338.78	-28636338.63	-28636338.47	0.0286	0.0216
Uranus	-83115-01-19 19:40 J	-28636311.93	-28636311.68	-28636311.43	0.0133	0.0011
Mars	-83115-06-18 07:25 J	-28636162.34	-28636162.19	-28636162.04	0.1585	0.0946
Saturn	-83114-01-06 01:54 J	-28635960.64	-28635960.42	-28635960.19	0.0283	0.0111
Uranus	-83114-01-23 22:18 J	-28635942.82	-28635942.57	-28635942.32	0.0133	0.0001
Saturn	-83113-01-18 21:20 J	-28635582.85	-28635582.61	-28635582.37	0.0281	0.0007
Uranus	-83113-01-28 01:11 J	-28635573.70	-28635573.45	-28635573.20	0.0134	0.0014
Saturn	-83112-01-30 07:54 J	-28635205.40	-28635205.17	-28635204.95	0.0278	0.0094
Uranus	-83112-01-31 04:18 J	-28635204.56	-28635204.32	-28635204.07	0.0134	0.0027
Jupiter	-83112-03-18 15:49 J	-28635157.95	-28635157.84	-28635157.71	0.0529	0.0449
Uranus	-83111-02-04 07:54 J	-28634835.40	-28634835.17	-28634834.92	0.0135	0.0039
Saturn	-83111-02-11 10:32 J	-28634828.23	-28634828.06	-28634827.88	0.0276	0.0185
Uranus	-83110-02-08 12:28 J	-28634466.21	-28634465.98	-28634465.75	0.0135	0.0052
Saturn	-83110-02-23 06:42 J	-28634451.26	-28634451.22	-28634451.15	0.0273	0.0265
Uranus	-83109-02-12 16:47 J	-28634097.01	-28634096.80	-28634096.58	0.0136	0.0064
Uranus	-83108-02-15 22:18 J	-28633727.77	-28633727.57	-28633727.37	0.0137	0.0077
Uranus	-83107-02-20 03:49 J	-28633358.51	-28633358.34	-28633358.14	0.0137	0.0089
Uranus	-83106-02-24 10:47 J	-28632989.20	-28632989.05	-28632988.87	0.0138	0.0101
Jupiter	-83106-09-28 11:44 J	-28632773.25	-28632773.01	-28632772.77	0.0502	0.0013
Uranus	-83105-02-28 18:28 J	-28632619.86	-28632619.73	-28632619.58	0.0138	0.0113
Uranus	-83104-03-04 02:37 J	-28632250.48	-28632250.39	-28632250.26	0.0139	0.0124
Uranus	-83103-03-08 12:13 J	-28631881.04	-28631880.99	-28631880.91	0.0140	0.0135
Jupiter	-83100-03-23 09:20 J	-28630770.33	-28630770.11	-28630769.90	0.0527	0.0174
Saturn	-83100-06-17 20:52 J	-28630683.78	-28630683.63	-28630683.45	0.0274	0.0206
Saturn	-83099-06-30 21:20 J	-28630305.83	-28630305.61	-28630305.38	0.0276	0.0114
Saturn	-83098-07-14 07:11 J	-28629927.45	-28629927.20	-28629926.95	0.0279	0.0012
Saturn	-83097-07-27 02:23 J	-28629548.63	-28629548.40	-28629548.15	0.0281	0.0098
Saturn	-83096-08-10 07:11 J	-28629169.37	-28629169.20	-28629169.02	0.0284	0.0205

Jupiter -83094-10-03 08:23 J -28628385.36 -28628385.15 -28628384.94 0.0504 0.0247
 Jupiter -83088-03-27 21:20 J -28626382.84 -28626382.61 -28626382.39 0.0525 0.0091
 Saturn -83087-12-18 10:04 J -28625752.18 -28625752.08 -28625751.96 0.0288 0.0255
 Saturn -83086-12-31 20:23 J -28625373.84 -28625373.65 -28625373.44 0.0285 0.0151
 Saturn -83084-01-12 20:37 J -28624995.87 -28624995.64 -28624995.40 0.0283 0.0045
 Uranus -83084-06-03 23:59 J -28624853.56 -28624853.50 -28624853.42 0.0148 0.0142
 Saturn -83083-01-25 11:16 J -28624618.26 -28624618.03 -28624617.79 0.0280 0.0057
 Uranus -83083-06-09 06:56 J -28624483.32 -28624483.21 -28624483.08 0.0148 0.0129
 Saturn -83082-02-06 17:30 J -28624240.97 -28624240.77 -28624240.57 0.0277 0.0152
 Uranus -83082-06-14 14:08 J -28624113.05 -28624112.91 -28624112.73 0.0148 0.0115
 Jupiter -83082-10-08 04:47 J -28623997.31 -28623997.30 -28623997.28 0.0506 0.0504
 Saturn -83081-02-18 16:18 J -28623863.92 -28623863.82 -28623863.68 0.0274 0.0236
 Uranus -83081-06-18 22:18 J -28623742.75 -28623742.57 -28623742.38 0.0148 0.0100
 Uranus -83080-06-24 06:13 J -28623372.44 -28623372.24 -28623372.02 0.0147 0.0084
 Uranus -83079-06-29 14:37 J -28623002.12 -28623001.89 -28623001.66 0.0147 0.0068
 Uranus -83078-07-04 22:47 J -28622631.78 -28622631.55 -28622631.30 0.0147 0.0051
 Uranus -83077-07-09 07:11 J -28622261.45 -28622261.20 -28622260.95 0.0146 0.0034
 Mars -83077-12-20 10:32 J -28622097.26 -28622097.06 -28622096.86 0.1958 0.0131
 Jupiter -83076-04-01 13:25 J -28621995.10 -28621994.94 -28621994.77 0.0523 0.0359
 Uranus -83076-07-14 15:20 J -28621891.11 -28621890.86 -28621890.60 0.0146 0.0017
 Pluto -83076-07-15 14:37 J -28621890.15 -28621889.89 -28621889.62 0.0067 0.0011
 Uranus -83075-07-19 23:16 J -28621520.79 -28621520.53 -28621520.27 0.0146 0.0002
 Neptune -83075-09-28 17:16 J -28621449.78 -28621449.78 -28621449.73 0.0088 0.0088
 Uranus -83074-07-25 06:56 J -28621150.47 -28621150.21 -28621149.95 0.0145 0.0018
 Neptune -83074-10-01 07:40 J -28621082.34 -28621082.18 -28621081.98 0.0088 0.0065
 Uranus -83073-07-29 13:54 J -28620780.17 -28620779.92 -28620779.66 0.0144 0.0035
 Neptune -83073-10-02 21:49 J -28620714.80 -28620714.59 -28620714.33 0.0088 0.0042
 Uranus -83072-08-03 20:37 J -28620409.88 -28620409.64 -28620409.39 0.0144 0.0051
 Neptune -83072-10-05 12:28 J -28620347.24 -28620346.98 -28620346.72 0.0088 0.0018
 Saturn -83071-06-12 17:16 J -28620096.89 -28620096.78 -28620096.65 0.0272 0.0238

Uranus -83071-08-09 01:54 J -28620039.63 -28620039.42 -28620039.17 0.0143 0.0067
 Neptune -83071-10-08 02:37 J -28619979.66 -28619979.39 -28619979.13 0.0088 0.0006
 Saturn -83070-06-25 12:42 J -28619719.17 -28619718.97 -28619718.76 0.0275 0.0152
 Uranus -83070-08-14 07:25 J -28619669.40 -28619669.19 -28619668.98 0.0143 0.0082
 Neptune -83070-10-10 16:32 J -28619612.05 -28619611.81 -28619611.55 0.0088 0.0029
 Saturn -83069-07-07 17:44 J -28619341.01 -28619340.76 -28619340.52 0.0277 0.0053
 Uranus -83069-08-18 11:30 J -28619299.21 -28619299.02 -28619298.83 0.0142 0.0096
 Neptune -83069-10-12 06:28 J -28619244.43 -28619244.23 -28619244.00 0.0088 0.0052
 Mars -83068-06-12 13:40 J -28619001.12 -28619000.93 -28619000.75 0.1581 0.0413
 Saturn -83068-07-21 08:08 J -28618962.41 -28618962.16 -28618961.91 0.0280 0.0053
 Uranus -83068-08-23 13:54 J -28618929.06 -28618928.92 -28618928.73 0.0141 0.0111
 Neptune -83068-10-14 20:08 J -28618876.77 -28618876.66 -28618876.50 0.0088 0.0076
 Saturn -83067-08-04 08:08 J -28618583.36 -28618583.16 -28618582.95 0.0283 0.0162
 Uranus -83067-08-28 16:04 J -28618558.94 -28618558.83 -28618558.69 0.0141 0.0123
 Saturn -83066-08-18 16:47 J -28618203.87 -28618203.80 -28618203.70 0.0286 0.0268
 Uranus -83066-09-02 16:47 J -28618188.85 -28618188.80 -28618188.71 0.0140 0.0134
 Saturn -83057-12-25 03:06 J -28614787.53 -28614787.37 -28614787.19 0.0286 0.0200
 Saturn -83055-01-07 07:40 J -28614409.40 -28614409.18 -28614408.95 0.0283 0.0095
 Saturn -83054-01-20 02:37 J -28614031.63 -28614031.39 -28614031.15 0.0280 0.0011
 Saturn -83053-02-01 12:13 J -28613654.21 -28613653.99 -28613653.77 0.0278 0.0109
 Saturn -83052-02-12 13:54 J -28613277.07 -28613276.92 -28613276.74 0.0275 0.0198
 Uranus -83043-12-09 12:42 J -28609690.01 -28609689.97 -28609689.92 0.0131 0.0128
 Saturn -83042-06-07 05:44 J -28609510.26 -28609510.26 -28609510.24 0.0272 0.0271
 Uranus -83042-12-13 15:20 J -28609320.95 -28609320.86 -28609320.74 0.0131 0.0119
 Saturn -83041-06-18 21:06 J -28609132.79 -28609132.62 -28609132.44 0.0274 0.0192
 Uranus -83041-12-16 18:13 J -28608951.88 -28608951.74 -28608951.60 0.0131 0.0109
 Saturn -83040-07-01 21:35 J -28608754.83 -28608754.60 -28608754.36 0.0276 0.0099
 Uranus -83040-12-20 19:54 J -28608582.82 -28608582.67 -28608582.49 0.0131 0.0100
 Saturn -83039-07-15 07:54 J -28608376.42 -28608376.17 -28608375.92 0.0279 0.0004
 Uranus -83039-12-24 21:49 J -28608213.75 -28608213.59 -28608213.39 0.0131 0.0089

Saturn -83038-07-29 03:49 J -28607997.57 -28607997.34 -28607997.10 0.0281 0.0111
 Uranus -83038-12-28 23:59 J -28607844.70 -28607844.50 -28607844.30 0.0131 0.0078
 Saturn -83037-08-11 09:06 J -28607618.27 -28607618.12 -28607617.95 0.0284 0.0219
 Uranus -83036-01-01 01:25 J -28607475.65 -28607475.44 -28607475.22 0.0132 0.0067
 Mars -83036-06-20 08:23 J -28607305.18 -28607305.15 -28607305.11 0.1586 0.1553
 Uranus -83035-01-05 02:37 J -28607106.60 -28607106.39 -28607106.14 0.0132 0.0056
 Jupiter -83035-09-23 00:13 J -28606845.69 -28606845.49 -28606845.29 0.0500 0.0278
 Uranus -83034-01-09 04:47 J -28606737.53 -28606737.30 -28606737.06 0.0132 0.0043
 Uranus -83033-01-13 06:28 J -28606368.47 -28606368.23 -28606367.98 0.0132 0.0032
 Uranus -83032-01-16 08:23 J -28605999.39 -28605999.15 -28605998.90 0.0133 0.0019
 Uranus -83031-01-20 10:47 J -28605630.30 -28605630.05 -28605629.80 0.0133 0.0007
 Uranus -83030-01-24 13:25 J -28605261.19 -28605260.94 -28605260.69 0.0133 0.0006
 Uranus -83029-01-28 16:04 J -28604892.07 -28604891.83 -28604891.58 0.0134 0.0019
 Jupiter -83029-03-17 17:16 J -28604842.87 -28604842.78 -28604842.70 0.0529 0.0487
 Uranus -83028-01-31 19:11 J -28604522.93 -28604522.70 -28604522.45 0.0134 0.0032
 Saturn -83028-12-19 13:54 J -28604201.04 -28604200.92 -28604200.78 0.0288 0.0240
 Uranus -83027-02-04 23:01 J -28604153.78 -28604153.54 -28604153.31 0.0135 0.0044
 Saturn -83026-01-01 23:59 J -28603822.71 -28603822.50 -28603822.28 0.0285 0.0135
 Uranus -83026-02-09 02:37 J -28603784.60 -28603784.39 -28603784.15 0.0135 0.0058
 Saturn -83025-01-14 23:44 J -28603444.74 -28603444.51 -28603444.27 0.0282 0.0029
 Uranus -83025-02-13 07:11 J -28603415.39 -28603415.20 -28603414.97 0.0136 0.0070
 Saturn -83024-01-26 13:54 J -28603067.15 -28603066.92 -28603066.69 0.0280 0.0073
 Uranus -83024-02-16 12:28 J -28603046.16 -28603045.98 -28603045.77 0.0137 0.0083
 Saturn -83023-02-07 19:40 J -28602689.86 -28602689.68 -28602689.48 0.0277 0.0166
 Uranus -83023-02-20 18:42 J -28602676.90 -28602676.72 -28602676.54 0.0137 0.0094
 Jupiter -83023-09-27 19:54 J -28602457.91 -28602457.67 -28602457.42 0.0501 0.0028
 Saturn -83022-02-19 18:13 J -28602312.83 -28602312.74 -28602312.62 0.0274 0.0247
 Uranus -83022-02-25 01:11 J -28602307.59 -28602307.45 -28602307.28 0.0138 0.0107
 Uranus -83021-02-29 09:06 J -28601938.25 -28601938.12 -28601937.99 0.0138 0.0118
 Uranus -83020-03-04 17:16 J -28601568.85 -28601568.78 -28601568.67 0.0139 0.0129

Jupiter	-83017-03-22 10:47 J	-28600455.26	-28600455.05	-28600454.84	0.0528	0.0212
Saturn	-83012-06-13 17:01 J	-28598545.92	-28598545.79	-28598545.64	0.0272	0.0225
Saturn	-83011-06-26 12:42 J	-28598168.18	-28598167.97	-28598167.75	0.0275	0.0138
Jupiter	-83011-10-02 13:11 J	-28598070.16	-28598069.95	-28598069.73	0.0503	0.0223
Saturn	-83010-07-09 17:44 J	-28597790.00	-28597789.76	-28597789.50	0.0277	0.0040
Saturn	-83009-07-22 08:52 J	-28597411.37	-28597411.13	-28597410.88	0.0280	0.0067
Saturn	-83008-08-05 09:06 J	-28597032.30	-28597032.12	-28597031.91	0.0283	0.0176
Saturn	-83007-08-19 18:13 J	-28596652.77	-28596652.74	-28596652.67	0.0286	0.0280
Jupiter	-83005-03-27 05:44 J	-28596067.48	-28596067.26	-28596067.03	0.0526	0.0068

83RD MILLENNIUM BCE

This is a list of transits of Earth in the 83rd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-83000-06-04 13:54 J	-28594171.97	-28594171.92	-28594171.83	0.0148	0.0141		
Uranus	-82999-06-09 20:37 J	-28593801.74	-28593801.64	-28593801.49	0.0148	0.0128		
Jupiter	-82999-10-07 09:35 J	-28593682.17	-28593682.10	-28593682.02	0.0505	0.0478		
Saturn	-82999-12-13 16:32 J	-28593614.83	-28593614.81	-28593614.78	0.0288	0.0286		
Uranus	-82998-06-15 04:18 J	-28593431.47	-28593431.32	-28593431.14	0.0148	0.0113		
Mars	-82998-12-25 06:56 J	-28593238.28	-28593238.21	-28593238.14	0.1957	0.1814		
Saturn	-82998-12-27 07:11 J	-28593236.39	-28593236.20	-28593236.02	0.0286	0.0184		
Uranus	-82997-06-19 12:28 J	-28593061.17	-28593060.98	-28593060.79	0.0148	0.0097		
Saturn	-82996-01-08 11:16 J	-28592858.26	-28592858.03	-28592857.80	0.0283	0.0078		
Uranus	-82996-06-24 20:08 J	-28592690.86	-28592690.66	-28592690.43	0.0148	0.0081		

Saturn -82995-01-21 05:30 J -28592480.51 -28592480.27 -28592480.03 0.0280 0.0026
 Uranus -82995-06-30 04:32 J -28592320.54 -28592320.31 -28592320.07 0.0147 0.0064
 Saturn -82994-02-02 14:37 J -28592103.10 -28592102.89 -28592102.67 0.0277 0.0123
 Uranus -82994-07-05 12:42 J -28591950.20 -28591949.97 -28591949.71 0.0147 0.0047
 Saturn -82993-02-14 16:18 J -28591725.97 -28591725.82 -28591725.67 0.0275 0.0210
 Jupiter -82993-04-01 00:42 J -28591679.64 -28591679.47 -28591679.30 0.0523 0.0344
 Uranus -82993-07-09 21:20 J -28591579.86 -28591579.61 -28591579.36 0.0146 0.0030
 Neptune -82992-03-26 20:37 J -28591319.70 -28591319.64 -28591319.52 0.0089 0.0083
 Uranus -82992-07-15 05:44 J -28591209.52 -28591209.26 -28591209.00 0.0146 0.0012
 Neptune -82991-03-29 06:13 J -28590952.42 -28590952.24 -28590952.05 0.0089 0.0060
 Uranus -82991-07-20 13:25 J -28590839.20 -28590838.94 -28590838.68 0.0146 0.0006
 Neptune -82990-03-31 15:20 J -28590585.08 -28590584.86 -28590584.63 0.0089 0.0038
 Uranus -82990-07-25 21:20 J -28590468.87 -28590468.61 -28590468.35 0.0145 0.0023
 Pluto -82989-01-20 18:13 J -28590289.93 -28590289.74 -28590289.52 0.0078 0.0046
 Neptune -82989-04-02 00:13 J -28590217.73 -28590217.49 -28590217.23 0.0089 0.0016
 Mars -82989-06-14 14:23 J -28590144.09 -28590143.90 -28590143.71 0.1582 0.0184
 Uranus -82989-07-30 04:18 J -28590098.56 -28590098.32 -28590098.06 0.0144 0.0040
 Neptune -82988-04-04 09:35 J -28589850.34 -28589850.10 -28589849.84 0.0089 0.0007
 Uranus -82988-08-04 10:47 J -28589728.28 -28589728.05 -28589727.80 0.0144 0.0057
 Neptune -82987-04-06 18:28 J -28589482.95 -28589482.73 -28589482.47 0.0089 0.0030
 Uranus -82987-08-09 16:18 J -28589358.03 -28589357.82 -28589357.58 0.0143 0.0074
 Neptune -82986-04-09 03:49 J -28589115.53 -28589115.34 -28589115.12 0.0089 0.0052
 Uranus -82986-08-14 21:35 J -28588987.80 -28588987.60 -28588987.39 0.0143 0.0088
 Neptune -82985-04-10 13:40 J -28588748.07 -28588747.93 -28588747.79 0.0089 0.0074
 Uranus -82985-08-19 01:11 J -28588617.61 -28588617.45 -28588617.25 0.0142 0.0103
 Uranus -82984-08-24 04:18 J -28588247.45 -28588247.32 -28588247.15 0.0141 0.0117
 Saturn -82983-06-08 04:04 J -28587959.39 -28587959.33 -28587959.24 0.0271 0.0260
 Uranus -82983-08-29 05:59 J -28587877.33 -28587877.25 -28587877.12 0.0141 0.0129
 Saturn -82982-06-20 19:11 J -28587581.87 -28587581.70 -28587581.50 0.0274 0.0179
 Uranus -82982-09-03 07:11 J -28587507.20 -28587507.20 -28587507.17 0.0140 0.0140

Saturn	-82981-07-02 19:54 J	-28587203.90	-28587203.67	-28587203.43	0.0276	0.0085
Saturn	-82980-07-16 06:13 J	-28586825.49	-28586825.24	-28586824.98	0.0279	0.0019
Saturn	-82979-07-30 02:37 J	-28586446.61	-28586446.39	-28586446.16	0.0282	0.0125
Saturn	-82978-08-13 08:23 J	-28586067.29	-28586067.15	-28586067.00	0.0284	0.0232
Saturn	-82969-12-20 15:35 J	-28582649.99	-28582649.85	-28582649.69	0.0288	0.0226
Saturn	-82967-01-03 01:40 J	-28582271.65	-28582271.43	-28582271.21	0.0285	0.0120
Saturn	-82966-01-16 01:11 J	-28581893.69	-28581893.45	-28581893.21	0.0282	0.0015
Saturn	-82965-01-28 15:06 J	-28581516.09	-28581515.87	-28581515.64	0.0280	0.0088
Saturn	-82964-02-08 20:37 J	-28581138.81	-28581138.64	-28581138.45	0.0277	0.0179
Saturn	-82963-02-20 18:56 J	-28580761.78	-28580761.71	-28580761.63	0.0274	0.0258
Uranus	-82959-12-10 03:35 J	-28579008.39	-28579008.35	-28579008.28	0.0131	0.0127
Uranus	-82958-12-14 06:13 J	-28578639.33	-28578639.24	-28578639.11	0.0131	0.0118
Uranus	-82957-12-17 08:37 J	-28578270.26	-28578270.14	-28578269.98	0.0131	0.0108
Uranus	-82956-12-21 10:47 J	-28577901.20	-28577901.05	-28577900.87	0.0131	0.0097
Uranus	-82955-12-25 12:42 J	-28577532.14	-28577531.97	-28577531.77	0.0131	0.0087
Uranus	-82954-12-29 14:23 J	-28577163.09	-28577162.90	-28577162.68	0.0131	0.0076
Saturn	-82953-06-14 16:04 J	-28576994.98	-28576994.83	-28576994.68	0.0272	0.0212
Uranus	-82952-01-01 16:04 J	-28576794.04	-28576793.83	-28576793.60	0.0132	0.0064
Saturn	-82952-06-27 11:44 J	-28576617.23	-28576617.01	-28576616.78	0.0275	0.0124
Jupiter	-82952-09-22 07:25 J	-28576530.38	-28576530.19	-28576529.99	0.0499	0.0295
Uranus	-82951-01-05 17:44 J	-28576424.99	-28576424.76	-28576424.53	0.0132	0.0052
Saturn	-82951-07-10 17:01 J	-28576239.04	-28576238.79	-28576238.54	0.0277	0.0025
Uranus	-82950-01-09 19:25 J	-28576055.92	-28576055.69	-28576055.45	0.0132	0.0040
Saturn	-82950-07-24 08:08 J	-28575860.40	-28575860.16	-28575859.92	0.0280	0.0081
Uranus	-82949-01-13 21:06 J	-28575686.86	-28575686.62	-28575686.37	0.0132	0.0028
Saturn	-82949-08-06 08:52 J	-28575481.31	-28575481.13	-28575480.93	0.0283	0.0189
Uranus	-82948-01-16 23:01 J	-28575317.78	-28575317.54	-28575317.28	0.0133	0.0016
Uranus	-82947-01-21 01:25 J	-28574948.69	-28574948.44	-28574948.19	0.0133	0.0002
Uranus	-82946-01-25 04:04 J	-28574579.58	-28574579.33	-28574579.08	0.0133	0.0010
Jupiter	-82946-03-18 01:40 J	-28574527.48	-28574527.43	-28574527.37	0.0530	0.0509

Uranus	-82945-01-29 06:28 J	-28574210.46	-28574210.23	-28574209.98	0.0134	0.0024
Uranus	-82944-02-01 09:35 J	-28573841.33	-28573841.10	-28573840.85	0.0134	0.0037
Uranus	-82943-02-05 12:56 J	-28573472.18	-28573471.96	-28573471.72	0.0135	0.0050
Uranus	-82942-02-09 17:16 J	-28573103.00	-28573102.78	-28573102.56	0.0135	0.0063
Mars	-82942-06-09 22:47 J	-28572982.68	-28572982.55	-28572982.42	0.1579	0.1144
Uranus	-82941-02-13 21:35 J	-28572733.80	-28572733.60	-28572733.39	0.0136	0.0075
Uranus	-82940-02-17 02:52 J	-28572364.56	-28572364.38	-28572364.19	0.0137	0.0088
Jupiter	-82940-09-27 02:08 J	-28572142.65	-28572142.41	-28572142.18	0.0501	0.0048
Saturn	-82940-12-14 18:13 J	-28572063.81	-28572063.74	-28572063.65	0.0288	0.0272
Uranus	-82939-02-21 08:37 J	-28571995.29	-28571995.14	-28571994.96	0.0137	0.0100
Saturn	-82939-12-28 08:52 J	-28571685.32	-28571685.13	-28571684.93	0.0286	0.0169
Uranus	-82938-02-25 15:49 J	-28571625.98	-28571625.84	-28571625.70	0.0138	0.0112
Saturn	-82937-01-10 12:56 J	-28571307.19	-28571306.96	-28571306.72	0.0283	0.0063
Uranus	-82937-02-29 23:16 J	-28571256.63	-28571256.53	-28571256.42	0.0138	0.0124
Saturn	-82936-01-22 06:42 J	-28570929.45	-28570929.22	-28570928.98	0.0280	0.0041
Uranus	-82936-03-05 07:40 J	-28570887.22	-28570887.18	-28570887.11	0.0139	0.0135
Saturn	-82935-02-03 15:49 J	-28570552.05	-28570551.84	-28570551.63	0.0277	0.0137
Saturn	-82934-02-15 16:47 J	-28570174.92	-28570174.80	-28570174.65	0.0275	0.0223
Jupiter	-82934-03-22 22:32 J	-28570139.77	-28570139.56	-28570139.36	0.0528	0.0224
Jupiter	-82928-10-01 21:49 J	-28567754.81	-28567754.59	-28567754.37	0.0503	0.0207
Saturn	-82924-06-09 02:08 J	-28566408.49	-28566408.41	-28566408.29	0.0271	0.0248
Saturn	-82923-06-21 17:30 J	-28566030.97	-28566030.77	-28566030.57	0.0274	0.0165
Jupiter	-82922-03-27 16:47 J	-28565752.03	-28565751.80	-28565751.58	0.0526	0.0052
Saturn	-82922-07-04 17:44 J	-28565653.00	-28565652.76	-28565652.51	0.0276	0.0071
Saturn	-82921-07-17 04:18 J	-28565274.57	-28565274.32	-28565274.07	0.0279	0.0032
Saturn	-82920-07-31 00:42 J	-28564895.69	-28564895.47	-28564895.25	0.0282	0.0139
Saturn	-82919-08-14 06:13 J	-28564516.35	-28564516.24	-28564516.10	0.0284	0.0244
Uranus	-82916-06-05 04:32 J	-28563490.37	-28563490.31	-28563490.21	0.0148	0.0140
Jupiter	-82916-10-06 19:54 J	-28563366.75	-28563366.67	-28563366.58	0.0505	0.0467
Uranus	-82915-06-10 11:30 J	-28563120.13	-28563120.02	-28563119.86	0.0148	0.0126

Uranus	-82914-06-15 19:25 J	-28562749.86	-28562749.69	-28562749.52	0.0148	0.0110
Uranus	-82913-06-20 02:52 J	-28562379.56	-28562379.38	-28562379.17	0.0148	0.0095
Uranus	-82912-06-25 11:16 J	-28562009.24	-28562009.03	-28562008.81	0.0148	0.0078
Uranus	-82911-06-30 19:25 J	-28561638.92	-28561638.69	-28561638.45	0.0147	0.0061
Jupiter	-82910-04-01 04:04 J	-28561364.50	-28561364.33	-28561364.14	0.0524	0.0310
Mars	-82910-06-17 14:23 J	-28561287.06	-28561286.90	-28561286.73	0.1582	0.0778
Uranus	-82910-07-06 03:49 J	-28561268.57	-28561268.34	-28561268.08	0.0147	0.0043
Neptune	-82910-09-30 08:23 J	-28561182.24	-28561182.15	-28561181.99	0.0088	0.0078
Saturn	-82910-12-22 15:20 J	-28561099.02	-28561098.86	-28561098.70	0.0288	0.0212
Uranus	-82909-07-10 12:42 J	-28560898.23	-28560897.97	-28560897.72	0.0146	0.0025
Neptune	-82909-10-01 23:16 J	-28560814.73	-28560814.53	-28560814.31	0.0088	0.0054
Saturn	-82908-01-04 01:11 J	-28560720.67	-28560720.45	-28560720.22	0.0285	0.0106
Uranus	-82908-07-15 20:52 J	-28560527.89	-28560527.63	-28560527.37	0.0146	0.0007
Neptune	-82908-10-04 13:11 J	-28560447.19	-28560446.95	-28560446.69	0.0088	0.0031
Saturn	-82907-01-17 00:56 J	-28560342.70	-28560342.46	-28560342.22	0.0283	0.0002
Uranus	-82907-07-21 04:47 J	-28560157.55	-28560157.30	-28560157.03	0.0146	0.0012
Neptune	-82907-10-07 03:35 J	-28560079.61	-28560079.35	-28560079.08	0.0088	0.0007
Saturn	-82906-01-29 14:52 J	-28559965.10	-28559964.88	-28559964.65	0.0280	0.0101
Uranus	-82906-07-26 12:42 J	-28559787.22	-28559786.97	-28559786.71	0.0145	0.0029
Neptune	-82906-10-09 17:30 J	-28559712.02	-28559711.77	-28559711.50	0.0088	0.0016
Saturn	-82905-02-10 20:08 J	-28559587.82	-28559587.66	-28559587.48	0.0277	0.0192
Uranus	-82905-07-30 19:40 J	-28559416.92	-28559416.68	-28559416.43	0.0145	0.0046
Neptune	-82905-10-11 07:11 J	-28559344.41	-28559344.20	-28559343.94	0.0088	0.0040
Saturn	-82904-02-21 18:28 J	-28559210.77	-28559210.73	-28559210.69	0.0274	0.0269
Uranus	-82904-08-05 02:23 J	-28559046.63	-28559046.40	-28559046.17	0.0144	0.0063
Neptune	-82904-10-13 20:52 J	-28558976.79	-28558976.63	-28558976.41	0.0088	0.0063
Uranus	-82903-08-10 07:40 J	-28558676.38	-28558676.18	-28558675.95	0.0143	0.0080
Neptune	-82903-10-16 10:47 J	-28558609.09	-28558609.05	-28558608.95	0.0088	0.0086
Uranus	-82902-08-15 12:42 J	-28558306.15	-28558305.97	-28558305.76	0.0143	0.0095
Uranus	-82901-08-19 16:32 J	-28557935.96	-28557935.81	-28557935.63	0.0142	0.0110

Uranus	-82900-08-24 19:25 J	-28557565.81	-28557565.69	-28557565.55	0.0141	0.0123
Uranus	-82899-08-29 21:20 J	-28557195.67	-28557195.61	-28557195.52	0.0141	0.0135
Saturn	-82894-06-16 14:23 J	-28555444.06	-28555443.90	-28555443.73	0.0272	0.0200
Saturn	-82893-06-28 10:18 J	-28555066.30	-28555066.07	-28555065.84	0.0275	0.0111
Saturn	-82892-07-11 15:20 J	-28554688.11	-28554687.86	-28554687.61	0.0277	0.0012
Saturn	-82891-07-25 06:42 J	-28554309.46	-28554309.22	-28554308.98	0.0280	0.0095
Saturn	-82890-08-08 07:54 J	-28553930.35	-28553930.17	-28553930.00	0.0283	0.0202
Saturn	-82881-12-15 18:56 J	-28550512.81	-28550512.71	-28550512.60	0.0289	0.0259
Saturn	-82880-12-29 09:20 J	-28550134.31	-28550134.11	-28550133.90	0.0286	0.0155
Saturn	-82878-01-11 13:25 J	-28549756.17	-28549755.94	-28549755.70	0.0283	0.0049
Saturn	-82877-01-24 07:25 J	-28549378.43	-28549378.19	-28549377.96	0.0280	0.0055
Saturn	-82876-02-04 16:04 J	-28549001.02	-28549000.83	-28549000.62	0.0277	0.0151
Saturn	-82875-02-16 17:30 J	-28548623.89	-28548623.77	-28548623.65	0.0275	0.0234
Uranus	-82875-12-10 17:44 J	-28548326.79	-28548326.76	-28548326.67	0.0131	0.0127
Uranus	-82874-12-14 21:06 J	-28547957.73	-28547957.62	-28547957.51	0.0131	0.0116
Uranus	-82873-12-17 23:01 J	-28547588.67	-28547588.54	-28547588.38	0.0131	0.0106
Uranus	-82872-12-22 01:11 J	-28547219.61	-28547219.45	-28547219.27	0.0131	0.0095
Uranus	-82871-12-26 03:06 J	-28546850.55	-28546850.37	-28546850.17	0.0131	0.0084
Uranus	-82870-12-30 04:47 J	-28546481.51	-28546481.30	-28546481.09	0.0131	0.0073
Jupiter	-82869-09-21 15:49 J	-28546215.03	-28546214.84	-28546214.65	0.0499	0.0309
Uranus	-82868-01-02 06:13 J	-28546112.45	-28546112.24	-28546112.01	0.0131	0.0061
Uranus	-82867-01-06 07:54 J	-28545743.40	-28545743.17	-28545742.93	0.0132	0.0049
Uranus	-82866-01-10 09:35 J	-28545374.33	-28545374.10	-28545373.85	0.0132	0.0037
Uranus	-82865-01-14 11:16 J	-28545005.27	-28545005.03	-28545004.77	0.0132	0.0025
Saturn	-82865-06-10 00:56 J	-28544857.57	-28544857.46	-28544857.33	0.0271	0.0235
Uranus	-82864-01-17 13:25 J	-28544636.19	-28544635.94	-28544635.69	0.0133	0.0011
Saturn	-82864-06-22 16:04 J	-28544480.03	-28544479.83	-28544479.62	0.0273	0.0152
Uranus	-82863-01-21 15:35 J	-28544267.10	-28544266.85	-28544266.60	0.0133	0.0002
Jupiter	-82863-03-17 12:56 J	-28544211.99	-28544211.96	-28544211.92	0.0530	0.0523
Mars	-82863-06-11 22:18 J	-28544125.75	-28544125.57	-28544125.39	0.1579	0.0562

Saturn	-82863-07-05 16:18 J	-28544102.06	-28544101.82	-28544101.57	0.0276	0.0057
Uranus	-82862-01-25 17:59 J	-28543898.00	-28543897.75	-28543897.50	0.0133	0.0015
Saturn	-82862-07-19 02:52 J	-28543723.63	-28543723.38	-28543723.13	0.0279	0.0046
Uranus	-82861-01-29 20:23 J	-28543528.89	-28543528.65	-28543528.41	0.0134	0.0028
Saturn	-82861-07-31 23:01 J	-28543344.74	-28543344.54	-28543344.31	0.0282	0.0153
Uranus	-82860-02-01 23:16 J	-28543159.76	-28543159.53	-28543159.29	0.0134	0.0041
Saturn	-82860-08-15 05:01 J	-28542965.39	-28542965.29	-28542965.17	0.0284	0.0256
Uranus	-82859-02-06 02:23 J	-28542790.61	-28542790.40	-28542790.16	0.0135	0.0055
Uranus	-82858-02-10 06:13 J	-28542421.44	-28542421.24	-28542421.01	0.0135	0.0068
Uranus	-82857-02-14 10:47 J	-28542052.24	-28542052.05	-28542051.85	0.0136	0.0080
Jupiter	-82857-09-26 12:56 J	-28541827.20	-28541826.96	-28541826.72	0.0501	0.0056
Uranus	-82856-02-17 16:04 J	-28541683.01	-28541682.83	-28541682.65	0.0136	0.0093
Uranus	-82855-02-21 21:35 J	-28541313.75	-28541313.60	-28541313.43	0.0137	0.0105
Uranus	-82854-02-26 04:04 J	-28540944.44	-28540944.33	-28540944.18	0.0138	0.0118
Uranus	-82853-03-01 11:30 J	-28540575.09	-28540575.02	-28540574.91	0.0138	0.0129
Jupiter	-82851-03-22 02:23 J	-28539824.60	-28539824.40	-28539824.20	0.0528	0.0258
Saturn	-82851-12-23 14:23 J	-28539548.06	-28539547.90	-28539547.72	0.0288	0.0200
Saturn	-82849-01-06 00:28 J	-28539169.70	-28539169.48	-28539169.25	0.0285	0.0092
Saturn	-82848-01-18 00:13 J	-28538791.73	-28538791.49	-28538791.25	0.0283	0.0015
Saturn	-82847-01-30 14:08 J	-28538414.13	-28538413.91	-28538413.69	0.0280	0.0115
Saturn	-82846-02-11 19:25 J	-28538036.84	-28538036.69	-28538036.52	0.0277	0.0204
Jupiter	-82845-10-01 09:20 J	-28537439.32	-28537439.11	-28537438.88	0.0502	0.0198
Jupiter	-82839-03-26 18:56 J	-28535436.94	-28535436.71	-28535436.48	0.0526	0.0014
Saturn	-82836-06-05 02:52 J	-28534270.40	-28534270.38	-28534270.33	0.0270	0.0266
Saturn	-82835-06-17 13:40 J	-28533893.10	-28533892.93	-28533892.74	0.0272	0.0188
Saturn	-82834-06-30 09:35 J	-28533515.33	-28533515.10	-28533514.87	0.0274	0.0098
Saturn	-82833-07-12 14:52 J	-28533137.13	-28533136.88	-28533136.63	0.0277	0.0004
Jupiter	-82833-10-06 02:52 J	-28533051.49	-28533051.38	-28533051.27	0.0504	0.0446
Uranus	-82832-06-05 14:37 J	-28532808.96	-28532808.89	-28532808.79	0.0148	0.0139
Saturn	-82832-07-26 06:13 J	-28532758.46	-28532758.24	-28532758.00	0.0280	0.0109

Uranus -82831-06-10 21:35 J -28532438.72 -28532438.60 -28532438.45 0.0148 0.0124
 Mars -82831-06-19 15:35 J -28532429.94 -28532429.85 -28532429.77 0.1583 0.1391
 Pluto -82831-07-16 07:40 J -28532403.29 -28532403.18 -28532403.03 0.0066 0.0058
 Saturn -82831-08-09 07:25 J -28532379.35 -28532379.19 -28532379.02 0.0283 0.0214
 Uranus -82830-06-16 04:47 J -28532068.45 -28532068.30 -28532068.11 0.0148 0.0109
 Pluto -82830-07-17 23:44 J -28532036.72 -28532036.51 -28532036.30 0.0067 0.0040
 Uranus -82829-06-20 13:11 J -28531698.15 -28531697.95 -28531697.75 0.0148 0.0092
 Uranus -82828-06-25 20:52 J -28531327.83 -28531327.63 -28531327.39 0.0148 0.0076
 Neptune -82827-03-28 12:28 J -28531052.11 -28531051.98 -28531051.82 0.0089 0.0072
 Jupiter -82827-03-31 13:25 J -28531049.13 -28531048.94 -28531048.75 0.0525 0.0289
 Uranus -82827-07-01 05:44 J -28530957.49 -28530957.26 -28530957.02 0.0147 0.0057
 Neptune -82826-03-30 21:35 J -28530684.80 -28530684.60 -28530684.38 0.0089 0.0050
 Uranus -82826-07-06 14:23 J -28530587.14 -28530586.90 -28530586.65 0.0147 0.0039
 Neptune -82825-04-01 06:42 J -28530317.44 -28530317.22 -28530316.97 0.0089 0.0028
 Uranus -82825-07-10 23:01 J -28530216.79 -28530216.54 -28530216.28 0.0147 0.0021
 Neptune -82824-04-03 16:04 J -28529950.08 -28529949.83 -28529949.57 0.0089 0.0006
 Uranus -82824-07-16 07:40 J -28529846.44 -28529846.18 -28529845.92 0.0146 0.0003
 Neptune -82823-04-06 01:11 J -28529582.69 -28529582.45 -28529582.20 0.0089 0.0017
 Uranus -82823-07-21 15:49 J -28529476.10 -28529475.84 -28529475.58 0.0146 0.0016
 Neptune -82822-04-08 10:32 J -28529215.28 -28529215.06 -28529214.83 0.0089 0.0039
 Uranus -82822-07-26 23:44 J -28529105.76 -28529105.51 -28529105.25 0.0145 0.0034
 Saturn -82822-12-17 18:56 J -28528961.83 -28528961.71 -28528961.58 0.0289 0.0246
 Neptune -82821-04-09 19:25 J -28528847.85 -28528847.69 -28528847.49 0.0089 0.0062
 Uranus -82821-07-31 06:56 J -28528735.45 -28528735.21 -28528734.96 0.0145 0.0052
 Saturn -82821-12-30 09:20 J -28528583.31 -28528583.11 -28528582.89 0.0286 0.0141
 Neptune -82820-04-12 04:47 J -28528480.36 -28528480.30 -28528480.20 0.0089 0.0084
 Uranus -82820-08-05 13:40 J -28528365.16 -28528364.93 -28528364.70 0.0144 0.0069
 Saturn -82819-01-12 13:40 J -28528205.17 -28528204.93 -28528204.69 0.0283 0.0034
 Uranus -82819-08-10 18:56 J -28527994.90 -28527994.71 -28527994.48 0.0143 0.0086
 Saturn -82818-01-25 07:40 J -28527827.41 -28527827.18 -28527826.95 0.0280 0.0069

Uranus	-82818-08-15 23:59 J	-28527624.66	-28527624.50	-28527624.29	0.0143	0.0101
Saturn	-82817-02-06 16:18 J	-28527450.00	-28527449.82	-28527449.61	0.0277	0.0164
Uranus	-82817-08-20 03:49 J	-28527254.47	-28527254.34	-28527254.16	0.0142	0.0116
Saturn	-82816-02-17 17:30 J	-28527072.87	-28527072.77	-28527072.66	0.0275	0.0246
Uranus	-82816-08-25 06:56 J	-28526884.29	-28526884.21	-28526884.08	0.0142	0.0129
Uranus	-82815-08-30 09:20 J	-28526514.11	-28526514.11	-28526514.08	0.0141	0.0141
Saturn	-82806-06-12 01:11 J	-28523306.57	-28523306.45	-28523306.30	0.0271	0.0224
Saturn	-82805-06-23 16:18 J	-28522929.03	-28522928.82	-28522928.60	0.0273	0.0138
Saturn	-82804-07-06 16:18 J	-28522551.06	-28522550.82	-28522550.57	0.0276	0.0043
Saturn	-82803-07-20 02:37 J	-28522172.63	-28522172.39	-28522172.14	0.0279	0.0060
Saturn	-82802-08-02 23:01 J	-28521793.74	-28521793.54	-28521793.33	0.0282	0.0166
Saturn	-82801-08-16 04:47 J	-28521414.37	-28521414.30	-28521414.21	0.0284	0.0269
Mars	-82793-12-19 04:32 J	-28518367.50	-28518367.31	-28518367.11	0.1961	0.0556
Saturn	-82792-12-24 13:40 J	-28517997.11	-28517996.93	-28517996.74	0.0288	0.0187
Uranus	-82791-12-11 08:23 J	-28517645.21	-28517645.15	-28517645.07	0.0131	0.0125
Saturn	-82790-01-06 23:59 J	-28517618.73	-28517618.50	-28517618.27	0.0286	0.0079
Uranus	-82790-12-15 10:47 J	-28517276.15	-28517276.05	-28517275.92	0.0131	0.0115
Saturn	-82789-01-19 23:30 J	-28517240.76	-28517240.52	-28517240.28	0.0283	0.0028
Uranus	-82789-12-18 13:11 J	-28516907.09	-28516906.95	-28516906.78	0.0131	0.0104
Saturn	-82788-01-31 13:25 J	-28516863.15	-28516862.94	-28516862.72	0.0280	0.0128
Uranus	-82788-12-22 15:20 J	-28516538.02	-28516537.86	-28516537.67	0.0131	0.0093
Saturn	-82787-02-12 18:56 J	-28516485.85	-28516485.71	-28516485.55	0.0277	0.0216
Uranus	-82787-12-26 17:01 J	-28516168.96	-28516168.79	-28516168.57	0.0131	0.0083
Jupiter	-82786-09-22 03:35 J	-28515899.53	-28515899.35	-28515899.16	0.0499	0.0318
Uranus	-82786-12-30 18:56 J	-28515799.91	-28515799.71	-28515799.49	0.0131	0.0070
Uranus	-82784-01-02 20:52 J	-28515430.86	-28515430.63	-28515430.41	0.0131	0.0058
Mars	-82784-06-13 22:47 J	-28515268.74	-28515268.55	-28515268.36	0.1580	0.0046
Uranus	-82783-01-06 22:04 J	-28515061.80	-28515061.58	-28515061.33	0.0132	0.0046
Uranus	-82782-01-10 23:59 J	-28514692.73	-28514692.50	-28514692.25	0.0132	0.0033
Uranus	-82781-01-15 01:40 J	-28514323.67	-28514323.43	-28514323.18	0.0132	0.0020

Uranus	-82780-01-18 03:49 J	-28513954.59	-28513954.34	-28513954.09	0.0133	0.0007
Uranus	-82779-01-22 05:44 J	-28513585.51	-28513585.26	-28513585.01	0.0133	0.0007
Uranus	-82778-01-26 07:54 J	-28513216.41	-28513216.17	-28513215.92	0.0133	0.0020
Uranus	-82777-01-30 10:18 J	-28512847.31	-28512847.07	-28512846.83	0.0134	0.0033
Saturn	-82777-06-06 04:04 J	-28512719.40	-28512719.33	-28512719.25	0.0270	0.0255
Uranus	-82776-02-02 13:11 J	-28512478.18	-28512477.95	-28512477.72	0.0134	0.0046
Saturn	-82776-06-18 14:37 J	-28512342.07	-28512341.89	-28512341.69	0.0272	0.0176
Uranus	-82775-02-06 16:04 J	-28512109.04	-28512108.83	-28512108.60	0.0135	0.0060
Saturn	-82775-07-01 10:32 J	-28511964.29	-28511964.06	-28511963.82	0.0274	0.0084
Uranus	-82774-02-10 19:54 J	-28511739.87	-28511739.67	-28511739.45	0.0135	0.0073
Saturn	-82774-07-14 16:18 J	-28511586.07	-28511585.82	-28511585.57	0.0277	0.0016
Jupiter	-82774-09-26 19:54 J	-28511511.90	-28511511.67	-28511511.43	0.0500	0.0074
Uranus	-82773-02-14 23:59 J	-28511370.67	-28511370.50	-28511370.29	0.0136	0.0086
Saturn	-82773-07-27 07:54 J	-28511207.39	-28511207.17	-28511206.94	0.0280	0.0122
Uranus	-82772-02-18 05:16 J	-28511001.44	-28511001.28	-28511001.10	0.0136	0.0099
Saturn	-82772-08-10 09:06 J	-28510828.26	-28510828.12	-28510827.96	0.0283	0.0227
Uranus	-82771-02-22 11:01 J	-28510632.17	-28510632.04	-28510631.88	0.0137	0.0111
Uranus	-82770-02-26 17:59 J	-28510262.86	-28510262.75	-28510262.64	0.0137	0.0123
Uranus	-82769-03-02 00:56 J	-28509893.49	-28509893.46	-28509893.39	0.0138	0.0135
Jupiter	-82768-03-21 09:35 J	-28509509.29	-28509509.10	-28509508.91	0.0529	0.0282
Saturn	-82763-12-18 20:52 J	-28507410.77	-28507410.63	-28507410.49	0.0289	0.0233
Jupiter	-82762-10-01 14:23 J	-28507124.12	-28507123.90	-28507123.67	0.0502	0.0175
Saturn	-82761-01-01 10:47 J	-28507032.26	-28507032.05	-28507031.82	0.0286	0.0128
Saturn	-82760-01-13 14:52 J	-28506654.12	-28506653.88	-28506653.64	0.0283	0.0020
Saturn	-82759-01-26 09:06 J	-28506276.35	-28506276.12	-28506275.90	0.0280	0.0083
Saturn	-82758-02-07 17:59 J	-28505898.94	-28505898.75	-28505898.57	0.0277	0.0176
Saturn	-82757-02-19 18:28 J	-28505521.80	-28505521.73	-28505521.64	0.0275	0.0257
Jupiter	-82756-03-26 05:44 J	-28505121.49	-28505121.26	-28505121.03	0.0527	0.0001
Jupiter	-82750-10-06 10:04 J	-28502736.21	-28502736.08	-28502735.96	0.0504	0.0426
Uranus	-82748-06-06 01:54 J	-28502127.49	-28502127.42	-28502127.31	0.0148	0.0138

Uranus -82747-06-11 08:52 J -28501757.26 -28501757.13 -28501756.98 0.0148 0.0123
 Saturn -82747-06-13 03:49 J -28501755.49 -28501755.34 -28501755.18 0.0271 0.0211
 Uranus -82746-06-16 16:04 J -28501386.99 -28501386.83 -28501386.64 0.0148 0.0107
 Saturn -82746-06-25 18:56 J -28501377.93 -28501377.71 -28501377.49 0.0273 0.0125
 Uranus -82745-06-21 00:13 J -28501016.69 -28501016.49 -28501016.28 0.0148 0.0090
 Saturn -82745-07-07 19:11 J -28500999.95 -28500999.70 -28500999.45 0.0276 0.0028
 Neptune -82745-10-01 00:13 J -28500914.66 -28500914.49 -28500914.31 0.0088 0.0066
 Pluto -82744-01-20 05:44 J -28500803.40 -28500803.26 -28500803.09 0.0079 0.0062
 Jupiter -82744-03-30 23:59 J -28500733.69 -28500733.50 -28500733.30 0.0525 0.0271
 Uranus -82744-06-26 08:08 J -28500646.37 -28500646.16 -28500645.92 0.0148 0.0073
 Saturn -82744-07-21 05:16 J -28500621.52 -28500621.28 -28500621.03 0.0279 0.0075
 Neptune -82744-10-03 14:08 J -28500547.12 -28500546.91 -28500546.66 0.0088 0.0043
 Uranus -82743-07-01 16:47 J -28500276.03 -28500275.80 -28500275.55 0.0147 0.0055
 Saturn -82743-08-04 01:54 J -28500242.61 -28500242.42 -28500242.23 0.0282 0.0180
 Neptune -82743-10-06 04:18 J -28500179.56 -28500179.32 -28500179.04 0.0088 0.0021
 Uranus -82742-07-07 01:40 J -28499905.67 -28499905.43 -28499905.17 0.0147 0.0036
 Saturn -82742-08-18 07:40 J -28499863.20 -28499863.18 -28499863.13 0.0284 0.0282
 Neptune -82742-10-08 18:42 J -28499811.98 -28499811.72 -28499811.45 0.0088 0.0004
 Uranus -82741-07-11 10:32 J -28499535.31 -28499535.06 -28499534.80 0.0147 0.0017
 Neptune -82741-10-10 08:37 J -28499444.39 -28499444.14 -28499443.88 0.0088 0.0026
 Uranus -82740-07-16 19:11 J -28499164.96 -28499164.70 -28499164.44 0.0146 0.0002
 Neptune -82740-10-12 22:18 J -28499076.77 -28499076.57 -28499076.33 0.0088 0.0050
 Uranus -82739-07-22 03:20 J -28498794.61 -28498794.36 -28498794.10 0.0146 0.0021
 Neptune -82739-10-15 12:13 J -28498709.12 -28498708.99 -28498708.82 0.0088 0.0072
 Uranus -82738-07-27 11:16 J -28498424.27 -28498424.03 -28498423.77 0.0145 0.0039
 Mars -82737-06-08 08:08 J -28498107.26 -28498107.16 -28498107.05 0.1579 0.1288
 Uranus -82737-07-31 18:13 J -28498053.97 -28498053.74 -28498053.49 0.0145 0.0058
 Uranus -82736-08-06 00:56 J -28497683.67 -28497683.46 -28497683.22 0.0144 0.0075
 Uranus -82735-08-11 06:28 J -28497313.41 -28497313.23 -28497313.00 0.0144 0.0092
 Uranus -82734-08-16 11:44 J -28496943.16 -28496943.01 -28496942.82 0.0143 0.0107

Saturn	-82734-12-12 17:59 J	-28496824.81	-28496824.75	-28496824.68	0.0290	0.0280
Uranus	-82733-08-20 15:49 J	-28496572.96	-28496572.84	-28496572.68	0.0142	0.0122
Saturn	-82733-12-25 14:08 J	-28496446.09	-28496445.91	-28496445.71	0.0288	0.0175
Uranus	-82732-08-25 18:56 J	-28496202.77	-28496202.71	-28496202.61	0.0142	0.0135
Saturn	-82731-01-08 00:13 J	-28496067.72	-28496067.49	-28496067.25	0.0286	0.0066
Saturn	-82730-01-20 23:44 J	-28495689.75	-28495689.51	-28495689.27	0.0283	0.0041
Saturn	-82729-02-02 13:40 J	-28495312.13	-28495311.93	-28495311.72	0.0280	0.0140
Saturn	-82728-02-13 19:25 J	-28494934.82	-28494934.69	-28494934.55	0.0277	0.0227
Saturn	-82718-06-08 06:56 J	-28491168.30	-28491168.21	-28491168.10	0.0270	0.0244
Saturn	-82717-06-19 18:13 J	-28490790.93	-28490790.74	-28490790.54	0.0272	0.0163
Saturn	-82716-07-02 14:23 J	-28490413.14	-28490412.90	-28490412.66	0.0274	0.0070
Saturn	-82715-07-15 20:08 J	-28490034.90	-28490034.66	-28490034.40	0.0277	0.0031
Saturn	-82714-07-29 11:59 J	-28489656.21	-28489656.00	-28489655.77	0.0280	0.0136
Mars	-82714-12-24 03:49 J	-28489508.47	-28489508.34	-28489508.21	0.1960	0.1472
Saturn	-82713-08-11 13:25 J	-28489277.06	-28489276.94	-28489276.80	0.0283	0.0240
Uranus	-82707-12-11 23:01 J	-28486963.62	-28486963.54	-28486963.46	0.0131	0.0124
Uranus	-82706-12-16 01:11 J	-28486594.55	-28486594.45	-28486594.30	0.0131	0.0114
Mars	-82705-06-15 23:16 J	-28486411.70	-28486411.53	-28486411.35	0.1580	0.0627
Uranus	-82705-12-19 03:49 J	-28486225.48	-28486225.34	-28486225.17	0.0131	0.0103
Saturn	-82704-12-19 23:16 J	-28485859.67	-28485859.53	-28485859.36	0.0289	0.0220
Uranus	-82704-12-23 05:59 J	-28485856.41	-28485856.25	-28485856.05	0.0131	0.0091
Jupiter	-82703-09-21 07:54 J	-28485584.34	-28485584.17	-28485583.99	0.0498	0.0339
Uranus	-82703-12-27 08:23 J	-28485487.35	-28485487.15	-28485486.95	0.0131	0.0079
Saturn	-82702-01-02 13:40 J	-28485481.15	-28485480.93	-28485480.71	0.0286	0.0113
Uranus	-82702-12-31 09:49 J	-28485118.30	-28485118.09	-28485117.87	0.0131	0.0067
Saturn	-82701-01-15 17:16 J	-28485103.02	-28485102.78	-28485102.54	0.0284	0.0005
Uranus	-82700-01-03 11:59 J	-28484749.23	-28484749.00	-28484748.78	0.0131	0.0055
Saturn	-82700-01-27 11:01 J	-28484725.26	-28484725.04	-28484724.81	0.0281	0.0097
Uranus	-82699-01-07 13:11 J	-28484380.17	-28484379.95	-28484379.70	0.0132	0.0043
Saturn	-82699-02-08 19:54 J	-28484347.84	-28484347.67	-28484347.49	0.0278	0.0189

Uranus	-82698-01-11 15:20 J	-28484011.10	-28484010.86	-28484010.61	0.0132	0.0029
Saturn	-82698-02-20 20:52 J	-28483970.67	-28483970.63	-28483970.57	0.0275	0.0268
Uranus	-82697-01-15 17:01 J	-28483642.04	-28483641.79	-28483641.54	0.0132	0.0016
Uranus	-82696-01-18 18:56 J	-28483272.96	-28483272.71	-28483272.46	0.0133	0.0003
Uranus	-82695-01-22 20:37 J	-28482903.88	-28482903.64	-28482903.39	0.0133	0.0011
Uranus	-82694-01-26 23:01 J	-28482534.79	-28482534.54	-28482534.30	0.0133	0.0025
Uranus	-82693-01-31 01:11 J	-28482165.69	-28482165.45	-28482165.21	0.0134	0.0038
Uranus	-82692-02-03 04:04 J	-28481796.56	-28481796.33	-28481796.10	0.0134	0.0051
Uranus	-82691-02-07 07:11 J	-28481427.41	-28481427.20	-28481426.98	0.0135	0.0065
Jupiter	-82691-09-26 01:25 J	-28481196.67	-28481196.44	-28481196.20	0.0500	0.0095
Uranus	-82690-02-11 10:47 J	-28481058.24	-28481058.05	-28481057.84	0.0135	0.0078
Uranus	-82689-02-15 15:06 J	-28480689.04	-28480688.87	-28480688.68	0.0136	0.0091
Uranus	-82688-02-18 20:23 J	-28480319.80	-28480319.65	-28480319.48	0.0136	0.0104
Saturn	-82688-06-14 08:37 J	-28480204.30	-28480204.14	-28480203.97	0.0271	0.0198
Uranus	-82687-02-23 01:40 J	-28479950.53	-28479950.43	-28479950.28	0.0137	0.0117
Saturn	-82687-06-26 23:44 J	-28479826.73	-28479826.51	-28479826.28	0.0273	0.0111
Uranus	-82686-02-27 08:37 J	-28479581.21	-28479581.14	-28479581.04	0.0137	0.0129
Saturn	-82686-07-10 00:28 J	-28479448.73	-28479448.48	-28479448.23	0.0276	0.0013
Jupiter	-82685-03-20 19:11 J	-28479193.88	-28479193.70	-28479193.51	0.0529	0.0301
Saturn	-82685-07-22 11:01 J	-28479070.28	-28479070.04	-28479069.80	0.0279	0.0090
Saturn	-82684-08-05 07:25 J	-28478691.36	-28478691.19	-28478691.00	0.0282	0.0195
Jupiter	-82679-09-30 22:32 J	-28476808.79	-28476808.56	-28476808.33	0.0502	0.0157
Saturn	-82675-12-13 21:49 J	-28475273.67	-28475273.59	-28475273.49	0.0290	0.0268
Saturn	-82674-12-27 17:30 J	-28474894.96	-28474894.77	-28474894.56	0.0288	0.0162
Jupiter	-82673-03-25 08:52 J	-28474806.35	-28474806.13	-28474805.90	0.0527	0.0037
Saturn	-82672-01-09 03:06 J	-28474516.61	-28474516.37	-28474516.13	0.0285	0.0052
Saturn	-82671-01-22 02:23 J	-28474138.63	-28474138.40	-28474138.16	0.0283	0.0055
Saturn	-82670-02-03 16:04 J	-28473761.02	-28473760.83	-28473760.62	0.0280	0.0153
Saturn	-82669-02-15 21:20 J	-28473383.71	-28473383.61	-28473383.48	0.0277	0.0239
Jupiter	-82667-10-05 18:28 J	-28472420.86	-28472420.73	-28472420.59	0.0504	0.0410

Uranus -82664-06-06 12:28 J -28471446.06 -28471445.98 -28471445.87 0.0148 0.0137
 Neptune -82663-03-27 18:42 J -28471151.78 -28471151.72 -28471151.62 0.0089 0.0084
 Uranus -82663-06-11 19:25 J -28471075.83 -28471075.69 -28471075.54 0.0148 0.0121
 Neptune -82662-03-30 03:49 J -28470784.49 -28470784.34 -28470784.13 0.0089 0.0062
 Uranus -82662-06-17 02:23 J -28470705.56 -28470705.40 -28470705.20 0.0148 0.0105
 Jupiter -82661-03-30 00:13 J -28470418.69 -28470418.49 -28470418.28 0.0525 0.0229
 Neptune -82661-03-31 13:11 J -28470417.16 -28470416.95 -28470416.71 0.0089 0.0040
 Uranus -82661-06-21 10:18 J -28470335.26 -28470335.07 -28470334.85 0.0148 0.0088
 Neptune -82660-04-02 22:47 J -28470049.79 -28470049.55 -28470049.30 0.0089 0.0017
 Uranus -82660-06-26 18:28 J -28469964.94 -28469964.73 -28469964.49 0.0147 0.0070
 Neptune -82659-04-05 08:08 J -28469682.41 -28469682.16 -28469681.91 0.0089 0.0005
 Saturn -82659-06-09 12:28 J -28469617.11 -28469616.98 -28469616.86 0.0270 0.0232
 Uranus -82659-07-02 03:06 J -28469594.60 -28469594.37 -28469594.11 0.0147 0.0051
 Neptune -82658-04-07 17:16 J -28469315.01 -28469314.78 -28469314.53 0.0089 0.0027
 Mars -82658-06-11 08:37 J -28469250.31 -28469250.14 -28469249.97 0.1578 0.0705
 Saturn -82658-06-21 23:59 J -28469239.70 -28469239.50 -28469239.29 0.0272 0.0150
 Uranus -82658-07-07 11:59 J -28469224.25 -28469224.00 -28469223.74 0.0147 0.0032
 Neptune -82657-04-09 02:37 J -28468947.59 -28468947.39 -28468947.17 0.0089 0.0049
 Saturn -82657-07-03 20:37 J -28468861.88 -28468861.64 -28468861.39 0.0274 0.0056
 Uranus -82657-07-11 20:37 J -28468853.90 -28468853.64 -28468853.38 0.0147 0.0013
 Neptune -82656-04-11 11:30 J -28468580.14 -28468580.02 -28468579.84 0.0089 0.0072
 Saturn -82656-07-17 03:06 J -28468483.62 -28468483.37 -28468483.12 0.0277 0.0045
 Uranus -82656-07-17 05:16 J -28468483.54 -28468483.28 -28468483.02 0.0146 0.0007 *
 Uranus -82655-07-22 13:11 J -28468113.20 -28468112.95 -28468112.69 0.0146 0.0026
 Saturn -82655-07-30 19:11 J -28468104.90 -28468104.70 -28468104.48 0.0280 0.0151
 Uranus -82654-07-27 21:06 J -28467742.86 -28467742.62 -28467742.37 0.0145 0.0044
 Saturn -82654-08-13 21:20 J -28467725.71 -28467725.61 -28467725.49 0.0283 0.0253
 Uranus -82653-08-01 04:04 J -28467372.55 -28467372.33 -28467372.08 0.0145 0.0063
 Uranus -82652-08-06 10:32 J -28467002.26 -28467002.06 -28467001.83 0.0144 0.0080
 Uranus -82651-08-11 16:32 J -28466631.99 -28466631.81 -28466631.61 0.0144 0.0097

Uranus	-82650-08-16 21:35 J	-28466261.74	-28466261.60	-28466261.42	0.0143	0.0112
Jupiter	-82649-04-03 16:32 J	-28466030.87	-28466030.81	-28466030.73	0.0524	0.0496
Uranus	-82649-08-21 01:54 J	-28465891.53	-28465891.42	-28465891.29	0.0142	0.0127
Uranus	-82648-08-26 05:30 J	-28465521.30	-28465521.27	-28465521.23	0.0142	0.0140
Saturn	-82645-12-21 05:01 J	-28464308.45	-28464308.29	-28464308.12	0.0289	0.0206
Saturn	-82643-01-03 18:28 J	-28463929.95	-28463929.73	-28463929.50	0.0286	0.0099
Saturn	-82642-01-16 21:49 J	-28463551.83	-28463551.59	-28463551.35	0.0284	0.0010
Saturn	-82641-01-29 15:06 J	-28463174.09	-28463173.87	-28463173.65	0.0281	0.0110
Saturn	-82640-02-09 23:44 J	-28462796.67	-28462796.51	-28462796.34	0.0278	0.0201
Saturn	-82630-06-04 08:37 J	-28459030.18	-28459030.14	-28459030.08	0.0269	0.0263
Saturn	-82629-06-15 16:04 J	-28458653.00	-28458652.83	-28458652.64	0.0271	0.0186
Saturn	-82628-06-28 08:08 J	-28458275.40	-28458275.16	-28458274.93	0.0273	0.0096
Saturn	-82627-07-11 09:20 J	-28457897.36	-28457897.11	-28457896.86	0.0276	0.0004
Mars	-82626-06-18 23:44 J	-28457554.63	-28457554.51	-28457554.39	0.1581	0.1225
Saturn	-82626-07-24 20:08 J	-28457518.88	-28457518.66	-28457518.42	0.0279	0.0106
Saturn	-82625-08-06 17:16 J	-28457139.95	-28457139.78	-28457139.61	0.0282	0.0209
Uranus	-82623-12-12 12:42 J	-28456282.04	-28456281.97	-28456281.87	0.0131	0.0123
Uranus	-82622-12-16 15:20 J	-28455912.97	-28455912.86	-28455912.71	0.0131	0.0112
Uranus	-82621-12-19 17:59 J	-28455543.89	-28455543.75	-28455543.57	0.0131	0.0101
Jupiter	-82620-09-20 13:25 J	-28455269.09	-28455268.94	-28455268.76	0.0498	0.0359
Uranus	-82620-12-23 20:23 J	-28455174.82	-28455174.65	-28455174.45	0.0131	0.0089
Uranus	-82619-12-27 22:18 J	-28454805.75	-28454805.57	-28454805.34	0.0131	0.0078
Uranus	-82617-01-01 00:28 J	-28454436.69	-28454436.48	-28454436.25	0.0131	0.0065
Uranus	-82616-01-04 02:37 J	-28454067.62	-28454067.39	-28454067.15	0.0131	0.0052
Saturn	-82616-12-15 04:04 J	-28453722.44	-28453722.33	-28453722.21	0.0290	0.0254
Uranus	-82615-01-08 04:18 J	-28453698.55	-28453698.32	-28453698.07	0.0132	0.0039
Saturn	-82615-12-28 23:01 J	-28453343.74	-28453343.54	-28453343.33	0.0288	0.0148
Uranus	-82614-01-12 06:28 J	-28453329.48	-28453329.23	-28453328.99	0.0132	0.0025
Saturn	-82613-01-11 07:54 J	-28452965.41	-28452965.17	-28452964.93	0.0285	0.0038
Uranus	-82613-01-16 07:54 J	-28452960.42	-28452960.17	-28452959.92	0.0132	0.0012

Uranus	-82612-01-19 09:49 J	-28452591.34	-28452591.09	-28452590.84	0.0133	0.0003
Saturn	-82612-01-23 06:42 J	-28452587.45	-28452587.22	-28452586.98	0.0283	0.0068
Uranus	-82611-01-23 11:44 J	-28452222.26	-28452222.01	-28452221.76	0.0133	0.0016
Saturn	-82611-02-04 20:08 J	-28452209.85	-28452209.66	-28452209.46	0.0280	0.0165
Uranus	-82610-01-27 13:54 J	-28451853.16	-28451852.92	-28451852.68	0.0133	0.0029
Saturn	-82610-02-17 00:56 J	-28451832.55	-28451832.46	-28451832.34	0.0277	0.0250
Uranus	-82609-01-31 16:18 J	-28451484.05	-28451483.82	-28451483.59	0.0134	0.0043
Uranus	-82608-02-03 18:56 J	-28451114.92	-28451114.71	-28451114.47	0.0134	0.0057
Jupiter	-82608-09-25 08:08 J	-28450881.39	-28450881.16	-28450880.92	0.0500	0.0114
Uranus	-82607-02-07 22:04 J	-28450745.77	-28450745.58	-28450745.35	0.0135	0.0071
Uranus	-82606-02-12 02:23 J	-28450376.59	-28450376.40	-28450376.20	0.0135	0.0084
Uranus	-82605-02-16 06:28 J	-28450007.39	-28450007.23	-28450007.04	0.0136	0.0097
Uranus	-82604-02-19 11:30 J	-28449638.14	-28449638.02	-28449637.85	0.0136	0.0111
Uranus	-82603-02-23 17:30 J	-28449268.86	-28449268.77	-28449268.64	0.0137	0.0123
Uranus	-82602-02-28 00:28 J	-28448899.52	-28448899.48	-28448899.43	0.0137	0.0135
Jupiter	-82602-03-20 18:28 J	-28448878.89	-28448878.73	-28448878.55	0.0529	0.0344
Saturn	-82600-06-10 19:40 J	-28448065.82	-28448065.68	-28448065.53	0.0270	0.0220
Saturn	-82599-06-23 07:54 J	-28447688.37	-28447688.17	-28447687.94	0.0272	0.0137
Saturn	-82598-07-06 05:30 J	-28447310.51	-28447310.27	-28447310.02	0.0275	0.0041
Saturn	-82597-07-18 12:28 J	-28446932.22	-28446931.98	-28446931.73	0.0277	0.0061
Saturn	-82596-08-01 05:16 J	-28446553.48	-28446553.28	-28446553.07	0.0280	0.0165
Jupiter	-82596-09-30 00:42 J	-28446493.71	-28446493.47	-28446493.24	0.0501	0.0131
Saturn	-82595-08-15 08:08 J	-28446174.24	-28446174.16	-28446174.07	0.0283	0.0267
Jupiter	-82590-03-25 11:01 J	-28444491.26	-28444491.04	-28444490.81	0.0528	0.0073
Saturn	-82586-12-23 13:40 J	-28442757.11	-28442756.93	-28442756.74	0.0289	0.0191
Pluto	-82585-07-17 13:54 J	-28442550.12	-28442549.92	-28442549.68	0.0066	0.0036
Saturn	-82584-01-05 02:23 J	-28442378.63	-28442378.40	-28442378.16	0.0286	0.0083
Pluto	-82584-07-19 05:16 J	-28442183.35	-28442183.28	-28442183.16	0.0067	0.0062
Jupiter	-82584-10-04 18:42 J	-28442105.87	-28442105.72	-28442105.55	0.0503	0.0377
Saturn	-82583-01-18 05:01 J	-28442000.53	-28442000.29	-28442000.05	0.0283	0.0024

Saturn -82582-01-30 21:49 J -28441622.80 -28441622.59 -28441622.37 0.0280 0.0124
 Saturn -82581-02-12 05:59 J -28441245.39 -28441245.25 -28441245.09 0.0277 0.0214
 Neptune -82581-09-30 02:08 J -28441014.51 -28441014.41 -28441014.26 0.0088 0.0078
 Uranus -82580-06-07 03:20 J -28440764.46 -28440764.36 -28440764.26 0.0148 0.0135
 Neptune -82580-10-02 16:32 J -28440647.00 -28440646.81 -28440646.58 0.0088 0.0055
 Uranus -82579-06-12 10:04 J -28440394.23 -28440394.08 -28440393.93 0.0148 0.0119
 Mars -82579-06-13 08:08 J -28440393.35 -28440393.16 -28440392.97 0.1579 0.0121
 Neptune -82579-10-05 07:11 J -28440279.45 -28440279.20 -28440278.95 0.0088 0.0032
 Jupiter -82578-03-30 05:30 J -28440103.47 -28440103.27 -28440103.05 0.0526 0.0202
 Uranus -82578-06-17 16:47 J -28440023.96 -28440023.80 -28440023.60 0.0148 0.0103
 Neptune -82578-10-07 20:52 J -28439911.88 -28439911.63 -28439911.35 0.0088 0.0010
 Uranus -82577-06-22 00:42 J -28439653.66 -28439653.47 -28439653.25 0.0148 0.0085
 Neptune -82577-10-09 10:47 J -28439544.30 -28439544.05 -28439543.77 0.0088 0.0015
 Uranus -82576-06-27 08:52 J -28439283.34 -28439283.13 -28439282.88 0.0147 0.0067
 Neptune -82576-10-12 00:42 J -28439176.69 -28439176.47 -28439176.21 0.0088 0.0037
 Uranus -82575-07-02 17:30 J -28438913.00 -28438912.77 -28438912.51 0.0147 0.0048
 Neptune -82575-10-14 14:37 J -28438809.07 -28438808.89 -28438808.68 0.0088 0.0060
 Uranus -82574-07-08 02:08 J -28438542.65 -28438542.41 -28438542.15 0.0147 0.0028
 Neptune -82574-10-17 04:04 J -28438441.40 -28438441.33 -28438441.21 0.0088 0.0082
 Uranus -82573-07-12 11:01 J -28438172.30 -28438172.04 -28438171.78 0.0147 0.0008
 Uranus -82572-07-17 19:11 J -28437801.95 -28437801.70 -28437801.44 0.0146 0.0012
 Saturn -82571-06-05 17:30 J -28437478.84 -28437478.77 -28437478.67 0.0270 0.0251
 Uranus -82571-07-23 03:06 J -28437431.61 -28437431.37 -28437431.10 0.0146 0.0032
 Saturn -82570-06-18 01:54 J -28437101.61 -28437101.42 -28437101.22 0.0271 0.0172
 Uranus -82570-07-28 11:01 J -28437061.28 -28437061.04 -28437060.79 0.0145 0.0050
 Saturn -82569-06-29 18:28 J -28436723.96 -28436723.73 -28436723.49 0.0274 0.0081
 Uranus -82569-08-01 17:44 J -28436690.98 -28436690.76 -28436690.52 0.0145 0.0069
 Saturn -82568-07-12 20:37 J -28436345.89 -28436345.64 -28436345.39 0.0276 0.0018
 Uranus -82568-08-07 00:28 J -28436320.68 -28436320.48 -28436320.26 0.0144 0.0086
 Saturn -82567-07-26 08:23 J -28435967.37 -28435967.15 -28435966.92 0.0279 0.0122

Uranus	-82567-08-12 06:13 J	-28435950.41	-28435950.24	-28435950.05	0.0144	0.0103
Jupiter	-82566-04-03 23:16 J	-28435715.62	-28435715.53	-28435715.43	0.0524	0.0469
Saturn	-82566-08-09 05:59 J	-28435588.40	-28435588.25	-28435588.10	0.0282	0.0224
Uranus	-82566-08-17 11:30 J	-28435580.16	-28435580.02	-28435579.87	0.0143	0.0118
Uranus	-82565-08-21 15:06 J	-28435209.93	-28435209.87	-28435209.75	0.0142	0.0134
Saturn	-82557-12-16 13:54 J	-28432171.04	-28432170.92	-28432170.77	0.0290	0.0240
Saturn	-82556-12-30 07:54 J	-28431792.37	-28431792.17	-28431791.95	0.0287	0.0133
Saturn	-82554-01-12 15:49 J	-28431414.08	-28431413.84	-28431413.60	0.0285	0.0023
Saturn	-82553-01-25 13:40 J	-28431036.15	-28431035.93	-28431035.69	0.0282	0.0082
Saturn	-82552-02-06 02:37 J	-28430658.57	-28430658.39	-28430658.21	0.0279	0.0178
Saturn	-82551-02-18 06:56 J	-28430281.28	-28430281.21	-28430281.12	0.0277	0.0261
Saturn	-82541-06-12 05:01 J	-28426514.44	-28426514.29	-28426514.13	0.0271	0.0207
Saturn	-82540-06-24 18:13 J	-28426136.95	-28426136.74	-28426136.50	0.0273	0.0122
Saturn	-82539-07-07 16:47 J	-28425759.05	-28425758.80	-28425758.55	0.0275	0.0025
Uranus	-82539-12-13 02:52 J	-28425600.46	-28425600.38	-28425600.28	0.0131	0.0122
Saturn	-82538-07-21 00:42 J	-28425380.71	-28425380.47	-28425380.23	0.0278	0.0077
Uranus	-82538-12-17 05:30 J	-28425231.38	-28425231.27	-28425231.11	0.0131	0.0111
Saturn	-82537-08-02 18:13 J	-28425001.92	-28425001.74	-28425001.54	0.0281	0.0181
Jupiter	-82537-09-19 14:37 J	-28424954.03	-28424953.89	-28424953.73	0.0497	0.0384
Uranus	-82537-12-20 08:37 J	-28424862.29	-28424862.14	-28424861.96	0.0131	0.0099
Saturn	-82536-08-16 21:49 J	-28424622.61	-28424622.59	-28424622.55	0.0284	0.0280
Uranus	-82536-12-24 10:47 J	-28424493.22	-28424493.05	-28424492.84	0.0131	0.0087
Uranus	-82535-12-28 13:25 J	-28424124.14	-28424123.94	-28424123.73	0.0131	0.0075
Uranus	-82533-01-01 15:20 J	-28423755.08	-28423754.86	-28423754.63	0.0131	0.0062
Uranus	-82532-01-04 17:16 J	-28423386.00	-28423385.78	-28423385.53	0.0132	0.0049
Mars	-82532-06-07 18:42 J	-28423231.80	-28423231.72	-28423231.65	0.1578	0.1429
Uranus	-82531-01-08 19:25 J	-28423016.93	-28423016.69	-28423016.45	0.0132	0.0035
Uranus	-82530-01-12 21:06 J	-28422647.87	-28422647.62	-28422647.37	0.0132	0.0021
Uranus	-82529-01-16 22:47 J	-28422278.80	-28422278.55	-28422278.30	0.0132	0.0008
Uranus	-82528-01-20 00:42 J	-28421909.72	-28421909.47	-28421909.22	0.0133	0.0007

Saturn -82528-12-11 03:06 J -28421584.42 -28421584.37 -28421584.29 0.0291 0.0279
 Uranus -82527-01-24 02:37 J -28421540.64 -28421540.39 -28421540.14 0.0133 0.0020
 Saturn -82527-12-25 00:56 J -28421205.65 -28421205.46 -28421205.26 0.0289 0.0174
 Uranus -82526-01-28 04:47 J -28421171.54 -28421171.30 -28421171.05 0.0133 0.0034
 Saturn -82525-01-07 12:28 J -28420827.21 -28420826.98 -28420826.74 0.0286 0.0066
 Uranus -82525-02-01 07:11 J -28420802.42 -28420802.20 -28420801.96 0.0134 0.0048
 Jupiter -82525-09-24 07:40 J -28420566.41 -28420566.18 -28420565.94 0.0499 0.0144
 Saturn -82524-01-19 14:08 J -28420449.14 -28420448.91 -28420448.67 0.0283 0.0040
 Uranus -82524-02-04 10:04 J -28420433.29 -28420433.08 -28420432.85 0.0134 0.0062
 Saturn -82523-02-01 06:13 J -28420071.44 -28420071.24 -28420071.02 0.0280 0.0139
 Uranus -82523-02-08 13:25 J -28420064.13 -28420063.94 -28420063.72 0.0135 0.0076
 Uranus -82522-02-12 17:16 J -28419694.95 -28419694.78 -28419694.58 0.0135 0.0089
 Saturn -82522-02-13 13:40 J -28419694.05 -28419693.93 -28419693.78 0.0277 0.0226
 Uranus -82521-02-16 21:49 J -28419325.74 -28419325.59 -28419325.42 0.0136 0.0103
 Uranus -82520-02-20 03:20 J -28418956.48 -28418956.36 -28418956.22 0.0136 0.0115
 Uranus -82519-02-24 09:20 J -28418587.19 -28418587.11 -28418587.02 0.0137 0.0128
 Jupiter -82519-03-19 20:52 J -28418563.79 -28418563.63 -28418563.47 0.0530 0.0377
 Jupiter -82513-09-29 00:42 J -28416178.71 -28416178.47 -28416178.24 0.0501 0.0098
 Saturn -82512-06-07 03:49 J -28415927.44 -28415927.34 -28415927.21 0.0270 0.0239
 Saturn -82511-06-19 13:25 J -28415550.14 -28415549.94 -28415549.74 0.0272 0.0157
 Saturn -82510-07-02 06:56 J -28415172.45 -28415172.21 -28415171.96 0.0274 0.0065
 Saturn -82509-07-14 09:49 J -28414794.33 -28414794.09 -28414793.84 0.0277 0.0035
 Mars -82509-12-17 21:06 J -28414637.79 -28414637.62 -28414637.44 0.1963 0.1029
 Saturn -82508-07-27 22:18 J -28414415.78 -28414415.57 -28414415.34 0.0279 0.0139
 Jupiter -82507-03-24 16:18 J -28414176.04 -28414175.82 -28414175.59 0.0528 0.0101
 Saturn -82507-08-10 20:37 J -28414036.75 -28414036.64 -28414036.49 0.0282 0.0241
 Jupiter -82501-10-03 20:37 J -28411790.81 -28411790.64 -28411790.46 0.0503 0.0346
 Mars -82500-06-15 08:08 J -28411536.34 -28411536.16 -28411535.98 0.1579 0.0476
 Pluto -82498-01-22 12:13 J -28410950.20 -28410949.99 -28410949.74 0.0078 0.0035
 Neptune -82498-03-29 10:47 J -28410884.17 -28410884.05 -28410883.89 0.0089 0.0073

Saturn -82498-12-19 02:52 J -28410619.52 -28410619.38 -28410619.22 0.0289 0.0224
 Neptune -82497-03-30 20:08 J -28410516.86 -28410516.66 -28410516.45 0.0089 0.0051
 Saturn -82497-12-31 19:40 J -28410240.89 -28410240.68 -28410240.45 0.0287 0.0116
 Neptune -82496-04-02 05:16 J -28410149.51 -28410149.28 -28410149.03 0.0089 0.0029
 Uranus -82496-06-07 17:01 J -28410082.88 -28410082.79 -28410082.67 0.0148 0.0134
 Saturn -82495-01-14 02:23 J -28409862.64 -28409862.40 -28409862.15 0.0285 0.0009
 Jupiter -82495-03-29 07:25 J -28409788.41 -28409788.19 -28409787.98 0.0526 0.0164
 Neptune -82495-04-04 14:37 J -28409782.14 -28409781.89 -28409781.64 0.0089 0.0007
 Uranus -82495-06-12 23:59 J -28409712.65 -28409712.50 -28409712.35 0.0148 0.0117
 Saturn -82494-01-26 23:16 J -28409484.75 -28409484.53 -28409484.30 0.0282 0.0097
 Neptune -82494-04-06 23:59 J -28409414.74 -28409414.50 -28409414.24 0.0089 0.0015
 Uranus -82494-06-18 06:42 J -28409342.39 -28409342.22 -28409342.02 0.0148 0.0100
 Saturn -82493-02-08 11:01 J -28409107.20 -28409107.04 -28409106.86 0.0279 0.0191
 Neptune -82493-04-08 09:20 J -28409047.33 -28409047.11 -28409046.87 0.0089 0.0037
 Uranus -82493-06-22 14:37 J -28408972.09 -28408971.89 -28408971.67 0.0148 0.0082
 Saturn -82492-02-19 14:52 J -28408729.91 -28408729.88 -28408729.82 0.0276 0.0272
 Neptune -82492-04-10 18:42 J -28408679.89 -28408679.72 -28408679.52 0.0089 0.0059
 Uranus -82492-06-27 22:32 J -28408601.78 -28408601.56 -28408601.32 0.0147 0.0063
 Neptune -82491-04-13 04:04 J -28408312.42 -28408312.33 -28408312.22 0.0089 0.0081
 Uranus -82491-07-03 06:56 J -28408231.44 -28408231.21 -28408230.95 0.0147 0.0044
 Uranus -82490-07-08 15:35 J -28407861.10 -28407860.85 -28407860.59 0.0147 0.0023
 Uranus -82489-07-12 23:59 J -28407490.76 -28407490.50 -28407490.24 0.0147 0.0003
 Uranus -82488-07-18 08:08 J -28407120.42 -28407120.16 -28407119.90 0.0146 0.0017
 Uranus -82487-07-23 15:49 J -28406750.08 -28406749.84 -28406749.58 0.0146 0.0037
 Uranus -82486-07-28 23:30 J -28406379.76 -28406379.52 -28406379.28 0.0145 0.0056
 Uranus -82485-08-02 06:28 J -28406009.45 -28406009.23 -28406009.00 0.0145 0.0074
 Uranus -82484-08-07 12:56 J -28405639.16 -28405638.96 -28405638.75 0.0144 0.0092
 Jupiter -82483-04-02 22:04 J -28405400.71 -28405400.58 -28405400.45 0.0524 0.0424
 Uranus -82483-08-12 18:28 J -28405268.89 -28405268.73 -28405268.55 0.0144 0.0109
 Saturn -82482-06-14 15:06 J -28404963.03 -28404962.87 -28404962.69 0.0271 0.0194

Uranus	-82482-08-17 23:44 J	-28404898.63	-28404898.51	-28404898.37	0.0143	0.0124
Saturn	-82481-06-26 05:44 J	-28404585.49	-28404585.26	-28404585.03	0.0273	0.0106
Uranus	-82481-08-22 03:35 J	-28404528.38	-28404528.35	-28404528.27	0.0142	0.0139
Saturn	-82480-07-09 05:16 J	-28404207.53	-28404207.28	-28404207.03	0.0275	0.0010
Saturn	-82479-07-22 14:08 J	-28403829.14	-28403828.91	-28403828.67	0.0278	0.0093
Saturn	-82478-08-05 08:52 J	-28403450.31	-28403450.13	-28403449.95	0.0281	0.0196
Saturn	-82469-12-12 17:59 J	-28400032.85	-28400032.75	-28400032.64	0.0290	0.0262
Saturn	-82468-12-26 14:37 J	-28399654.09	-28399653.89	-28399653.69	0.0288	0.0157
Saturn	-82466-01-09 00:56 J	-28399275.70	-28399275.46	-28399275.22	0.0286	0.0048
Saturn	-82465-01-22 01:40 J	-28398897.67	-28398897.43	-28398897.20	0.0283	0.0057
Saturn	-82464-02-02 16:32 J	-28398519.99	-28398519.81	-28398519.60	0.0280	0.0154
Saturn	-82463-02-14 23:30 J	-28398142.64	-28398142.52	-28398142.40	0.0277	0.0238
Uranus	-82455-12-13 16:18 J	-28394918.89	-28394918.82	-28394918.70	0.0131	0.0121
Jupiter	-82454-09-19 14:08 J	-28394639.04	-28394638.91	-28394638.78	0.0497	0.0415
Uranus	-82454-12-17 19:40 J	-28394549.81	-28394549.68	-28394549.53	0.0131	0.0109
Saturn	-82453-06-08 15:20 J	-28394375.98	-28394375.86	-28394375.72	0.0270	0.0225
Mars	-82453-06-09 18:13 J	-28394374.90	-28394374.74	-28394374.58	0.1578	0.0853
Uranus	-82453-12-20 22:18 J	-28394180.72	-28394180.57	-28394180.38	0.0131	0.0097
Saturn	-82452-06-21 01:40 J	-28393998.63	-28393998.43	-28393998.21	0.0272	0.0142
Uranus	-82452-12-25 01:11 J	-28393811.64	-28393811.45	-28393811.25	0.0131	0.0085
Saturn	-82451-07-03 20:37 J	-28393620.88	-28393620.64	-28393620.39	0.0274	0.0049
Uranus	-82451-12-29 03:20 J	-28393442.56	-28393442.36	-28393442.14	0.0131	0.0072
Saturn	-82450-07-17 00:42 J	-28393242.71	-28393242.47	-28393242.22	0.0277	0.0052
Uranus	-82449-01-02 05:30 J	-28393073.49	-28393073.27	-28393073.04	0.0131	0.0058
Saturn	-82449-07-29 14:23 J	-28392864.11	-28392863.90	-28392863.69	0.0280	0.0155
Uranus	-82448-01-05 07:40 J	-28392704.41	-28392704.18	-28392703.94	0.0132	0.0045
Saturn	-82448-08-12 13:40 J	-28392485.02	-28392484.93	-28392484.81	0.0283	0.0256
Uranus	-82447-01-09 09:20 J	-28392335.35	-28392335.11	-28392334.87	0.0132	0.0031
Uranus	-82446-01-13 11:01 J	-28391966.29	-28391966.04	-28391965.79	0.0132	0.0017
Uranus	-82445-01-17 12:42 J	-28391597.22	-28391596.97	-28391596.72	0.0132	0.0003

Uranus	-82444-01-20 14:37 J	-28391228.14	-28391227.89	-28391227.64	0.0133	0.0011
Uranus	-82443-01-24 16:18 J	-28390859.06	-28390858.82	-28390858.57	0.0133	0.0025
Uranus	-82442-01-28 18:28 J	-28390489.96	-28390489.73	-28390489.48	0.0133	0.0040
Jupiter	-82442-09-24 08:23 J	-28390251.37	-28390251.15	-28390250.92	0.0499	0.0175
Uranus	-82441-02-01 20:52 J	-28390120.84	-28390120.63	-28390120.39	0.0134	0.0054
Uranus	-82440-02-05 00:13 J	-28389751.70	-28389751.49	-28389751.27	0.0134	0.0067
Uranus	-82439-02-09 03:35 J	-28389382.54	-28389382.35	-28389382.15	0.0135	0.0081
Saturn	-82439-12-20 17:59 J	-28389067.92	-28389067.75	-28389067.58	0.0289	0.0206
Uranus	-82438-02-13 07:25 J	-28389013.35	-28389013.19	-28389013.00	0.0135	0.0095
Saturn	-82437-01-03 09:06 J	-28388689.35	-28388689.12	-28388688.89	0.0287	0.0098
Uranus	-82437-02-17 12:28 J	-28388644.13	-28388643.98	-28388643.83	0.0136	0.0108
Saturn	-82436-01-15 14:23 J	-28388311.14	-28388310.90	-28388310.65	0.0284	0.0011
Uranus	-82436-02-20 17:44 J	-28388274.86	-28388274.76	-28388274.64	0.0136	0.0121
Jupiter	-82436-03-18 23:16 J	-28388248.67	-28388248.53	-28388248.39	0.0530	0.0410
Saturn	-82435-01-28 10:04 J	-28387933.29	-28387933.08	-28387932.86	0.0281	0.0112
Uranus	-82435-02-24 23:30 J	-28387905.55	-28387905.52	-28387905.46	0.0137	0.0134
Saturn	-82434-02-09 20:52 J	-28387555.79	-28387555.63	-28387555.46	0.0279	0.0204
Jupiter	-82430-09-29 02:08 J	-28385863.65	-28385863.41	-28385863.17	0.0501	0.0070
Mars	-82430-12-22 21:35 J	-28385778.77	-28385778.60	-28385778.43	0.1962	0.1058
Jupiter	-82424-03-23 15:20 J	-28383861.07	-28383860.86	-28383860.64	0.0528	0.0143
Saturn	-82424-06-03 17:59 J	-28383788.81	-28383788.75	-28383788.67	0.0270	0.0257
Saturn	-82423-06-16 01:40 J	-28383411.61	-28383411.43	-28383411.24	0.0271	0.0179
Saturn	-82422-06-28 17:16 J	-28383034.01	-28383033.78	-28383033.54	0.0273	0.0090
Mars	-82421-06-17 08:23 J	-28382679.29	-28382679.15	-28382679.01	0.1579	0.1069
Saturn	-82421-07-10 17:59 J	-28382656.00	-28382655.75	-28382655.50	0.0276	0.0007
Saturn	-82420-07-24 04:04 J	-28382277.56	-28382277.33	-28382277.10	0.0278	0.0110
Saturn	-82419-08-06 23:30 J	-28381898.67	-28381898.52	-28381898.34	0.0281	0.0212
Jupiter	-82418-10-03 19:40 J	-28381475.87	-28381475.68	-28381475.50	0.0502	0.0315
Neptune	-82417-09-29 05:16 J	-28381114.28	-28381114.28	-28381114.26	0.0088	0.0088
Neptune	-82416-10-01 19:40 J	-28380746.84	-28380746.68	-28380746.49	0.0088	0.0066

Neptune -82415-10-04 09:49 J -28380379.30 -28380379.09 -28380378.84 0.0088 0.0043
 Neptune -82414-10-06 23:59 J -28380011.74 -28380011.50 -28380011.23 0.0088 0.0021
 Neptune -82413-10-08 14:23 J -28379644.16 -28379643.90 -28379643.63 0.0088 0.0003
 Jupiter -82412-03-28 05:30 J -28379473.49 -28379473.27 -28379473.05 0.0527 0.0121
 Uranus -82412-06-08 08:08 J -28379401.27 -28379401.16 -28379401.04 0.0148 0.0132
 Neptune -82412-10-11 04:04 J -28379276.57 -28379276.33 -28379276.06 0.0088 0.0026
 Uranus -82411-06-13 14:52 J -28379031.03 -28379030.88 -28379030.72 0.0148 0.0115
 Neptune -82411-10-13 18:13 J -28378908.96 -28378908.74 -28378908.52 0.0088 0.0048
 Uranus -82410-06-18 22:04 J -28378660.77 -28378660.58 -28378660.38 0.0148 0.0097
 Neptune -82410-10-16 07:25 J -28378541.32 -28378541.19 -28378541.00 0.0088 0.0071
 Saturn -82410-12-15 09:20 J -28378481.23 -28378481.11 -28378480.97 0.0290 0.0245
 Uranus -82409-06-23 05:30 J -28378290.47 -28378290.27 -28378290.04 0.0148 0.0079
 Saturn -82409-12-28 05:01 J -28378102.50 -28378102.29 -28378102.07 0.0288 0.0138
 Uranus -82408-06-28 13:40 J -28377920.16 -28377919.93 -28377919.69 0.0147 0.0059
 Saturn -82407-01-10 14:23 J -28377724.14 -28377723.90 -28377723.66 0.0285 0.0030
 Uranus -82407-07-03 22:04 J -28377549.82 -28377549.58 -28377549.33 0.0147 0.0039
 Saturn -82406-01-23 13:54 J -28377346.15 -28377345.92 -28377345.69 0.0283 0.0074
 Uranus -82406-07-09 06:13 J -28377179.49 -28377179.24 -28377178.98 0.0147 0.0019
 Saturn -82405-02-05 03:49 J -28376968.52 -28376968.34 -28376968.14 0.0280 0.0169
 Uranus -82405-07-13 14:37 J -28376809.15 -28376808.89 -28376808.63 0.0147 0.0002
 Saturn -82404-02-16 09:35 J -28376591.19 -28376591.10 -28376590.99 0.0277 0.0251
 Uranus -82404-07-18 22:32 J -28376438.81 -28376438.56 -28376438.30 0.0146 0.0023
 Uranus -82403-07-24 06:13 J -28376068.48 -28376068.24 -28376067.98 0.0146 0.0043
 Uranus -82402-07-29 13:54 J -28375698.15 -28375697.92 -28375697.68 0.0145 0.0061
 Uranus -82401-08-02 20:37 J -28375327.85 -28375327.64 -28375327.42 0.0145 0.0080
 Jupiter -82400-04-01 22:32 J -28375085.71 -28375085.56 -28375085.41 0.0525 0.0388
 Uranus -82400-08-08 02:52 J -28374957.55 -28374957.38 -28374957.17 0.0144 0.0098
 Uranus -82399-08-13 08:37 J -28374587.28 -28374587.14 -28374586.97 0.0144 0.0115
 Uranus -82398-08-18 13:40 J -28374217.02 -28374216.93 -28374216.81 0.0143 0.0131
 Saturn -82394-06-11 02:23 J -28372824.54 -28372824.40 -28372824.24 0.0270 0.0211

Saturn -82393-06-22 13:40 J -28372447.14 -28372446.93 -28372446.71 0.0272 0.0126
 Saturn -82392-07-05 09:35 J -28372069.34 -28372069.10 -28372068.85 0.0275 0.0032
 Saturn -82391-07-18 14:52 J -28371691.12 -28371690.88 -28371690.63 0.0277 0.0069
 Saturn -82390-08-01 05:44 J -28371312.46 -28371312.26 -28371312.06 0.0280 0.0171
 Saturn -82389-08-14 06:28 J -28370933.30 -28370933.23 -28370933.16 0.0283 0.0270
 Saturn -82381-12-08 10:04 J -28367895.08 -28367895.08 -28367895.08 0.0290 0.0290
 Saturn -82380-12-22 09:49 J -28367516.28 -28367516.09 -28367515.91 0.0289 0.0188
 Saturn -82378-01-04 23:16 J -28367137.75 -28367137.53 -28367137.29 0.0286 0.0081
 Saturn -82377-01-18 03:35 J -28366759.59 -28366759.35 -28366759.11 0.0284 0.0027
 Saturn -82376-01-29 22:04 J -28366381.79 -28366381.58 -28366381.37 0.0281 0.0127
 Saturn -82375-02-11 07:40 J -28366004.33 -28366004.18 -28366004.03 0.0278 0.0217
 Mars -82374-06-12 17:44 J -28365517.95 -28365517.76 -28365517.57 0.1578 0.0270
 Jupiter -82371-09-18 15:20 J -28364323.97 -28364323.86 -28364323.75 0.0497 0.0441
 Uranus -82371-12-14 05:44 J -28364237.34 -28364237.26 -28364237.14 0.0131 0.0120
 Uranus -82370-12-18 08:52 J -28363868.25 -28363868.13 -28363867.96 0.0131 0.0108
 Uranus -82369-12-21 12:13 J -28363499.15 -28363498.99 -28363498.81 0.0131 0.0095
 Uranus -82368-12-25 14:37 J -28363130.08 -28363129.89 -28363129.69 0.0131 0.0082
 Uranus -82367-12-29 16:47 J -28362761.00 -28362760.80 -28362760.57 0.0131 0.0070
 Uranus -82365-01-02 18:56 J -28362391.93 -28362391.71 -28362391.47 0.0131 0.0056
 Saturn -82365-06-05 02:52 J -28362237.48 -28362237.38 -28362237.27 0.0270 0.0244
 Uranus -82364-01-05 20:52 J -28362022.86 -28362022.63 -28362022.38 0.0132 0.0042
 Saturn -82364-06-17 11:16 J -28361860.22 -28361860.03 -28361859.83 0.0271 0.0165
 Uranus -82363-01-09 22:32 J -28361653.80 -28361653.56 -28361653.31 0.0132 0.0028
 Saturn -82363-06-30 04:04 J -28361482.56 -28361482.33 -28361482.08 0.0274 0.0075
 Uranus -82362-01-14 00:13 J -28361284.74 -28361284.49 -28361284.24 0.0132 0.0013
 Saturn -82362-07-13 05:59 J -28361104.49 -28361104.25 -28361104.00 0.0276 0.0025
 Uranus -82361-01-18 01:54 J -28360915.67 -28360915.42 -28360915.17 0.0132 0.0001
 Saturn -82361-07-25 17:01 J -28360726.00 -28360725.79 -28360725.55 0.0279 0.0127
 Uranus -82360-01-21 03:49 J -28360546.59 -28360546.34 -28360546.09 0.0133 0.0015
 Saturn -82360-08-08 14:08 J -28360347.05 -28360346.91 -28360346.76 0.0282 0.0227

Uranus -82359-01-25 05:44 J -28360177.51 -28360177.26 -28360177.02 0.0133 0.0029
 Jupiter -82359-09-23 08:08 J -28359936.38 -28359936.16 -28359935.94 0.0498 0.0201
 Uranus -82358-01-29 07:54 J -28359808.40 -28359808.17 -28359807.93 0.0133 0.0044
 Uranus -82357-02-02 10:18 J -28359439.28 -28359439.07 -28359438.84 0.0134 0.0058
 Uranus -82356-02-05 13:25 J -28359070.14 -28359069.94 -28359069.72 0.0134 0.0072
 Uranus -82355-02-09 16:32 J -28358700.98 -28358700.81 -28358700.60 0.0135 0.0087
 Uranus -82354-02-13 20:52 J -28358331.78 -28358331.63 -28358331.45 0.0135 0.0100
 Uranus -82353-02-18 01:40 J -28357962.55 -28357962.43 -28357962.29 0.0136 0.0114
 Jupiter -82353-03-17 19:40 J -28357933.79 -28357933.68 -28357933.56 0.0531 0.0457
 Uranus -82352-02-21 06:42 J -28357593.28 -28357593.22 -28357593.11 0.0136 0.0127
 Saturn -82351-12-17 01:11 J -28356929.60 -28356929.45 -28356929.30 0.0290 0.0227
 Saturn -82350-12-30 19:40 J -28356550.90 -28356550.68 -28356550.46 0.0288 0.0120
 Saturn -82348-01-12 03:49 J -28356172.58 -28356172.34 -28356172.10 0.0285 0.0012
 Saturn -82347-01-25 02:08 J -28355794.64 -28355794.41 -28355794.18 0.0282 0.0091
 Jupiter -82347-09-28 01:54 J -28355548.66 -28355548.42 -28355548.18 0.0499 0.0040
 Saturn -82346-02-06 14:52 J -28355417.05 -28355416.88 -28355416.69 0.0279 0.0184
 Saturn -82345-02-18 19:40 J -28355039.74 -28355039.68 -28355039.60 0.0276 0.0264
 Jupiter -82341-03-22 14:08 J -28353546.12 -28353545.91 -28353545.70 0.0529 0.0185
 Pluto -82339-07-19 18:42 J -28352696.97 -28352696.72 -28352696.46 0.0066 0.0019
 Saturn -82335-06-12 12:13 J -28351273.15 -28351272.99 -28351272.82 0.0270 0.0197
 Jupiter -82335-10-02 18:13 J -28351160.93 -28351160.74 -28351160.53 0.0501 0.0279
 Neptune -82334-03-28 18:56 J -28350983.77 -28350983.71 -28350983.61 0.0089 0.0084
 Saturn -82334-06-25 00:13 J -28350895.71 -28350895.49 -28350895.26 0.0272 0.0111
 Neptune -82333-03-30 04:04 J -28350616.49 -28350616.33 -28350616.14 0.0089 0.0063
 Saturn -82333-07-06 21:20 J -28350517.86 -28350517.61 -28350517.36 0.0275 0.0015
 Neptune -82332-04-01 12:56 J -28350249.17 -28350248.96 -28350248.72 0.0089 0.0041
 Saturn -82332-07-20 03:49 J -28350139.58 -28350139.34 -28350139.10 0.0278 0.0086
 Neptune -82331-04-03 22:18 J -28349881.81 -28349881.57 -28349881.32 0.0089 0.0019
 Saturn -82331-08-02 19:54 J -28349760.85 -28349760.67 -28349760.48 0.0280 0.0188
 Neptune -82330-04-06 07:40 J -28349514.43 -28349514.18 -28349513.93 0.0089 0.0003

Jupiter -82329-03-27 09:06 J -28349158.34 -28349158.12 -28349157.89 0.0528 0.0090
 Neptune -82329-04-07 17:01 J -28349147.03 -28349146.79 -28349146.54 0.0089 0.0025
 Uranus -82329-06-03 13:54 J -28349089.94 -28349089.92 -28349089.90 0.0148 0.0147
 Neptune -82328-04-10 02:23 J -28348779.61 -28348779.40 -28348779.18 0.0089 0.0047
 Uranus -82328-06-08 19:25 J -28348719.79 -28348719.69 -28348719.56 0.0148 0.0131
 Neptune -82327-04-12 11:44 J -28348412.15 -28348412.01 -28348411.84 0.0089 0.0069
 Uranus -82327-06-14 02:23 J -28348349.55 -28348349.40 -28348349.23 0.0148 0.0113
 Uranus -82326-06-19 09:20 J -28347979.30 -28347979.11 -28347978.90 0.0148 0.0095
 Uranus -82325-06-23 17:01 J -28347609.00 -28347608.79 -28347608.56 0.0148 0.0076
 Uranus -82324-06-29 00:56 J -28347238.69 -28347238.46 -28347238.21 0.0147 0.0056
 Uranus -82323-07-04 09:06 J -28346868.36 -28346868.12 -28346867.86 0.0147 0.0036
 Uranus -82322-07-09 17:30 J -28346498.02 -28346497.77 -28346497.51 0.0147 0.0014
 Saturn -82322-12-11 01:40 J -28346343.49 -28346343.43 -28346343.34 0.0290 0.0274
 Uranus -82321-07-14 01:40 J -28346127.69 -28346127.43 -28346127.17 0.0147 0.0007
 Saturn -82321-12-24 00:28 J -28345964.67 -28345964.48 -28345964.27 0.0288 0.0170
 Uranus -82320-07-19 09:35 J -28345757.35 -28345757.10 -28345756.84 0.0146 0.0028
 Saturn -82319-01-06 13:11 J -28345586.18 -28345585.95 -28345585.71 0.0286 0.0061
 Uranus -82319-07-24 17:16 J -28345387.02 -28345386.78 -28345386.52 0.0146 0.0048
 Saturn -82318-01-19 15:49 J -28345208.07 -28345207.84 -28345207.60 0.0283 0.0045
 Uranus -82318-07-30 00:28 J -28345016.70 -28345016.48 -28345016.24 0.0145 0.0067
 Saturn -82317-02-01 09:20 J -28344830.31 -28344830.11 -28344829.90 0.0280 0.0143
 Jupiter -82317-04-01 02:23 J -28344770.56 -28344770.40 -28344770.23 0.0525 0.0358
 Uranus -82317-08-03 07:25 J -28344646.39 -28344646.19 -28344645.97 0.0145 0.0086
 Saturn -82316-02-12 17:44 J -28344452.88 -28344452.76 -28344452.62 0.0278 0.0230
 Uranus -82316-08-08 14:08 J -28344276.08 -28344275.91 -28344275.72 0.0144 0.0103
 Uranus -82315-08-13 19:40 J -28343905.80 -28343905.68 -28343905.52 0.0144 0.0121
 Uranus -82314-08-19 00:42 J -28343535.52 -28343535.47 -28343535.37 0.0143 0.0137
 Saturn -82306-06-07 10:18 J -28340686.19 -28340686.07 -28340685.94 0.0270 0.0230
 Saturn -82305-06-18 19:11 J -28340308.89 -28340308.70 -28340308.48 0.0272 0.0150
 Saturn -82304-07-01 13:11 J -28339931.20 -28339930.95 -28339930.71 0.0274 0.0058

Saturn	-82303-07-14 15:49 J	-28339553.08	-28339552.84	-28339552.59	0.0276	0.0041
Saturn	-82302-07-28 04:04 J	-28339174.54	-28339174.33	-28339174.11	0.0279	0.0142
Saturn	-82301-08-10 02:08 J	-28338795.54	-28338795.41	-28338795.28	0.0282	0.0242
Mars	-82295-06-14 17:44 J	-28336660.95	-28336660.76	-28336660.57	0.1578	0.0319
Saturn	-82292-12-18 15:06 J	-28335378.02	-28335377.87	-28335377.69	0.0290	0.0209
Saturn	-82290-01-01 08:52 J	-28334999.35	-28334999.13	-28334998.90	0.0288	0.0101
Saturn	-82289-01-14 16:04 J	-28334621.07	-28334620.83	-28334620.58	0.0285	0.0008
Saturn	-82288-01-26 13:11 J	-28334243.16	-28334242.95	-28334242.72	0.0282	0.0108
Jupiter	-82288-09-17 17:30 J	-28334008.85	-28334008.77	-28334008.68	0.0496	0.0463
Uranus	-82288-12-10 14:37 J	-28333924.90	-28333924.89	-28333924.86	0.0131	0.0130
Saturn	-82287-02-08 01:11 J	-28333865.61	-28333865.45	-28333865.28	0.0279	0.0198
Uranus	-82287-12-14 18:28 J	-28333555.83	-28333555.73	-28333555.62	0.0131	0.0118
Saturn	-82286-02-20 05:01 J	-28333488.29	-28333488.29	-28333488.26	0.0276	0.0275
Uranus	-82286-12-18 21:20 J	-28333186.74	-28333186.61	-28333186.45	0.0131	0.0106
Uranus	-82285-12-22 00:28 J	-28332817.64	-28332817.48	-28332817.29	0.0131	0.0093
Uranus	-82284-12-26 03:06 J	-28332448.56	-28332448.37	-28332448.16	0.0131	0.0080
Uranus	-82283-12-30 05:16 J	-28332079.48	-28332079.28	-28332079.05	0.0131	0.0067
Uranus	-82281-01-03 07:25 J	-28331710.41	-28331710.19	-28331709.95	0.0131	0.0053
Uranus	-82280-01-06 09:06 J	-28331341.35	-28331341.12	-28331340.87	0.0132	0.0039
Uranus	-82279-01-10 10:47 J	-28330972.29	-28330972.05	-28330971.80	0.0132	0.0024
Uranus	-82278-01-14 12:28 J	-28330603.23	-28330602.98	-28330602.73	0.0132	0.0010
Uranus	-82277-01-18 14:08 J	-28330234.16	-28330233.91	-28330233.66	0.0132	0.0005
Saturn	-82277-06-01 15:06 J	-28330098.94	-28330098.87	-28330098.81	0.0269	0.0258
Uranus	-82276-01-21 15:49 J	-28329865.08	-28329864.84	-28329864.59	0.0133	0.0020
Saturn	-82276-06-13 19:54 J	-28329721.84	-28329721.67	-28329721.48	0.0271	0.0182
Jupiter	-82276-09-22 09:06 J	-28329621.33	-28329621.12	-28329620.91	0.0497	0.0231
Uranus	-82275-01-25 17:44 J	-28329495.99	-28329495.76	-28329495.51	0.0133	0.0034
Saturn	-82275-06-26 09:06 J	-28329344.36	-28329344.12	-28329343.89	0.0273	0.0095
Uranus	-82274-01-29 20:08 J	-28329126.89	-28329126.66	-28329126.43	0.0133	0.0048
Saturn	-82274-07-09 06:56 J	-28328966.46	-28328966.21	-28328965.96	0.0275	0.0002

Uranus -82273-02-02 22:32 J -28328757.77 -28328757.56 -28328757.33 0.0134 0.0063
 Saturn -82273-07-21 14:23 J -28328588.13 -28328587.90 -28328587.66 0.0278 0.0102
 Uranus -82272-02-06 01:40 J -28328388.62 -28328388.43 -28328388.22 0.0134 0.0077
 Saturn -82272-08-04 07:25 J -28328209.35 -28328209.19 -28328209.00 0.0281 0.0204
 Uranus -82271-02-10 04:47 J -28328019.46 -28328019.30 -28328019.10 0.0135 0.0092
 Uranus -82270-02-14 09:20 J -28327650.26 -28327650.11 -28327649.96 0.0135 0.0106
 Jupiter -82270-03-17 23:44 J -28327618.60 -28327618.51 -28327618.43 0.0532 0.0488
 Uranus -82269-02-18 13:54 J -28327281.04 -28327280.92 -28327280.80 0.0136 0.0119
 Uranus -82268-02-21 18:56 J -28326911.76 -28326911.71 -28326911.66 0.0136 0.0133
 Jupiter -82264-09-27 02:52 J -28325233.62 -28325233.38 -28325233.14 0.0499 0.0011
 Saturn -82263-12-12 16:04 J -28324791.93 -28324791.83 -28324791.70 0.0290 0.0256
 Saturn -82262-12-26 14:08 J -28324413.11 -28324412.91 -28324412.70 0.0288 0.0151
 Saturn -82260-01-08 01:54 J -28324034.66 -28324034.42 -28324034.18 0.0286 0.0043
 Saturn -82259-01-21 03:20 J -28323656.59 -28323656.36 -28323656.12 0.0283 0.0062
 Saturn -82258-02-02 19:25 J -28323278.88 -28323278.69 -28323278.49 0.0280 0.0158
 Jupiter -82258-03-22 19:25 J -28323230.89 -28323230.69 -28323230.47 0.0530 0.0211
 Saturn -82257-02-15 02:37 J -28322901.49 -28322901.39 -28322901.26 0.0277 0.0243
 Pluto -82252-01-23 20:08 J -28321096.91 -28321096.66 -28321096.41 0.0078 0.0005
 Neptune -82252-09-30 23:16 J -28320846.64 -28320846.53 -28320846.38 0.0088 0.0077
 Jupiter -82252-10-01 20:52 J -28320845.83 -28320845.63 -28320845.42 0.0501 0.0254
 Neptune -82251-10-03 13:54 J -28320479.13 -28320478.92 -28320478.71 0.0088 0.0054
 Neptune -82250-10-06 04:04 J -28320111.57 -28320111.33 -28320111.07 0.0088 0.0031
 Neptune -82249-10-07 18:28 J -28319743.99 -28319743.73 -28319743.46 0.0088 0.0009
 Mars -82248-06-09 04:18 J -28319499.46 -28319499.32 -28319499.17 0.1578 0.1002
 Neptune -82248-10-10 08:23 J -28319376.40 -28319376.15 -28319375.88 0.0088 0.0014
 Saturn -82247-06-08 15:49 J -28319134.98 -28319134.84 -28319134.69 0.0270 0.0216
 Neptune -82247-10-12 22:18 J -28319008.80 -28319008.57 -28319008.32 0.0088 0.0036
 Jupiter -82246-03-27 12:42 J -28318843.19 -28318842.97 -28318842.74 0.0528 0.0059
 Saturn -82246-06-21 01:25 J -28318757.66 -28318757.44 -28318757.23 0.0272 0.0134
 Neptune -82246-10-15 12:13 J -28318641.18 -28318640.99 -28318640.79 0.0088 0.0059

Uranus -82245-06-03 23:44 J -28318408.52 -28318408.51 -28318408.47 0.0148 0.0147
 Saturn -82245-07-02 19:40 J -28318379.93 -28318379.68 -28318379.43 0.0274 0.0042
 Neptune -82245-10-17 01:25 J -28318273.51 -28318273.44 -28318273.31 0.0088 0.0081
 Uranus -82244-06-09 05:44 J -28318038.37 -28318038.26 -28318038.13 0.0148 0.0130
 Saturn -82244-07-15 23:16 J -28318001.78 -28318001.53 -28318001.29 0.0277 0.0056
 Uranus -82243-06-14 12:13 J -28317668.14 -28317667.99 -28317667.81 0.0148 0.0112
 Saturn -82243-07-29 12:13 J -28317623.19 -28317622.99 -28317622.77 0.0279 0.0158
 Uranus -82242-06-19 19:25 J -28317297.88 -28317297.69 -28317297.48 0.0148 0.0093
 Saturn -82242-08-12 11:30 J -28317244.12 -28317244.02 -28317243.92 0.0282 0.0256
 Uranus -82241-06-24 03:06 J -28316927.58 -28316927.37 -28316927.14 0.0148 0.0073
 Uranus -82240-06-29 11:01 J -28316557.27 -28316557.04 -28316556.79 0.0147 0.0052
 Jupiter -82240-10-06 16:04 J -28316457.83 -28316457.83 -28316457.82 0.0503 0.0502
 Uranus -82239-07-04 19:25 J -28316186.94 -28316186.69 -28316186.43 0.0147 0.0031
 Uranus -82238-07-10 03:35 J -28315816.61 -28315816.35 -28315816.09 0.0147 0.0010
 Uranus -82237-07-14 11:44 J -28315446.26 -28315446.01 -28315445.75 0.0147 0.0011
 Uranus -82236-07-19 19:40 J -28315075.92 -28315075.68 -28315075.42 0.0146 0.0032
 Uranus -82235-07-25 03:20 J -28314705.59 -28314705.36 -28314705.11 0.0146 0.0053
 Jupiter -82234-04-01 01:11 J -28314455.62 -28314455.45 -28314455.26 0.0526 0.0317
 Uranus -82234-07-30 10:47 J -28314335.26 -28314335.05 -28314334.81 0.0145 0.0072
 Uranus -82233-08-03 18:13 J -28313964.94 -28313964.74 -28313964.54 0.0145 0.0091
 Saturn -82233-12-20 02:23 J -28313826.57 -28313826.40 -28313826.21 0.0290 0.0191
 Uranus -82232-08-09 00:42 J -28313594.63 -28313594.47 -28313594.29 0.0144 0.0110
 Saturn -82231-01-02 19:11 J -28313447.93 -28313447.70 -28313447.46 0.0287 0.0083
 Uranus -82231-08-14 06:28 J -28313224.33 -28313224.23 -28313224.09 0.0144 0.0127
 Saturn -82230-01-16 01:40 J -28313069.67 -28313069.43 -28313069.19 0.0285 0.0024
 Uranus -82230-08-19 11:59 J -28312854.00 -28312854.00 -28312853.98 0.0143 0.0143
 Saturn -82229-01-28 22:04 J -28312691.79 -28312691.58 -28312691.36 0.0282 0.0124
 Saturn -82228-02-09 09:20 J -28312314.26 -28312314.11 -28312313.96 0.0279 0.0212
 Mars -82225-12-16 11:44 J -28310908.13 -28310908.01 -28310907.88 0.1963 0.1558
 Saturn -82218-06-03 20:08 J -28308547.76 -28308547.66 -28308547.57 0.0269 0.0245

Saturn -82217-06-15 01:11 J -28308170.63 -28308170.45 -28308170.25 0.0271 0.0168
 Mars -82216-06-16 17:16 J -28307803.93 -28307803.78 -28307803.62 0.1578 0.0914
 Saturn -82216-06-27 14:52 J -28307793.11 -28307792.88 -28307792.63 0.0273 0.0080
 Saturn -82215-07-10 13:40 J -28307415.18 -28307414.93 -28307414.68 0.0275 0.0017
 Saturn -82214-07-23 21:35 J -28307036.81 -28307036.60 -28307036.36 0.0278 0.0118
 Saturn -82213-08-05 15:49 J -28306657.99 -28306657.84 -28306657.67 0.0281 0.0218
 Jupiter -82205-09-16 20:08 J -28303693.69 -28303693.66 -28303693.61 0.0496 0.0488
 Uranus -82204-12-11 02:52 J -28303243.39 -28303243.38 -28303243.33 0.0131 0.0130
 Saturn -82204-12-14 03:06 J -28303240.50 -28303240.37 -28303240.22 0.0290 0.0239
 Uranus -82203-12-15 07:11 J -28302874.31 -28302874.20 -28302874.09 0.0131 0.0117
 Saturn -82203-12-28 00:28 J -28302861.69 -28302861.48 -28302861.26 0.0288 0.0133
 Uranus -82202-12-19 10:32 J -28302505.21 -28302505.06 -28302504.91 0.0131 0.0104
 Saturn -82201-01-10 11:30 J -28302483.26 -28302483.02 -28302482.78 0.0285 0.0025
 Uranus -82201-12-22 13:25 J -28302136.11 -28302135.94 -28302135.75 0.0131 0.0091
 Saturn -82200-01-22 12:13 J -28302105.22 -28302104.99 -28302104.76 0.0282 0.0079
 Uranus -82200-12-26 15:35 J -28301767.04 -28301766.85 -28301766.63 0.0131 0.0078
 Saturn -82199-02-04 03:06 J -28301727.55 -28301727.37 -28301727.18 0.0280 0.0173
 Uranus -82199-12-30 17:44 J -28301397.96 -28301397.76 -28301397.52 0.0131 0.0065
 Saturn -82198-02-16 09:35 J -28301350.18 -28301350.10 -28301350.00 0.0277 0.0255
 Uranus -82197-01-03 19:54 J -28301028.89 -28301028.67 -28301028.43 0.0131 0.0050
 Uranus -82196-01-06 21:35 J -28300659.83 -28300659.60 -28300659.35 0.0132 0.0036
 Uranus -82195-01-10 23:16 J -28300290.77 -28300290.53 -28300290.28 0.0132 0.0021
 Uranus -82194-01-15 01:11 J -28299921.70 -28299921.45 -28299921.20 0.0132 0.0006
 Uranus -82193-01-19 02:37 J -28299552.63 -28299552.39 -28299552.14 0.0132 0.0009
 Jupiter -82193-09-21 12:42 J -28299306.17 -28299305.97 -28299305.76 0.0497 0.0252
 Uranus -82192-01-22 04:32 J -28299183.55 -28299183.31 -28299183.06 0.0133 0.0024
 Uranus -82191-01-26 06:28 J -28298814.47 -28298814.23 -28298813.99 0.0133 0.0038
 Uranus -82190-01-30 08:37 J -28298445.36 -28298445.14 -28298444.90 0.0133 0.0053
 Uranus -82189-02-03 11:16 J -28298076.23 -28298076.03 -28298075.81 0.0134 0.0068
 Uranus -82188-02-06 14:23 J -28297707.09 -28297706.90 -28297706.70 0.0134 0.0082

Saturn -82188-06-09 18:28 J -28297583.88 -28297583.73 -28297583.56 0.0270 0.0203
 Uranus -82187-02-10 17:44 J -28297337.92 -28297337.76 -28297337.58 0.0135 0.0097
 Jupiter -82187-03-17 05:16 J -28297303.34 -28297303.28 -28297303.22 0.0532 0.0513
 Saturn -82187-06-22 04:18 J -28297206.53 -28297206.32 -28297206.09 0.0272 0.0120
 Uranus -82186-02-14 21:35 J -28296968.72 -28296968.60 -28296968.44 0.0135 0.0111
 Saturn -82186-07-04 23:01 J -28296828.78 -28296828.54 -28296828.29 0.0274 0.0028
 Uranus -82185-02-19 02:08 J -28296599.49 -28296599.41 -28296599.31 0.0136 0.0125
 Saturn -82185-07-17 03:20 J -28296450.60 -28296450.36 -28296450.12 0.0277 0.0072
 Saturn -82184-07-30 17:30 J -28296071.96 -28296071.77 -28296071.57 0.0280 0.0173
 Saturn -82183-08-13 17:01 J -28295692.84 -28295692.79 -28295692.70 0.0282 0.0271
 Jupiter -82181-09-26 07:40 J -28294918.42 -28294918.18 -28294917.94 0.0499 0.0009
 Jupiter -82175-03-21 18:42 J -28292915.91 -28292915.72 -28292915.52 0.0530 0.0252
 Saturn -82175-12-08 08:23 J -28292654.21 -28292654.15 -28292654.07 0.0292 0.0278
 Saturn -82174-12-22 11:01 J -28292275.23 -28292275.04 -28292274.84 0.0290 0.0174
 Saturn -82172-01-04 03:20 J -28291896.60 -28291896.36 -28291896.13 0.0287 0.0065
 Saturn -82171-01-17 09:06 J -28291518.36 -28291518.12 -28291517.88 0.0284 0.0041
 Saturn -82170-01-30 04:47 J -28291140.50 -28291140.30 -28291140.09 0.0281 0.0140
 Saturn -82169-02-11 15:20 J -28290763.00 -28290762.86 -28290762.72 0.0278 0.0226
 Neptune -82169-03-29 12:13 J -28290716.10 -28290715.99 -28290715.82 0.0089 0.0073
 Mars -82169-06-11 03:49 J -28290642.53 -28290642.34 -28290642.16 0.1578 0.0421
 Jupiter -82169-10-01 02:37 J -28290530.59 -28290530.39 -28290530.17 0.0500 0.0236
 Neptune -82168-03-31 21:49 J -28290348.79 -28290348.59 -28290348.38 0.0089 0.0051
 Neptune -82167-04-03 06:42 J -28289981.44 -28289981.22 -28289980.97 0.0089 0.0030
 Neptune -82166-04-05 16:04 J -28289614.07 -28289613.83 -28289613.57 0.0089 0.0008
 Neptune -82165-04-07 01:11 J -28289246.69 -28289246.45 -28289246.19 0.0089 0.0014
 Neptune -82164-04-09 10:18 J -28288879.28 -28288879.07 -28288878.82 0.0089 0.0036
 Jupiter -82163-03-26 12:42 J -28288528.20 -28288527.97 -28288527.75 0.0529 0.0021
 Neptune -82163-04-11 19:40 J -28288511.85 -28288511.68 -28288511.47 0.0089 0.0058
 Neptune -82162-04-14 05:30 J -28288144.37 -28288144.27 -28288144.14 0.0089 0.0079
 Uranus -82161-06-04 08:52 J -28287727.15 -28287727.13 -28287727.09 0.0148 0.0146

Uranus	-82160-06-09 14:23 J	-28287357.01	-28287356.90	-28287356.76	0.0148	0.0129
Saturn	-82159-06-04 22:18 J	-28286996.69	-28286996.57	-28286996.44	0.0269	0.0233
Uranus	-82159-06-14 21:06 J	-28286986.78	-28286986.62	-28286986.45	0.0148	0.0110
Saturn	-82158-06-17 04:04 J	-28286619.53	-28286619.33	-28286619.13	0.0271	0.0154
Uranus	-82158-06-20 03:35 J	-28286616.53	-28286616.35	-28286616.13	0.0148	0.0091
Uranus	-82157-06-24 11:01 J	-28286246.25	-28286246.04	-28286245.80	0.0147	0.0071
Saturn	-82157-06-28 18:13 J	-28286241.98	-28286241.74	-28286241.50	0.0273	0.0065
Jupiter	-82157-10-05 19:40 J	-28286142.76	-28286142.68	-28286142.61	0.0502	0.0475
Uranus	-82156-06-29 18:56 J	-28285875.94	-28285875.71	-28285875.46	0.0147	0.0049
Saturn	-82156-07-11 17:16 J	-28285864.02	-28285863.78	-28285863.53	0.0275	0.0032
Uranus	-82155-07-05 02:52 J	-28285505.63	-28285505.38	-28285505.12	0.0147	0.0028
Saturn	-82155-07-25 02:08 J	-28285485.63	-28285485.41	-28285485.19	0.0278	0.0132
Uranus	-82154-07-10 11:01 J	-28285135.30	-28285135.04	-28285134.78	0.0147	0.0006
Saturn	-82154-08-07 20:37 J	-28285106.77	-28285106.64	-28285106.48	0.0281	0.0232
Uranus	-82153-07-14 19:11 J	-28284764.96	-28284764.70	-28284764.44	0.0147	0.0015
Uranus	-82152-07-20 02:52 J	-28284394.62	-28284394.38	-28284394.12	0.0146	0.0037
Jupiter	-82151-03-31 07:54 J	-28284140.35	-28284140.17	-28284139.97	0.0527	0.0292
Uranus	-82151-07-25 10:47 J	-28284024.28	-28284024.05	-28284023.80	0.0146	0.0057
Uranus	-82150-07-30 17:59 J	-28283653.95	-28283653.75	-28283653.51	0.0145	0.0077
Uranus	-82149-08-04 01:40 J	-28283283.62	-28283283.43	-28283283.23	0.0145	0.0096
Uranus	-82148-08-09 08:23 J	-28282913.30	-28282913.15	-28282912.99	0.0144	0.0115
Uranus	-82147-08-14 13:54 J	-28282543.00	-28282542.92	-28282542.80	0.0144	0.0133
Mars	-82146-12-21 12:13 J	-28282049.19	-28282048.99	-28282048.79	0.1964	0.0550
Saturn	-82145-12-15 10:47 J	-28281689.20	-28281689.05	-28281688.89	0.0290	0.0223
Saturn	-82144-12-29 07:25 J	-28281310.40	-28281310.19	-28281309.96	0.0288	0.0116
Saturn	-82142-01-11 17:59 J	-28280931.99	-28280931.75	-28280931.51	0.0285	0.0008
Saturn	-82141-01-24 17:59 J	-28280553.97	-28280553.75	-28280553.52	0.0282	0.0095
Saturn	-82140-02-05 08:08 J	-28280176.33	-28280176.16	-28280175.98	0.0279	0.0187
Saturn	-82139-02-17 13:54 J	-28279798.97	-28279798.92	-28279798.84	0.0276	0.0266
Mars	-82137-06-18 17:01 J	-28278946.84	-28278946.79	-28278946.74	0.1578	0.1507

Saturn	-82130-05-30 17:30 J	-28276409.81	-28276409.77	-28276409.72	0.0268	0.0263
Saturn	-82129-06-10 19:11 J	-28276032.86	-28276032.70	-28276032.51	0.0270	0.0190
Saturn	-82128-06-23 05:30 J	-28275655.50	-28275655.27	-28275655.04	0.0272	0.0105
Saturn	-82127-07-06 00:13 J	-28275277.74	-28275277.49	-28275277.24	0.0274	0.0013
Saturn	-82126-07-19 04:47 J	-28274899.54	-28274899.30	-28274899.06	0.0277	0.0087
Saturn	-82125-07-31 19:25 J	-28274520.87	-28274520.69	-28274520.50	0.0280	0.0187
Saturn	-82124-08-14 19:54 J	-28274141.67	-28274141.67	-28274141.67	0.0283	0.0283
Uranus	-82120-12-11 14:23 J	-28272561.92	-28272561.90	-28272561.84	0.0131	0.0129
Uranus	-82119-12-15 18:28 J	-28272192.82	-28272192.73	-28272192.59	0.0131	0.0117
Uranus	-82118-12-19 22:04 J	-28271823.72	-28271823.58	-28271823.41	0.0131	0.0103
Uranus	-82117-12-23 01:11 J	-28271454.62	-28271454.45	-28271454.26	0.0131	0.0089
Saturn	-82116-12-09 12:42 J	-28271103.06	-28271102.97	-28271102.85	0.0292	0.0265
Uranus	-82116-12-27 03:49 J	-28271085.54	-28271085.34	-28271085.13	0.0131	0.0075
Saturn	-82115-12-23 15:20 J	-28270724.06	-28270723.86	-28270723.65	0.0290	0.0159
Uranus	-82115-12-31 05:59 J	-28270716.46	-28270716.25	-28270716.02	0.0131	0.0061
Uranus	-82113-01-04 08:08 J	-28270347.39	-28270347.16	-28270346.92	0.0131	0.0047
Saturn	-82113-01-06 07:25 J	-28270345.43	-28270345.19	-28270344.95	0.0287	0.0049
Uranus	-82112-01-07 10:04 J	-28269978.32	-28269978.08	-28269977.84	0.0132	0.0032
Saturn	-82112-01-18 12:56 J	-28269967.20	-28269966.96	-28269966.73	0.0284	0.0057
Uranus	-82111-01-11 11:30 J	-28269609.26	-28269609.02	-28269608.76	0.0132	0.0017
Saturn	-82111-01-31 08:08 J	-28269589.36	-28269589.16	-28269588.96	0.0281	0.0154
Uranus	-82110-01-15 13:25 J	-28269240.19	-28269239.94	-28269239.69	0.0132	0.0003
Saturn	-82110-02-12 17:59 J	-28269211.86	-28269211.75	-28269211.62	0.0278	0.0239
Jupiter	-82110-09-21 21:35 J	-28268990.80	-28268990.60	-28268990.39	0.0497	0.0263
Uranus	-82109-01-19 15:06 J	-28268871.11	-28268870.87	-28268870.61	0.0132	0.0014
Uranus	-82108-01-22 17:16 J	-28268502.03	-28268501.78	-28268501.54	0.0133	0.0028
Uranus	-82107-01-26 19:11 J	-28268132.93	-28268132.70	-28268132.46	0.0133	0.0043
Uranus	-82106-01-30 21:35 J	-28267763.81	-28267763.60	-28267763.37	0.0133	0.0058
Uranus	-82105-02-04 00:28 J	-28267394.68	-28267394.48	-28267394.27	0.0134	0.0073
Uranus	-82104-02-07 03:20 J	-28267025.53	-28267025.36	-28267025.16	0.0134	0.0088

Uranus -82103-02-11 06:42 J -28266656.36 -28266656.22 -28266656.04 0.0135 0.0103
 Uranus -82102-02-15 10:32 J -28266287.16 -28266287.06 -28266286.92 0.0135 0.0117
 Uranus -82101-02-19 14:52 J -28265917.92 -28265917.88 -28265917.79 0.0136 0.0131
 Saturn -82100-06-05 22:32 J -28265445.70 -28265445.56 -28265445.42 0.0269 0.0221
 Saturn -82099-06-18 04:04 J -28265068.53 -28265068.33 -28265068.11 0.0270 0.0141
 Saturn -82098-06-30 18:28 J -28264690.97 -28264690.73 -28264690.48 0.0273 0.0051
 Jupiter -82098-09-26 13:40 J -28264603.17 -28264602.93 -28264602.69 0.0498 0.0028
 Saturn -82097-07-12 17:59 J -28264313.00 -28264312.75 -28264312.50 0.0275 0.0046
 Saturn -82096-07-26 03:06 J -28263934.58 -28263934.37 -28263934.15 0.0278 0.0146
 Saturn -82095-08-08 22:32 J -28263555.68 -28263555.56 -28263555.43 0.0281 0.0245
 Pluto -82093-07-20 18:56 J -28262843.95 -28262843.71 -28262843.44 0.0066 0.0014
 Jupiter -82092-03-21 01:54 J -28262600.61 -28262600.42 -28262600.23 0.0531 0.0276
 Mars -82090-06-14 02:52 J -28261785.57 -28261785.38 -28261785.20 0.1577 0.0163
 Neptune -82088-09-30 04:04 J -28260946.36 -28260946.33 -28260946.26 0.0088 0.0087
 Neptune -82087-10-02 18:28 J -28260578.89 -28260578.73 -28260578.52 0.0088 0.0064
 Jupiter -82086-10-01 07:40 J -28260215.39 -28260215.18 -28260214.96 0.0500 0.0213
 Neptune -82086-10-05 09:20 J -28260211.34 -28260211.11 -28260210.87 0.0088 0.0042
 Saturn -82086-12-17 15:35 J -28260138.01 -28260137.85 -28260137.67 0.0290 0.0208
 Neptune -82085-10-06 23:30 J -28259843.76 -28259843.52 -28259843.25 0.0088 0.0020
 Saturn -82085-12-30 12:13 J -28259759.22 -28259758.99 -28259758.76 0.0288 0.0100
 Neptune -82084-10-09 13:54 J -28259476.18 -28259475.92 -28259475.65 0.0088 0.0003
 Saturn -82083-01-12 22:04 J -28259380.82 -28259380.58 -28259380.33 0.0285 0.0010
 Neptune -82083-10-12 04:04 J -28259108.58 -28259108.33 -28259108.07 0.0088 0.0026
 Saturn -82082-01-25 21:49 J -28259002.81 -28259002.59 -28259002.37 0.0282 0.0110
 Neptune -82082-10-14 17:30 J -28258740.97 -28258740.77 -28258740.52 0.0088 0.0048
 Saturn -82081-02-07 11:30 J -28258625.18 -28258625.02 -28258624.85 0.0279 0.0200
 Neptune -82081-10-16 07:25 J -28258373.32 -28258373.19 -28258373.01 0.0088 0.0070
 Jupiter -82080-03-25 23:01 J -28258212.76 -28258212.54 -28258212.31 0.0529 0.0007
 Uranus -82077-06-04 19:25 J -28257045.71 -28257045.69 -28257045.63 0.0148 0.0146
 Uranus -82076-06-10 01:11 J -28256675.56 -28256675.45 -28256675.31 0.0148 0.0128

Uranus	-82075-06-15 07:11 J	-28256305.35	-28256305.20	-28256305.01	0.0148	0.0109
Uranus	-82074-06-20 13:54 J	-28255935.10	-28255934.92	-28255934.70	0.0148	0.0089
Jupiter	-82074-10-06 02:37 J	-28255827.48	-28255827.39	-28255827.29	0.0502	0.0458
Uranus	-82073-06-24 21:35 J	-28255564.82	-28255564.60	-28255564.37	0.0147	0.0068
Uranus	-82072-06-30 04:47 J	-28255194.53	-28255194.30	-28255194.04	0.0147	0.0047
Saturn	-82071-05-31 16:32 J	-28254858.89	-28254858.81	-28254858.73	0.0268	0.0252
Uranus	-82071-07-05 12:56 J	-28254824.21	-28254823.96	-28254823.70	0.0147	0.0025
Saturn	-82070-06-12 18:13 J	-28254481.92	-28254481.74	-28254481.55	0.0270	0.0177
Uranus	-82070-07-10 20:52 J	-28254453.89	-28254453.63	-28254453.37	0.0147	0.0002
Saturn	-82069-06-24 04:04 J	-28254104.56	-28254104.33	-28254104.09	0.0272	0.0092
Uranus	-82069-07-15 04:47 J	-28254083.55	-28254083.30	-28254083.04	0.0146	0.0020
Jupiter	-82068-03-30 17:30 J	-28253824.96	-28253824.77	-28253824.57	0.0527	0.0274
Saturn	-82068-07-06 23:16 J	-28253726.78	-28253726.53	-28253726.28	0.0274	0.0002
Uranus	-82068-07-20 12:56 J	-28253713.21	-28253712.96	-28253712.71	0.0146	0.0040
Saturn	-82067-07-20 03:49 J	-28253348.57	-28253348.34	-28253348.10	0.0277	0.0100
Uranus	-82067-07-25 20:23 J	-28253342.88	-28253342.65	-28253342.41	0.0146	0.0062
Uranus	-82066-07-31 03:49 J	-28252972.54	-28252972.34	-28252972.11	0.0145	0.0082
Saturn	-82066-08-02 18:28 J	-28252969.89	-28252969.73	-28252969.54	0.0280	0.0200
Uranus	-82065-08-04 11:01 J	-28252602.20	-28252602.04	-28252601.84	0.0145	0.0102
Uranus	-82064-08-09 17:59 J	-28252231.88	-28252231.75	-28252231.60	0.0144	0.0120
Uranus	-82063-08-14 23:59 J	-28251861.56	-28251861.50	-28251861.42	0.0144	0.0138
Saturn	-82057-12-10 14:37 J	-28249552.00	-28249551.89	-28249551.76	0.0292	0.0252
Jupiter	-82056-04-04 05:30 J	-28249437.27	-28249437.27	-28249437.26	0.0525	0.0525
Saturn	-82056-12-24 17:01 J	-28249173.00	-28249172.79	-28249172.58	0.0290	0.0144
Saturn	-82054-01-07 09:06 J	-28248794.36	-28248794.12	-28248793.88	0.0287	0.0034
Saturn	-82053-01-20 14:23 J	-28248416.13	-28248415.90	-28248415.67	0.0284	0.0072
Saturn	-82052-02-01 08:52 J	-28248038.31	-28248038.13	-28248037.92	0.0281	0.0169
Saturn	-82051-02-13 18:42 J	-28247660.81	-28247660.72	-28247660.61	0.0278	0.0251
Mars	-82043-06-08 13:54 J	-28244624.04	-28244623.92	-28244623.79	0.1579	0.1166
Saturn	-82041-06-06 21:06 J	-28243894.76	-28243894.62	-28243894.46	0.0268	0.0210

Saturn -82040-06-19 02:52 J -28243517.59 -28243517.38 -28243517.15 0.0270 0.0129
 Saturn -82039-07-01 17:16 J -28243140.02 -28243139.78 -28243139.53 0.0273 0.0038
 Saturn -82038-07-14 16:47 J -28242762.04 -28242761.80 -28242761.55 0.0275 0.0060
 Saturn -82037-07-27 02:23 J -28242383.59 -28242383.40 -28242383.18 0.0278 0.0160
 Saturn -82036-08-09 22:18 J -28242004.66 -28242004.57 -28242004.46 0.0282 0.0257
 Uranus -82036-12-12 02:37 J -28241880.43 -28241880.39 -28241880.33 0.0131 0.0128
 Uranus -82035-12-16 06:42 J -28241511.33 -28241511.22 -28241511.09 0.0131 0.0115
 Uranus -82034-12-20 10:18 J -28241142.22 -28241142.07 -28241141.91 0.0131 0.0102
 Uranus -82033-12-23 12:56 J -28240773.13 -28240772.96 -28240772.75 0.0131 0.0088
 Uranus -82032-12-27 15:35 J -28240404.04 -28240403.85 -28240403.62 0.0131 0.0074
 Uranus -82031-12-31 18:13 J -28240034.96 -28240034.74 -28240034.51 0.0131 0.0059
 Uranus -82029-01-04 20:23 J -28239665.88 -28239665.65 -28239665.41 0.0131 0.0044
 Uranus -82028-01-07 22:18 J -28239296.81 -28239296.57 -28239296.32 0.0132 0.0029
 Uranus -82027-01-11 23:59 J -28238927.74 -28238927.50 -28238927.24 0.0132 0.0014
 Jupiter -82027-09-21 04:32 J -28238675.51 -28238675.31 -28238675.11 0.0496 0.0279
 Saturn -82027-12-18 17:01 J -28238586.96 -28238586.79 -28238586.60 0.0290 0.0194
 Uranus -82026-01-16 02:08 J -28238558.66 -28238558.41 -28238558.16 0.0132 0.0002
 Saturn -82025-01-01 13:40 J -28238208.16 -28238207.93 -28238207.70 0.0288 0.0085
 Uranus -82025-01-20 03:49 J -28238189.58 -28238189.34 -28238189.08 0.0132 0.0017
 Saturn -82024-01-13 23:30 J -28237829.76 -28237829.52 -28237829.28 0.0285 0.0023
 Uranus -82024-01-23 05:59 J -28237820.49 -28237820.25 -28237820.00 0.0133 0.0032
 Saturn -82023-01-26 22:32 J -28237451.76 -28237451.56 -28237451.33 0.0282 0.0124
 Uranus -82023-01-27 08:08 J -28237451.38 -28237451.16 -28237450.92 0.0133 0.0048 *
 Uranus -82022-01-31 10:47 J -28237082.26 -28237082.05 -28237081.82 0.0133 0.0063
 Saturn -82022-02-08 12:28 J -28237074.13 -28237073.98 -28237073.82 0.0279 0.0213
 Uranus -82021-02-04 13:54 J -28236713.12 -28236712.92 -28236712.72 0.0134 0.0078
 Uranus -82020-02-07 16:47 J -28236343.97 -28236343.80 -28236343.61 0.0134 0.0093
 Uranus -82019-02-11 20:23 J -28235974.79 -28235974.65 -28235974.50 0.0135 0.0108
 Uranus -82018-02-15 23:59 J -28235605.58 -28235605.50 -28235605.38 0.0135 0.0123
 Jupiter -82015-09-25 21:35 J -28234287.84 -28234287.60 -28234287.36 0.0498 0.0043

Saturn -82012-06-01 14:08 J -28233308.00 -28233307.91 -28233307.80 0.0268 0.0241

Saturn -82011-06-13 16:04 J -28232931.03 -28232930.83 -28232930.64 0.0270 0.0165

Mars -82011-06-16 02:23 J -28232928.57 -28232928.40 -28232928.23 0.1577 0.0750

Saturn -82010-06-26 01:54 J -28232553.66 -28232553.42 -28232553.19 0.0272 0.0079

Jupiter -82009-03-20 12:56 J -28232285.15 -28232284.96 -28232284.77 0.0531 0.0290

Saturn -82009-07-07 20:37 J -28232175.89 -28232175.64 -28232175.39 0.0274 0.0015

Saturn -82008-07-21 01:11 J -28231797.67 -28231797.45 -28231797.22 0.0277 0.0114

Saturn -82007-08-03 16:04 J -28231418.98 -28231418.83 -28231418.66 0.0280 0.0212

Pluto -82006-01-25 19:40 J -28231243.93 -28231243.68 -28231243.43 0.0078 0.0003

Neptune -82005-03-28 22:18 J -28230815.63 -28230815.57 -28230815.45 0.0089 0.0083

Neptune -82004-03-31 07:40 J -28230448.35 -28230448.18 -28230447.99 0.0089 0.0061

Neptune -82003-04-02 16:32 J -28230081.02 -28230080.81 -28230080.57 0.0089 0.0040

Jupiter -82003-09-30 17:59 J -28229899.96 -28229899.75 -28229899.52 0.0500 0.0204

Neptune -82002-04-05 01:54 J -28229713.66 -28229713.42 -28229713.17 0.0089 0.0018

Neptune -82001-04-06 11:01 J -28229346.29 -28229346.04 -28229345.79 0.0089 0.0003

82ND MILLENNIUM BCE

This is a list of transits of Earth in the 82nd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Neptune -82000-04-08 19:54 J -28228978.90 -28228978.67 -28228978.42 0.0089 0.0025

Neptune -81999-04-11 05:16 J -28228611.48 -28228611.28 -28228611.06 0.0089 0.0047

Neptune -81998-04-13 14:23 J -28228244.04 -28228243.90 -28228243.72 0.0089 0.0069

Saturn -81998-12-12 14:08 J -28228001.04 -28228000.91 -28228000.76 0.0292 0.0240

Jupiter -81997-03-25 02:23 J -28227897.62 -28227897.40 -28227897.17 0.0529 0.0032
 Saturn -81997-12-25 16:32 J -28227622.02 -28227621.81 -28227621.59 0.0290 0.0131
 Saturn -81995-01-08 08:37 J -28227243.38 -28227243.14 -28227242.90 0.0287 0.0020
 Saturn -81994-01-21 13:54 J -28226865.15 -28226864.92 -28226864.69 0.0284 0.0085
 Saturn -81993-02-03 08:23 J -28226487.32 -28226487.15 -28226486.95 0.0281 0.0182
 Uranus -81993-06-05 07:54 J -28226364.20 -28226364.17 -28226364.10 0.0147 0.0145
 Saturn -81992-02-14 18:13 J -28226109.81 -28226109.74 -28226109.66 0.0278 0.0262
 Uranus -81992-06-10 13:11 J -28225994.06 -28225993.95 -28225993.80 0.0148 0.0126
 Uranus -81991-06-15 19:11 J -28225623.86 -28225623.70 -28225623.51 0.0148 0.0107
 Jupiter -81991-10-05 14:08 J -28225512.01 -28225511.91 -28225511.80 0.0501 0.0449
 Uranus -81990-06-21 01:40 J -28225253.62 -28225253.43 -28225253.21 0.0148 0.0086
 Uranus -81989-06-25 08:52 J -28224883.35 -28224883.13 -28224882.89 0.0147 0.0064
 Uranus -81988-06-30 16:18 J -28224513.06 -28224512.82 -28224512.57 0.0147 0.0043
 Uranus -81987-07-05 23:59 J -28224142.76 -28224142.50 -28224142.25 0.0147 0.0020
 Uranus -81986-07-11 07:40 J -28223772.44 -28223772.18 -28223771.92 0.0147 0.0002
 Jupiter -81985-03-29 19:40 J -28223509.88 -28223509.68 -28223509.47 0.0528 0.0238
 Uranus -81985-07-15 15:35 J -28223402.10 -28223401.85 -28223401.59 0.0146 0.0024
 Uranus -81984-07-20 23:01 J -28223031.77 -28223031.54 -28223031.28 0.0146 0.0046
 Uranus -81983-07-26 06:56 J -28222661.43 -28222661.21 -28222660.97 0.0146 0.0067
 Saturn -81982-06-08 18:56 J -28222343.87 -28222343.71 -28222343.54 0.0268 0.0199
 Uranus -81982-07-31 14:37 J -28222291.09 -28222290.89 -28222290.68 0.0145 0.0087
 Saturn -81981-06-20 00:42 J -28221966.69 -28221966.47 -28221966.24 0.0270 0.0116
 Uranus -81981-08-04 21:20 J -28221920.76 -28221920.61 -28221920.42 0.0145 0.0108
 Saturn -81980-07-02 15:06 J -28221589.12 -28221588.87 -28221588.62 0.0273 0.0025
 Uranus -81980-08-10 04:04 J -28221550.44 -28221550.33 -28221550.19 0.0144 0.0126
 Saturn -81979-07-15 14:37 J -28221211.13 -28221210.89 -28221210.64 0.0275 0.0072
 Saturn -81978-07-29 00:28 J -28220832.67 -28220832.48 -28220832.27 0.0278 0.0172
 Saturn -81977-08-10 20:23 J -28220453.71 -28220453.65 -28220453.56 0.0282 0.0268
 Jupiter -81973-04-03 14:52 J -28219121.93 -28219121.88 -28219121.82 0.0526 0.0506
 Saturn -81969-12-05 10:32 J -28217415.09 -28217415.06 -28217414.99 0.0293 0.0286

Saturn -81968-12-19 17:16 J -28217035.97 -28217035.78 -28217035.59 0.0291 0.0181
 Saturn -81966-01-02 13:40 J -28216657.16 -28216656.93 -28216656.69 0.0288 0.0071
 Saturn -81965-01-15 23:30 J -28216278.76 -28216278.52 -28216278.28 0.0285 0.0037
 Saturn -81964-01-27 22:32 J -28215900.76 -28215900.56 -28215900.34 0.0282 0.0137
 Mars -81964-06-10 13:40 J -28215767.11 -28215766.93 -28215766.76 0.1578 0.0579
 Saturn -81963-02-09 11:59 J -28215523.13 -28215523.00 -28215522.85 0.0279 0.0225
 Saturn -81953-06-02 11:59 J -28211757.11 -28211757.00 -28211756.87 0.0268 0.0231
 Saturn -81952-06-14 13:40 J -28211380.12 -28211379.93 -28211379.72 0.0270 0.0154
 Uranus -81952-12-12 13:40 J -28211198.98 -28211198.93 -28211198.87 0.0131 0.0128
 Saturn -81951-06-26 23:30 J -28211002.76 -28211002.52 -28211002.27 0.0272 0.0066
 Uranus -81951-12-16 17:30 J -28210829.87 -28210829.77 -28210829.62 0.0131 0.0115
 Saturn -81950-07-09 18:13 J -28210624.99 -28210624.74 -28210624.49 0.0274 0.0028
 Uranus -81950-12-20 21:06 J -28210460.77 -28210460.62 -28210460.44 0.0131 0.0100
 Saturn -81949-07-21 22:47 J -28210246.77 -28210246.55 -28210246.32 0.0277 0.0127
 Uranus -81949-12-24 00:13 J -28210091.67 -28210091.49 -28210091.29 0.0131 0.0086
 Saturn -81948-08-04 13:40 J -28209868.07 -28209867.93 -28209867.77 0.0280 0.0225
 Uranus -81948-12-28 02:37 J -28209722.58 -28209722.39 -28209722.16 0.0131 0.0072
 Uranus -81946-01-01 05:30 J -28209353.49 -28209353.27 -28209353.04 0.0131 0.0056
 Uranus -81945-01-05 07:40 J -28208984.42 -28208984.18 -28208983.94 0.0132 0.0041
 Uranus -81944-01-08 09:35 J -28208615.34 -28208615.10 -28208614.84 0.0132 0.0026
 Jupiter -81944-09-20 15:20 J -28208360.05 -28208359.86 -28208359.66 0.0496 0.0287
 Uranus -81943-01-12 11:44 J -28208246.26 -28208246.01 -28208245.76 0.0132 0.0010
 Uranus -81942-01-16 13:54 J -28207877.17 -28207876.92 -28207876.67 0.0132 0.0005
 Uranus -81941-01-20 15:49 J -28207508.08 -28207507.84 -28207507.59 0.0132 0.0021
 Uranus -81940-01-23 17:59 J -28207138.99 -28207138.75 -28207138.51 0.0133 0.0037
 Uranus -81939-01-27 20:37 J -28206769.87 -28206769.64 -28206769.41 0.0133 0.0052
 Saturn -81939-12-13 12:13 J -28206450.13 -28206449.99 -28206449.83 0.0292 0.0229
 Uranus -81938-01-31 23:16 J -28206400.74 -28206400.53 -28206400.31 0.0133 0.0068
 Saturn -81938-12-27 14:37 J -28206071.10 -28206070.89 -28206070.66 0.0290 0.0119
 Uranus -81937-02-05 01:40 J -28206031.61 -28206031.43 -28206031.22 0.0134 0.0084

Saturn -81936-01-09 06:42 J -28205692.46 -28205692.22 -28205691.98 0.0287 0.0007
 Uranus -81936-02-08 05:01 J -28205662.45 -28205662.29 -28205662.11 0.0134 0.0099
 Saturn -81935-01-22 11:44 J -28205314.23 -28205314.01 -28205313.78 0.0285 0.0099
 Uranus -81935-02-12 08:23 J -28205293.26 -28205293.15 -28205293.00 0.0135 0.0114
 Saturn -81934-02-04 06:56 J -28204936.38 -28204936.21 -28204936.04 0.0281 0.0193
 Uranus -81934-02-16 12:13 J -28204924.05 -28204923.99 -28204923.89 0.0135 0.0128
 Saturn -81933-02-16 16:18 J -28204558.85 -28204558.82 -28204558.77 0.0278 0.0273
 Mars -81932-06-18 02:08 J -28204071.51 -28204071.41 -28204071.31 0.1577 0.1347
 Jupiter -81932-09-25 10:18 J -28203972.31 -28203972.07 -28203971.83 0.0498 0.0049
 Jupiter -81926-03-20 15:06 J -28201970.05 -28201969.87 -28201969.70 0.0531 0.0327
 Saturn -81924-05-28 18:28 J -28201169.77 -28201169.73 -28201169.67 0.0267 0.0261
 Saturn -81923-06-09 16:47 J -28200792.97 -28200792.80 -28200792.62 0.0268 0.0188
 Neptune -81923-10-02 00:28 J -28200678.62 -28200678.48 -28200678.33 0.0088 0.0074
 Saturn -81922-06-21 22:32 J -28200415.78 -28200415.56 -28200415.33 0.0270 0.0105
 Neptune -81922-10-04 14:52 J -28200311.08 -28200310.88 -28200310.65 0.0088 0.0052
 Saturn -81921-07-03 12:56 J -28200038.20 -28200037.96 -28200037.71 0.0273 0.0015
 Neptune -81921-10-06 05:16 J -28199943.52 -28199943.28 -28199943.02 0.0088 0.0029
 Saturn -81920-07-16 12:42 J -28199660.20 -28199659.97 -28199659.73 0.0275 0.0084
 Jupiter -81920-09-30 02:37 J -28199584.61 -28199584.39 -28199584.17 0.0499 0.0189
 Neptune -81920-10-08 19:40 J -28199575.94 -28199575.68 -28199575.41 0.0088 0.0007
 Saturn -81919-07-29 22:32 J -28199281.74 -28199281.56 -28199281.36 0.0278 0.0183
 Neptune -81919-10-11 09:49 J -28199208.34 -28199208.09 -28199207.82 0.0088 0.0015
 Saturn -81918-08-12 18:42 J -28198902.75 -28198902.72 -28198902.69 0.0282 0.0279
 Neptune -81918-10-13 23:59 J -28198840.73 -28198840.50 -28198840.25 0.0088 0.0037
 Neptune -81917-10-15 13:40 J -28198473.10 -28198472.93 -28198472.71 0.0088 0.0060
 Neptune -81916-10-18 03:35 J -28198105.43 -28198105.35 -28198105.23 0.0088 0.0082
 Jupiter -81914-03-25 10:47 J -28197582.28 -28197582.05 -28197581.83 0.0530 0.0050
 Saturn -81910-12-07 10:18 J -28195864.15 -28195864.07 -28195863.99 0.0293 0.0274
 Uranus -81909-06-05 21:20 J -28195682.67 -28195682.61 -28195682.55 0.0147 0.0143
 Saturn -81909-12-20 16:32 J -28195485.00 -28195484.81 -28195484.61 0.0291 0.0168

Uranus	-81908-06-11 02:08 J	-28195312.53	-28195312.41	-28195312.26	0.0148	0.0125
Jupiter	-81908-10-04 20:52 J	-28195196.75	-28195196.63	-28195196.51	0.0501	0.0430
Saturn	-81907-01-03 13:11 J	-28195106.19	-28195105.95	-28195105.71	0.0288	0.0057
Uranus	-81907-06-16 08:08 J	-28194942.33	-28194942.16	-28194941.97	0.0148	0.0104
Saturn	-81906-01-16 23:01 J	-28194727.78	-28194727.54	-28194727.30	0.0285	0.0051
Uranus	-81906-06-21 14:37 J	-28194572.10	-28194571.89	-28194571.68	0.0148	0.0083
Saturn	-81905-01-29 22:04 J	-28194349.78	-28194349.58	-28194349.37	0.0282	0.0150
Uranus	-81905-06-25 21:20 J	-28194201.83	-28194201.61	-28194201.37	0.0147	0.0062
Saturn	-81904-02-10 11:16 J	-28193972.14	-28193972.03	-28193971.89	0.0279	0.0237
Uranus	-81904-07-01 04:18 J	-28193831.55	-28193831.32	-28193831.06	0.0147	0.0040
Uranus	-81903-07-06 12:13 J	-28193461.25	-28193460.99	-28193460.73	0.0147	0.0017
Jupiter	-81902-03-30 07:40 J	-28193194.38	-28193194.18	-28193193.97	0.0528	0.0226
Uranus	-81902-07-11 19:54 J	-28193090.93	-28193090.67	-28193090.41	0.0147	0.0006
Uranus	-81901-07-16 03:49 J	-28192720.59	-28192720.34	-28192720.09	0.0146	0.0028
Uranus	-81900-07-21 11:30 J	-28192350.26	-28192350.02	-28192349.77	0.0146	0.0050
Uranus	-81899-07-26 18:56 J	-28191979.92	-28191979.71	-28191979.47	0.0146	0.0073
Uranus	-81898-08-01 02:23 J	-28191609.58	-28191609.40	-28191609.19	0.0145	0.0093
Uranus	-81897-08-05 09:49 J	-28191239.25	-28191239.09	-28191238.93	0.0145	0.0113
Uranus	-81896-08-10 15:49 J	-28190868.93	-28190868.84	-28190868.73	0.0144	0.0132
Saturn	-81894-06-04 10:47 J	-28190206.18	-28190206.05	-28190205.91	0.0268	0.0221
Saturn	-81893-06-15 12:42 J	-28189829.18	-28189828.97	-28189828.76	0.0269	0.0142
Saturn	-81892-06-27 22:04 J	-28189451.82	-28189451.58	-28189451.34	0.0272	0.0054
Saturn	-81891-07-10 16:32 J	-28189074.06	-28189073.81	-28189073.56	0.0274	0.0041
Jupiter	-81890-04-04 02:37 J	-28188806.46	-28188806.39	-28188806.31	0.0526	0.0492
Saturn	-81890-07-23 21:06 J	-28188695.83	-28188695.62	-28188695.40	0.0277	0.0139
Saturn	-81889-08-05 12:13 J	-28188317.12	-28188316.99	-28188316.85	0.0280	0.0236
Mars	-81885-06-12 12:42 J	-28186910.16	-28186909.97	-28186909.78	0.1577	0.0021
Saturn	-81880-12-14 10:47 J	-28184899.20	-28184899.05	-28184898.88	0.0292	0.0218
Saturn	-81879-12-28 13:11 J	-28184520.16	-28184519.95	-28184519.71	0.0290	0.0108
Saturn	-81877-01-11 05:16 J	-28184141.52	-28184141.28	-28184141.04	0.0288	0.0006

Saturn	-81876-01-23 10:18 J	-28183763.29	-28183763.07	-28183762.84	0.0285	0.0111
Saturn	-81875-02-05 05:16 J	-28183385.43	-28183385.28	-28183385.11	0.0281	0.0205
Uranus	-81868-12-13 00:42 J	-28180517.51	-28180517.47	-28180517.39	0.0131	0.0127
Uranus	-81867-12-17 04:47 J	-28180148.41	-28180148.30	-28180148.15	0.0131	0.0114
Uranus	-81866-12-21 08:23 J	-28179779.31	-28179779.15	-28179778.97	0.0131	0.0099
Saturn	-81865-05-29 17:30 J	-28179618.84	-28179618.77	-28179618.68	0.0267	0.0252
Uranus	-81865-12-24 11:16 J	-28179410.21	-28179410.03	-28179409.82	0.0131	0.0084
Saturn	-81864-06-10 16:04 J	-28179242.01	-28179241.83	-28179241.64	0.0268	0.0178
Uranus	-81864-12-28 14:23 J	-28179041.11	-28179040.90	-28179040.69	0.0131	0.0069
Saturn	-81863-06-22 22:04 J	-28178864.81	-28178864.58	-28178864.35	0.0270	0.0093
Uranus	-81862-01-01 16:32 J	-28178672.03	-28178671.81	-28178671.57	0.0131	0.0054
Saturn	-81862-07-05 12:28 J	-28178487.23	-28178486.98	-28178486.73	0.0273	0.0004
Mars	-81862-12-20 00:13 J	-28178319.70	-28178319.49	-28178319.28	0.1964	0.0030
Uranus	-81861-01-05 18:42 J	-28178302.95	-28178302.72	-28178302.47	0.0132	0.0039
Saturn	-81861-07-17 12:28 J	-28178109.21	-28178108.98	-28178108.74	0.0275	0.0097
Jupiter	-81861-09-19 23:59 J	-28178044.69	-28178044.50	-28178044.30	0.0496	0.0298
Uranus	-81860-01-08 20:52 J	-28177933.87	-28177933.63	-28177933.37	0.0132	0.0023
Saturn	-81860-07-30 22:18 J	-28177730.74	-28177730.57	-28177730.38	0.0278	0.0195
Uranus	-81859-01-12 23:01 J	-28177564.79	-28177564.54	-28177564.29	0.0132	0.0007
Uranus	-81858-01-17 01:11 J	-28177195.70	-28177195.45	-28177195.20	0.0132	0.0009
Uranus	-81857-01-21 03:06 J	-28176826.61	-28176826.37	-28176826.12	0.0132	0.0025
Uranus	-81856-01-24 05:44 J	-28176457.50	-28176457.26	-28176457.02	0.0133	0.0041
Uranus	-81855-01-28 07:54 J	-28176088.38	-28176088.17	-28176087.93	0.0133	0.0057
Uranus	-81854-02-01 10:47 J	-28175719.26	-28175719.05	-28175718.84	0.0133	0.0073
Uranus	-81853-02-05 13:25 J	-28175350.12	-28175349.94	-28175349.75	0.0134	0.0088
Uranus	-81852-02-08 16:32 J	-28174980.96	-28174980.81	-28174980.65	0.0134	0.0104
Uranus	-81851-02-12 19:54 J	-28174611.77	-28174611.67	-28174611.54	0.0135	0.0119
Saturn	-81851-12-08 10:32 J	-28174313.16	-28174313.06	-28174312.95	0.0293	0.0263
Uranus	-81850-02-16 23:44 J	-28174242.53	-28174242.51	-28174242.45	0.0135	0.0133
Saturn	-81850-12-22 17:01 J	-28173934.00	-28173933.79	-28173933.59	0.0291	0.0155

Jupiter -81849-09-24 17:01 J -28173657.03 -28173656.79 -28173656.55 0.0497 0.0064
 Saturn -81848-01-04 13:11 J -28173555.19 -28173554.95 -28173554.71 0.0288 0.0044
 Saturn -81847-01-17 23:01 J -28173176.78 -28173176.54 -28173176.31 0.0285 0.0064
 Pluto -81847-07-22 15:49 J -28172991.08 -28172990.84 -28172990.57 0.0066 0.0018
 Saturn -81846-01-30 22:04 J -28172798.77 -28172798.58 -28172798.38 0.0282 0.0162
 Saturn -81845-02-12 11:01 J -28172421.13 -28172421.04 -28172420.91 0.0279 0.0249
 Jupiter -81843-03-20 01:11 J -28171654.62 -28171654.45 -28171654.27 0.0532 0.0341
 Neptune -81840-03-30 17:59 J -28170547.87 -28170547.75 -28170547.57 0.0089 0.0071
 Neptune -81839-04-02 03:06 J -28170180.55 -28170180.37 -28170180.14 0.0089 0.0050
 Neptune -81838-04-04 12:28 J -28169813.21 -28169812.98 -28169812.73 0.0089 0.0028
 Mars -81838-06-08 00:42 J -28169748.57 -28169748.47 -28169748.37 0.1580 0.1318
 Neptune -81837-04-05 21:49 J -28169445.84 -28169445.59 -28169445.34 0.0089 0.0007
 Jupiter -81837-09-29 10:04 J -28169269.30 -28169269.08 -28169268.85 0.0499 0.0173
 Neptune -81836-04-08 06:42 J -28169078.46 -28169078.22 -28169077.96 0.0089 0.0015
 Neptune -81835-04-10 15:49 J -28168711.05 -28168710.84 -28168710.59 0.0089 0.0036
 Saturn -81835-06-05 11:16 J -28168655.17 -28168655.03 -28168654.87 0.0268 0.0211
 Neptune -81834-04-13 01:25 J -28168343.63 -28168343.44 -28168343.25 0.0089 0.0057
 Saturn -81834-06-17 12:56 J -28168278.17 -28168277.96 -28168277.74 0.0269 0.0130
 Neptune -81833-04-14 10:18 J -28167976.16 -28167976.07 -28167975.93 0.0089 0.0079
 Saturn -81833-06-28 22:32 J -28167900.80 -28167900.56 -28167900.31 0.0271 0.0042
 Saturn -81832-07-11 17:16 J -28167523.03 -28167522.78 -28167522.54 0.0274 0.0054
 Jupiter -81831-03-24 22:04 J -28167266.80 -28167266.58 -28167266.35 0.0530 0.0066
 Saturn -81831-07-24 21:35 J -28167144.80 -28167144.60 -28167144.38 0.0277 0.0152
 Saturn -81830-08-07 12:42 J -28166766.08 -28166765.97 -28166765.85 0.0280 0.0248
 Uranus -81825-06-06 08:37 J -28165001.18 -28165001.14 -28165001.05 0.0147 0.0143
 Jupiter -81825-10-04 06:56 J -28164881.34 -28164881.21 -28164881.08 0.0501 0.0418
 Uranus -81824-06-11 13:40 J -28164631.05 -28164630.93 -28164630.77 0.0148 0.0123
 Uranus -81823-06-16 19:40 J -28164260.85 -28164260.68 -28164260.49 0.0148 0.0102
 Uranus -81822-06-22 01:54 J -28163890.62 -28163890.42 -28163890.20 0.0147 0.0080
 Uranus -81821-06-26 08:37 J -28163520.36 -28163520.14 -28163519.89 0.0147 0.0058

Saturn	-81821-12-15 10:32 J	-28163348.23	-28163348.06	-28163347.88	0.0292	0.0207
Uranus	-81820-07-01 15:49 J	-28163150.08	-28163149.84	-28163149.59	0.0147	0.0036
Saturn	-81820-12-29 12:56 J	-28162969.19	-28162968.96	-28162968.73	0.0290	0.0094
Jupiter	-81819-03-29 11:59 J	-28162879.20	-28162879.00	-28162878.78	0.0528	0.0195
Uranus	-81819-07-06 23:16 J	-28162779.78	-28162779.53	-28162779.27	0.0147	0.0013
Saturn	-81818-01-12 04:47 J	-28162590.54	-28162590.30	-28162590.05	0.0288	0.0019
Uranus	-81818-07-12 06:56 J	-28162409.46	-28162409.21	-28162408.95	0.0147	0.0011
Saturn	-81817-01-25 10:04 J	-28162212.30	-28162212.08	-28162211.86	0.0285	0.0123
Uranus	-81817-07-16 14:52 J	-28162039.13	-28162038.88	-28162038.62	0.0146	0.0033
Saturn	-81816-02-06 05:01 J	-28161834.44	-28161834.29	-28161834.14	0.0281	0.0216
Uranus	-81816-07-21 22:18 J	-28161668.80	-28161668.57	-28161668.32	0.0146	0.0056
Uranus	-81815-07-27 05:59 J	-28161298.46	-28161298.25	-28161298.02	0.0145	0.0077
Uranus	-81814-08-01 13:25 J	-28160928.13	-28160927.94	-28160927.75	0.0145	0.0098
Uranus	-81813-08-05 20:08 J	-28160557.80	-28160557.66	-28160557.51	0.0145	0.0119
Uranus	-81812-08-11 02:08 J	-28160187.46	-28160187.41	-28160187.32	0.0144	0.0138
Jupiter	-81807-04-03 04:32 J	-28158491.42	-28158491.31	-28158491.20	0.0526	0.0454
Saturn	-81806-05-31 18:42 J	-28158067.82	-28158067.72	-28158067.62	0.0267	0.0242
Mars	-81806-06-15 11:44 J	-28158053.18	-28158053.01	-28158052.83	0.1577	0.0593
Saturn	-81805-06-11 17:30 J	-28157690.96	-28157690.77	-28157690.57	0.0268	0.0166
Saturn	-81804-06-23 23:30 J	-28157313.75	-28157313.52	-28157313.28	0.0270	0.0082
Saturn	-81803-07-06 14:08 J	-28156936.16	-28156935.91	-28156935.66	0.0272	0.0012
Saturn	-81802-07-19 14:08 J	-28156558.13	-28156557.91	-28156557.67	0.0275	0.0109
Saturn	-81801-08-01 00:13 J	-28156179.64	-28156179.49	-28156179.31	0.0278	0.0208
Saturn	-81792-12-09 12:56 J	-28152762.08	-28152761.96	-28152761.83	0.0293	0.0251
Saturn	-81791-12-23 19:11 J	-28152382.91	-28152382.70	-28152382.49	0.0291	0.0142
Saturn	-81789-01-06 15:06 J	-28152004.11	-28152003.87	-28152003.63	0.0289	0.0031
Saturn	-81788-01-19 00:28 J	-28151625.71	-28151625.48	-28151625.24	0.0286	0.0078
Saturn	-81787-01-31 23:30 J	-28151247.70	-28151247.52	-28151247.32	0.0282	0.0175
Saturn	-81786-02-13 12:42 J	-28150870.04	-28150869.97	-28150869.87	0.0279	0.0260
Uranus	-81784-12-13 10:32 J	-28149836.11	-28149836.06	-28149835.98	0.0131	0.0127

Uranus	-81783-12-17 14:23 J	-28149467.01	-28149466.90	-28149466.75	0.0131	0.0112
Uranus	-81782-12-21 17:59 J	-28149097.91	-28149097.75	-28149097.57	0.0131	0.0097
Uranus	-81781-12-24 20:52 J	-28148728.81	-28148728.63	-28148728.42	0.0131	0.0082
Uranus	-81780-12-28 23:59 J	-28148359.71	-28148359.50	-28148359.28	0.0131	0.0067
Uranus	-81778-01-02 02:23 J	-28147990.62	-28147990.40	-28147990.16	0.0131	0.0051
Jupiter	-81778-09-20 06:13 J	-28147729.41	-28147729.24	-28147729.05	0.0495	0.0316
Uranus	-81777-01-06 04:32 J	-28147621.54	-28147621.31	-28147621.06	0.0132	0.0036
Uranus	-81776-01-09 06:56 J	-28147252.46	-28147252.21	-28147251.96	0.0132	0.0020
Saturn	-81776-06-06 14:08 J	-28147104.06	-28147103.91	-28147103.74	0.0268	0.0200
Uranus	-81775-01-13 09:06 J	-28146883.37	-28146883.12	-28146882.86	0.0132	0.0004
Saturn	-81775-06-18 16:04 J	-28146727.04	-28146726.83	-28146726.60	0.0269	0.0119
Uranus	-81774-01-17 11:16 J	-28146514.28	-28146514.03	-28146513.78	0.0132	0.0013
Saturn	-81774-07-01 02:08 J	-28146349.65	-28146349.41	-28146349.16	0.0271	0.0029
Uranus	-81773-01-21 13:25 J	-28146145.18	-28146144.94	-28146144.69	0.0132	0.0029
Saturn	-81773-07-12 21:06 J	-28145971.86	-28145971.62	-28145971.37	0.0274	0.0068
Uranus	-81772-01-24 15:49 J	-28145776.07	-28145775.84	-28145775.60	0.0133	0.0045
Saturn	-81772-07-26 01:54 J	-28145593.61	-28145593.42	-28145593.21	0.0277	0.0165
Uranus	-81771-01-28 18:13 J	-28145406.95	-28145406.74	-28145406.51	0.0133	0.0061
Saturn	-81771-08-08 16:47 J	-28145214.87	-28145214.80	-28145214.70	0.0280	0.0261
Uranus	-81770-02-01 20:37 J	-28145037.83	-28145037.64	-28145037.43	0.0133	0.0077
Uranus	-81769-02-05 23:16 J	-28144668.70	-28144668.53	-28144668.34	0.0134	0.0093
Uranus	-81768-02-09 02:23 J	-28144299.53	-28144299.40	-28144299.25	0.0134	0.0109
Uranus	-81767-02-13 05:44 J	-28143930.34	-28143930.26	-28143930.15	0.0135	0.0124
Jupiter	-81766-09-25 01:25 J	-28143341.68	-28143341.44	-28143341.20	0.0497	0.0079
Saturn	-81762-12-17 13:11 J	-28141797.13	-28141796.95	-28141796.76	0.0292	0.0194
Saturn	-81761-12-30 15:06 J	-28141418.10	-28141417.87	-28141417.63	0.0290	0.0082
Pluto	-81760-01-26 15:49 J	-28141391.08	-28141390.84	-28141390.58	0.0078	0.0012
Jupiter	-81760-03-19 05:44 J	-28141339.42	-28141339.26	-28141339.10	0.0532	0.0370
Saturn	-81759-01-13 06:42 J	-28141039.46	-28141039.22	-28141038.98	0.0287	0.0030
Mars	-81759-06-09 23:16 J	-28140891.70	-28140891.53	-28140891.37	0.1579	0.0746

Neptune -81759-10-01 07:11 J -28140778.25 -28140778.20 -28140778.07 0.0088 0.0084
 Saturn -81758-01-26 11:30 J -28140661.23 -28140661.02 -28140660.81 0.0285 0.0135
 Neptune -81758-10-03 21:35 J -28140410.76 -28140410.60 -28140410.38 0.0088 0.0062
 Saturn -81757-02-08 06:13 J -28140283.38 -28140283.24 -28140283.10 0.0281 0.0227
 Neptune -81757-10-05 11:59 J -28140043.21 -28140043.00 -28140042.74 0.0088 0.0040
 Neptune -81756-10-08 02:37 J -28139675.64 -28139675.39 -28139675.12 0.0088 0.0017
 Neptune -81755-10-10 17:01 J -28139308.05 -28139307.79 -28139307.52 0.0088 0.0006
 Jupiter -81754-09-29 19:40 J -28138953.90 -28138953.68 -28138953.45 0.0499 0.0161
 Neptune -81754-10-13 06:56 J -28138940.45 -28138940.21 -28138939.94 0.0088 0.0028
 Neptune -81753-10-14 20:52 J -28138572.83 -28138572.63 -28138572.39 0.0088 0.0050
 Neptune -81752-10-17 10:47 J -28138205.18 -28138205.05 -28138204.87 0.0088 0.0072
 Jupiter -81748-03-23 23:01 J -28136951.76 -28136951.54 -28136951.32 0.0530 0.0103
 Saturn -81747-06-01 21:49 J -28136516.70 -28136516.59 -28136516.46 0.0267 0.0232
 Saturn -81746-06-13 21:20 J -28136139.80 -28136139.61 -28136139.40 0.0268 0.0155
 Saturn -81745-06-25 04:04 J -28135762.57 -28135762.33 -28135762.09 0.0270 0.0068
 Saturn -81744-07-07 18:42 J -28135384.96 -28135384.72 -28135384.47 0.0273 0.0025
 Saturn -81743-07-20 19:11 J -28135006.92 -28135006.70 -28135006.47 0.0275 0.0122
 Saturn -81742-08-03 05:59 J -28134628.40 -28134628.25 -28134628.09 0.0278 0.0219
 Jupiter -81742-10-04 11:59 J -28134566.13 -28134566.00 -28134565.85 0.0500 0.0399
 Uranus -81741-06-06 17:30 J -28134319.81 -28134319.77 -28134319.68 0.0147 0.0142
 Uranus -81740-06-11 22:47 J -28133949.68 -28133949.55 -28133949.39 0.0148 0.0122
 Uranus -81739-06-17 04:18 J -28133579.49 -28133579.32 -28133579.12 0.0148 0.0101
 Uranus -81738-06-22 10:47 J -28133209.25 -28133209.05 -28133208.82 0.0147 0.0078
 Uranus -81737-06-26 17:44 J -28132838.99 -28132838.76 -28132838.52 0.0147 0.0056
 Jupiter -81736-03-28 16:47 J -28132564.02 -28132563.80 -28132563.59 0.0529 0.0167
 Uranus -81736-07-02 00:56 J -28132468.71 -28132468.46 -28132468.21 0.0147 0.0033
 Uranus -81735-07-07 08:37 J -28132098.40 -28132098.14 -28132097.88 0.0147 0.0010
 Uranus -81734-07-12 16:32 J -28131728.07 -28131727.81 -28131727.56 0.0147 0.0014
 Uranus -81733-07-17 00:13 J -28131357.73 -28131357.49 -28131357.23 0.0146 0.0037
 Saturn -81733-12-10 17:44 J -28131210.89 -28131210.76 -28131210.61 0.0293 0.0238

Uranus	-81732-07-22 07:54 J	-28130987.40	-28130987.17	-28130986.93	0.0146	0.0060
Saturn	-81732-12-24 23:30 J	-28130831.73	-28130831.52	-28130831.30	0.0291	0.0128
Uranus	-81731-07-27 15:35 J	-28130617.05	-28130616.85	-28130616.63	0.0146	0.0083
Saturn	-81730-01-07 19:11 J	-28130452.94	-28130452.70	-28130452.46	0.0289	0.0016
Uranus	-81730-08-01 22:32 J	-28130246.72	-28130246.56	-28130246.36	0.0145	0.0104
Saturn	-81729-01-21 04:04 J	-28130074.55	-28130074.33	-28130074.09	0.0286	0.0092
Uranus	-81729-08-06 05:30 J	-28129876.38	-28129876.27	-28129876.12	0.0145	0.0125
Saturn	-81728-02-02 03:06 J	-28129696.54	-28129696.37	-28129696.19	0.0282	0.0188
Uranus	-81728-08-11 11:44 J	-28129506.01	-28129506.01	-28129505.99	0.0144	0.0144
Saturn	-81727-02-14 16:04 J	-28129318.87	-28129318.83	-28129318.75	0.0279	0.0271
Mars	-81727-06-17 11:16 J	-28129196.15	-28129196.03	-28129195.90	0.1577	0.1184
Jupiter	-81724-04-02 12:13 J	-28128176.12	-28128175.99	-28128175.86	0.0527	0.0434
Saturn	-81718-05-27 23:59 J	-28125929.53	-28125929.50	-28125929.44	0.0267	0.0262
Saturn	-81717-06-07 20:08 J	-28125552.83	-28125552.66	-28125552.49	0.0268	0.0188
Saturn	-81716-06-19 22:32 J	-28125175.79	-28125175.56	-28125175.33	0.0269	0.0105
Saturn	-81715-07-02 08:52 J	-28124798.37	-28124798.13	-28124797.88	0.0272	0.0015
Saturn	-81714-07-15 04:04 J	-28124420.56	-28124420.33	-28124420.08	0.0274	0.0083
Saturn	-81713-07-27 09:20 J	-28124042.30	-28124042.11	-28124041.91	0.0277	0.0179
Saturn	-81712-08-10 00:42 J	-28123663.52	-28123663.47	-28123663.42	0.0280	0.0273
Saturn	-81704-12-04 08:37 J	-28120625.18	-28120625.14	-28120625.09	0.0293	0.0288
Saturn	-81703-12-18 19:11 J	-28120245.89	-28120245.70	-28120245.51	0.0292	0.0181
Saturn	-81701-01-01 20:23 J	-28119866.88	-28119866.65	-28119866.41	0.0290	0.0068
Saturn	-81700-01-14 11:16 J	-28119488.26	-28119488.03	-28119487.79	0.0287	0.0044
Uranus	-81700-12-13 20:23 J	-28119154.71	-28119154.65	-28119154.57	0.0131	0.0126
Saturn	-81699-01-27 15:35 J	-28119110.05	-28119109.85	-28119109.64	0.0284	0.0148
Uranus	-81699-12-17 23:59 J	-28118785.61	-28118785.50	-28118785.34	0.0131	0.0111
Saturn	-81698-02-09 10:04 J	-28118732.20	-28118732.08	-28118731.95	0.0281	0.0238
Uranus	-81698-12-22 03:20 J	-28118416.51	-28118416.36	-28118416.17	0.0131	0.0096
Uranus	-81697-12-25 06:56 J	-28118047.41	-28118047.21	-28118047.01	0.0131	0.0081
Uranus	-81696-12-29 09:20 J	-28117678.31	-28117678.11	-28117677.87	0.0131	0.0066

Jupiter -81695-09-19 13:40 J -28117414.11 -28117413.93 -28117413.75 0.0496 0.0330
 Uranus -81694-01-02 11:59 J -28117309.22 -28117309.00 -28117308.75 0.0131 0.0049
 Uranus -81693-01-06 14:37 J -28116940.13 -28116939.89 -28116939.65 0.0131 0.0033
 Uranus -81692-01-09 16:47 J -28116571.05 -28116570.80 -28116570.55 0.0132 0.0017
 Uranus -81691-01-13 19:11 J -28116201.95 -28116201.70 -28116201.45 0.0132 0.0001
 Uranus -81690-01-17 21:20 J -28115832.86 -28115832.61 -28115832.36 0.0132 0.0016
 Uranus -81689-01-21 23:30 J -28115463.76 -28115463.52 -28115463.28 0.0132 0.0033
 Uranus -81688-01-25 01:25 J -28115094.66 -28115094.44 -28115094.20 0.0133 0.0050
 Saturn -81688-06-03 03:35 J -28114965.48 -28114965.35 -28114965.20 0.0267 0.0221
 Uranus -81687-01-29 04:04 J -28114725.55 -28114725.33 -28114725.12 0.0133 0.0065
 Saturn -81687-06-15 03:35 J -28114588.55 -28114588.35 -28114588.13 0.0268 0.0143
 Uranus -81686-02-02 06:13 J -28114356.43 -28114356.24 -28114356.04 0.0133 0.0082
 Saturn -81686-06-27 11:01 J -28114211.28 -28114211.04 -28114210.80 0.0270 0.0055
 Uranus -81685-02-06 08:37 J -28113987.29 -28113987.14 -28113986.96 0.0134 0.0098
 Saturn -81685-07-09 02:37 J -28113833.64 -28113833.39 -28113833.14 0.0273 0.0039
 Uranus -81684-02-09 11:30 J -28113618.13 -28113618.02 -28113617.87 0.0134 0.0114
 Saturn -81684-07-22 03:35 J -28113455.56 -28113455.35 -28113455.12 0.0275 0.0137
 Uranus -81683-02-13 14:52 J -28113248.93 -28113248.88 -28113248.79 0.0135 0.0129
 Saturn -81683-08-04 14:52 J -28113077.01 -28113076.88 -28113076.73 0.0279 0.0233
 Jupiter -81683-09-24 05:16 J -28113026.52 -28113026.28 -28113026.05 0.0497 0.0098
 Mars -81680-06-11 22:32 J -28112034.75 -28112034.56 -28112034.37 0.1578 0.0155
 Jupiter -81677-03-18 07:11 J -28111024.34 -28111024.20 -28111024.05 0.0532 0.0404
 Neptune -81676-03-30 05:44 J -28110647.35 -28110647.26 -28110647.13 0.0089 0.0080
 Neptune -81675-04-01 14:37 J -28110280.05 -28110279.89 -28110279.68 0.0089 0.0059
 Neptune -81674-04-03 23:59 J -28109912.71 -28109912.50 -28109912.26 0.0089 0.0038
 Saturn -81674-12-13 02:52 J -28109659.53 -28109659.38 -28109659.22 0.0293 0.0224
 Neptune -81673-04-05 09:20 J -28109545.35 -28109545.11 -28109544.86 0.0089 0.0016
 Saturn -81673-12-26 07:40 J -28109280.40 -28109280.18 -28109279.95 0.0291 0.0113
 Neptune -81672-04-07 18:28 J -28109177.98 -28109177.73 -28109177.48 0.0089 0.0005
 Saturn -81671-01-09 02:52 J -28108901.62 -28108901.38 -28108901.14 0.0288 0.0003

Neptune -81671-04-10 03:20 J -28108810.59 -28108810.36 -28108810.11 0.0089 0.0026
 Jupiter -81671-09-28 21:49 J -28108638.82 -28108638.59 -28108638.36 0.0498 0.0136
 Saturn -81670-01-22 11:16 J -28108523.26 -28108523.03 -28108522.81 0.0285 0.0106
 Neptune -81670-04-12 12:42 J -28108443.18 -28108442.97 -28108442.75 0.0089 0.0047
 Saturn -81669-02-04 09:20 J -28108145.27 -28108145.11 -28108144.94 0.0282 0.0201
 Neptune -81669-04-13 21:35 J -28108075.74 -28108075.60 -28108075.42 0.0089 0.0069
 Jupiter -81665-03-23 03:35 J -28106636.57 -28106636.35 -28106636.13 0.0531 0.0130
 Saturn -81659-05-29 07:25 J -28104378.25 -28104378.19 -28104378.09 0.0267 0.0251
 Jupiter -81659-10-03 14:23 J -28104251.05 -28104250.90 -28104250.74 0.0500 0.0371
 Saturn -81658-06-10 04:04 J -28104001.50 -28104001.33 -28104001.13 0.0268 0.0176
 Uranus -81657-06-07 00:28 J -28103638.53 -28103638.48 -28103638.38 0.0147 0.0142
 Saturn -81657-06-21 07:25 J -28103624.41 -28103624.19 -28103623.95 0.0270 0.0092
 Uranus -81656-06-12 05:30 J -28103268.40 -28103268.27 -28103268.11 0.0147 0.0121
 Saturn -81656-07-03 18:42 J -28103246.97 -28103246.72 -28103246.47 0.0272 0.0000
 Uranus -81655-06-17 11:01 J -28102898.21 -28102898.04 -28102897.84 0.0147 0.0099
 Saturn -81655-07-16 14:37 J -28102869.12 -28102868.89 -28102868.65 0.0274 0.0097
 Uranus -81654-06-22 17:30 J -28102527.98 -28102527.77 -28102527.55 0.0147 0.0077
 Saturn -81654-07-29 20:37 J -28102490.82 -28102490.64 -28102490.46 0.0277 0.0193
 Jupiter -81653-03-27 23:30 J -28102248.73 -28102248.52 -28102248.30 0.0529 0.0143
 Uranus -81653-06-27 00:13 J -28102157.72 -28102157.49 -28102157.25 0.0147 0.0054
 Uranus -81652-07-02 07:40 J -28101787.43 -28101787.18 -28101786.93 0.0147 0.0030
 Uranus -81651-07-07 15:20 J -28101417.12 -28101416.86 -28101416.61 0.0147 0.0006
 Uranus -81650-07-12 23:01 J -28101046.79 -28101046.54 -28101046.28 0.0147 0.0017
 Uranus -81649-07-17 06:42 J -28100676.45 -28100676.22 -28100675.96 0.0146 0.0042
 Uranus -81648-07-22 14:37 J -28100306.12 -28100305.89 -28100305.66 0.0146 0.0064
 Uranus -81647-07-27 22:18 J -28099935.77 -28099935.57 -28099935.36 0.0146 0.0087
 Uranus -81646-08-02 05:01 J -28099565.44 -28099565.29 -28099565.10 0.0145 0.0109
 Uranus -81645-08-06 11:44 J -28099195.10 -28099195.01 -28099194.88 0.0145 0.0130
 Saturn -81645-12-05 18:42 J -28099073.79 -28099073.72 -28099073.62 0.0293 0.0274
 Saturn -81644-12-20 04:32 J -28098694.50 -28098694.31 -28098694.10 0.0292 0.0166

Saturn	-81642-01-03 04:47 J	-28098315.54	-28098315.30	-28098315.06	0.0290	0.0053
Saturn	-81641-01-16 18:42 J	-28097936.96	-28097936.72	-28097936.48	0.0287	0.0058
Jupiter	-81641-04-01 14:52 J	-28097861.03	-28097860.88	-28097860.73	0.0527	0.0400
Saturn	-81640-01-28 22:18 J	-28097558.76	-28097558.57	-28097558.37	0.0284	0.0161
Saturn	-81639-02-10 16:04 J	-28097180.93	-28097180.83	-28097180.71	0.0281	0.0249
Mars	-81633-06-06 10:32 J	-28094873.12	-28094873.06	-28094873.00	0.1582	0.1492
Saturn	-81629-06-04 11:30 J	-28093414.16	-28093414.02	-28093413.86	0.0267	0.0209
Saturn	-81628-06-16 12:28 J	-28093037.19	-28093036.98	-28093036.76	0.0269	0.0129
Saturn	-81627-06-28 20:37 J	-28092659.88	-28092659.64	-28092659.39	0.0271	0.0041
Saturn	-81626-07-11 13:11 J	-28092282.19	-28092281.95	-28092281.70	0.0273	0.0055
Saturn	-81625-07-23 14:52 J	-28091904.07	-28091903.88	-28091903.66	0.0276	0.0152
Saturn	-81624-08-06 02:52 J	-28091525.49	-28091525.38	-28091525.26	0.0279	0.0247
Uranus	-81616-12-14 04:47 J	-28088473.35	-28088473.30	-28088473.20	0.0131	0.0125
Saturn	-81615-12-14 14:37 J	-28088108.06	-28088107.89	-28088107.72	0.0293	0.0208
Uranus	-81615-12-18 08:37 J	-28088104.25	-28088104.14	-28088103.98	0.0131	0.0111
Uranus	-81614-12-22 12:13 J	-28087735.14	-28087734.99	-28087734.79	0.0131	0.0095
Saturn	-81614-12-28 18:42 J	-28087728.95	-28087728.72	-28087728.49	0.0291	0.0096
Uranus	-81613-12-25 15:35 J	-28087366.04	-28087365.85	-28087365.63	0.0131	0.0079
Saturn	-81612-01-10 12:42 J	-28087350.21	-28087349.97	-28087349.72	0.0288	0.0016
Jupiter	-81612-09-18 14:52 J	-28087099.04	-28087098.88	-28087098.70	0.0495	0.0353
Uranus	-81612-12-29 18:42 J	-28086996.93	-28086996.72	-28086996.49	0.0131	0.0063
Saturn	-81611-01-23 20:23 J	-28086971.86	-28086971.65	-28086971.43	0.0285	0.0121
Uranus	-81610-01-02 21:35 J	-28086627.84	-28086627.60	-28086627.37	0.0131	0.0047
Saturn	-81610-02-05 17:44 J	-28086593.91	-28086593.76	-28086593.60	0.0282	0.0214
Uranus	-81609-01-06 23:44 J	-28086258.75	-28086258.51	-28086258.26	0.0131	0.0031
Uranus	-81608-01-10 02:23 J	-28085889.65	-28085889.40	-28085889.15	0.0132	0.0014
Uranus	-81607-01-14 04:32 J	-28085520.56	-28085520.31	-28085520.05	0.0132	0.0004
Uranus	-81606-01-18 06:42 J	-28085151.47	-28085151.22	-28085150.97	0.0132	0.0020
Uranus	-81605-01-22 08:52 J	-28084782.37	-28084782.13	-28084781.89	0.0132	0.0037
Uranus	-81604-01-25 11:16 J	-28084413.26	-28084413.03	-28084412.81	0.0133	0.0053

Uranus -81603-01-29 13:11 J -28084044.15 -28084043.95 -28084043.73 0.0133 0.0070
 Uranus -81602-02-02 15:20 J -28083675.03 -28083674.86 -28083674.65 0.0133 0.0086
 Uranus -81601-02-06 17:59 J -28083305.89 -28083305.75 -28083305.57 0.0134 0.0103
 Mars -81601-06-13 22:04 J -28083177.76 -28083177.58 -28083177.40 0.1577 0.0435
 Pluto -81601-07-23 10:18 J -28083138.30 -28083138.07 -28083137.83 0.0066 0.0029
 Uranus -81600-02-09 20:52 J -28082936.72 -28082936.63 -28082936.49 0.0134 0.0119
 Saturn -81600-05-30 16:47 J -28082826.89 -28082826.80 -28082826.68 0.0267 0.0239
 Jupiter -81600-09-23 05:59 J -28082711.48 -28082711.25 -28082711.02 0.0496 0.0126
 Uranus -81599-02-14 00:28 J -28082567.49 -28082567.48 -28082567.43 0.0135 0.0134
 Saturn -81599-06-11 14:23 J -28082450.08 -28082449.90 -28082449.69 0.0268 0.0163
 Saturn -81598-06-23 18:42 J -28082072.95 -28082072.72 -28082072.48 0.0270 0.0077
 Saturn -81597-07-05 06:42 J -28081695.47 -28081695.22 -28081694.97 0.0272 0.0016
 Saturn -81596-07-18 03:35 J -28081317.57 -28081317.35 -28081317.12 0.0275 0.0112
 Saturn -81595-07-31 10:18 J -28080939.22 -28080939.07 -28080938.89 0.0277 0.0209
 Jupiter -81594-03-18 12:13 J -28080709.11 -28080708.99 -28080708.85 0.0533 0.0432
 Neptune -81594-10-03 05:01 J -28080510.42 -28080510.29 -28080510.10 0.0088 0.0071
 Neptune -81593-10-04 19:40 J -28080142.88 -28080142.68 -28080142.44 0.0088 0.0048
 Neptune -81592-10-07 10:18 J -28079775.32 -28079775.07 -28079774.81 0.0088 0.0026
 Neptune -81591-10-10 00:42 J -28079407.73 -28079407.47 -28079407.20 0.0088 0.0004
 Neptune -81590-10-12 14:52 J -28079040.14 -28079039.88 -28079039.62 0.0088 0.0018
 Neptune -81589-10-14 05:01 J -28078672.52 -28078672.29 -28078672.05 0.0088 0.0040
 Jupiter -81588-09-27 23:59 J -28078323.73 -28078323.50 -28078323.26 0.0498 0.0109
 Neptune -81588-10-16 18:42 J -28078304.88 -28078304.72 -28078304.50 0.0088 0.0062
 Neptune -81587-10-19 08:52 J -28077937.19 -28077937.13 -28077937.01 0.0088 0.0083
 Saturn -81586-12-08 09:20 J -28077522.21 -28077522.11 -28077521.98 0.0293 0.0258
 Saturn -81585-12-21 17:59 J -28077142.96 -28077142.75 -28077142.54 0.0291 0.0149
 Saturn -81583-01-04 16:47 J -28076764.04 -28076763.80 -28076763.55 0.0289 0.0036
 Saturn -81582-01-18 05:30 J -28076385.50 -28076385.27 -28076385.04 0.0287 0.0074
 Jupiter -81582-03-23 06:13 J -28076321.46 -28076321.24 -28076321.03 0.0531 0.0161
 Saturn -81581-01-31 07:54 J -28076007.35 -28076007.17 -28076006.97 0.0284 0.0175

Saturn -81580-02-12 00:56 J -28075629.53 -28075629.46 -28075629.36 0.0281 0.0261
 Mars -81578-12-18 11:44 J -28074590.21 -28074590.01 -28074589.81 0.1963 0.0627
 Jupiter -81576-10-02 17:16 J -28073935.95 -28073935.78 -28073935.61 0.0500 0.0348
 Uranus -81573-06-07 07:11 J -28072957.26 -28072957.20 -28072957.12 0.0147 0.0141
 Uranus -81572-06-12 11:44 J -28072587.13 -28072587.01 -28072586.84 0.0147 0.0121
 Uranus -81571-06-17 17:16 J -28072216.95 -28072216.78 -28072216.57 0.0147 0.0098
 Jupiter -81570-03-27 22:47 J -28071933.77 -28071933.55 -28071933.33 0.0529 0.0102
 Saturn -81570-06-06 20:52 J -28071862.79 -28071862.63 -28071862.46 0.0268 0.0196
 Uranus -81570-06-22 23:30 J -28071846.72 -28071846.52 -28071846.29 0.0147 0.0076
 Saturn -81569-06-17 22:47 J -28071485.77 -28071485.55 -28071485.32 0.0269 0.0114
 Uranus -81569-06-27 06:13 J -28071476.46 -28071476.24 -28071475.98 0.0147 0.0053
 Saturn -81568-06-30 08:08 J -28071108.41 -28071108.16 -28071107.92 0.0271 0.0025
 Uranus -81568-07-02 13:40 J -28071106.18 -28071105.93 -28071105.67 0.0147 0.0028
 Uranus -81567-07-07 21:20 J -28070735.86 -28070735.61 -28070735.35 0.0147 0.0004
 Saturn -81567-07-13 01:40 J -28070730.66 -28070730.43 -28070730.18 0.0273 0.0071
 Uranus -81566-07-13 05:01 J -28070365.54 -28070365.29 -28070365.03 0.0147 0.0021
 Saturn -81566-07-26 04:32 J -28070352.50 -28070352.31 -28070352.10 0.0276 0.0167
 Uranus -81565-07-17 12:56 J -28069995.21 -28069994.96 -28069994.72 0.0146 0.0045
 Saturn -81565-08-07 17:16 J -28069973.85 -28069973.78 -28069973.68 0.0279 0.0261
 Uranus -81564-07-22 20:23 J -28069624.87 -28069624.65 -28069624.42 0.0146 0.0068
 Uranus -81563-07-28 03:49 J -28069254.53 -28069254.34 -28069254.13 0.0146 0.0092
 Uranus -81562-08-02 10:47 J -28068884.20 -28068884.05 -28068883.87 0.0145 0.0114
 Uranus -81561-08-06 17:30 J -28068513.84 -28068513.77 -28068513.66 0.0145 0.0135
 Jupiter -81558-04-01 13:25 J -28067546.09 -28067545.94 -28067545.76 0.0528 0.0362
 Saturn -81556-12-16 05:16 J -28066556.46 -28066556.28 -28066556.09 0.0292 0.0191
 Saturn -81555-12-30 08:08 J -28066177.38 -28066177.16 -28066176.92 0.0290 0.0079
 Mars -81554-06-09 10:04 J -28066016.24 -28066016.08 -28066015.93 0.1580 0.0900
 Saturn -81553-01-13 01:11 J -28065798.69 -28065798.45 -28065798.21 0.0288 0.0033
 Saturn -81552-01-25 07:40 J -28065420.39 -28065420.18 -28065419.97 0.0285 0.0137
 Saturn -81551-02-07 04:04 J -28065042.46 -28065042.33 -28065042.18 0.0282 0.0228

Saturn -81541-06-01 03:20 J -28061275.47 -28061275.36 -28061275.22 0.0267 0.0226
 Saturn -81540-06-13 01:54 J -28060898.62 -28060898.42 -28060898.21 0.0268 0.0148
 Saturn -81539-06-25 07:11 J -28060521.44 -28060521.20 -28060520.96 0.0270 0.0061
 Saturn -81538-07-07 20:08 J -28060143.90 -28060143.66 -28060143.41 0.0272 0.0033
 Saturn -81537-07-19 18:13 J -28059765.95 -28059765.74 -28059765.51 0.0275 0.0129
 Saturn -81536-08-02 02:23 J -28059387.54 -28059387.40 -28059387.25 0.0278 0.0224
 Uranus -81532-12-14 14:08 J -28057791.98 -28057791.91 -28057791.82 0.0131 0.0125
 Uranus -81531-12-18 17:59 J -28057422.87 -28057422.75 -28057422.59 0.0131 0.0110
 Uranus -81530-12-22 21:49 J -28057053.75 -28057053.59 -28057053.40 0.0131 0.0094
 Jupiter -81529-09-17 15:35 J -28056783.99 -28056783.85 -28056783.69 0.0495 0.0381
 Uranus -81529-12-26 01:25 J -28056684.64 -28056684.44 -28056684.23 0.0131 0.0078
 Uranus -81528-12-30 04:18 J -28056315.53 -28056315.32 -28056315.08 0.0131 0.0061
 Saturn -81527-12-10 01:54 J -28055970.55 -28055970.42 -28055970.28 0.0293 0.0241
 Uranus -81526-01-03 07:11 J -28055946.44 -28055946.20 -28055945.96 0.0131 0.0045
 Saturn -81526-12-24 08:52 J -28055591.34 -28055591.13 -28055590.90 0.0291 0.0131
 Uranus -81525-01-07 09:49 J -28055577.33 -28055577.09 -28055576.84 0.0131 0.0028
 Saturn -81524-01-06 06:28 J -28055212.47 -28055212.23 -28055211.98 0.0289 0.0019
 Uranus -81524-01-10 12:28 J -28055208.23 -28055207.98 -28055207.73 0.0132 0.0011
 Uranus -81523-01-14 14:52 J -28054839.13 -28054838.88 -28054838.63 0.0132 0.0006
 Saturn -81523-01-19 17:59 J -28054833.98 -28054833.75 -28054833.52 0.0286 0.0091
 Uranus -81522-01-18 17:01 J -28054470.04 -28054469.79 -28054469.54 0.0132 0.0023
 Saturn -81522-02-01 19:25 J -28054455.87 -28054455.69 -28054455.51 0.0283 0.0188
 Mars -81522-06-16 20:52 J -28054320.77 -28054320.63 -28054320.49 0.1577 0.1026
 Uranus -81521-01-22 18:56 J -28054100.94 -28054100.71 -28054100.46 0.0132 0.0041
 Saturn -81521-02-14 11:01 J -28054078.08 -28054078.04 -28054077.97 0.0280 0.0272
 Uranus -81520-01-25 21:06 J -28053731.83 -28053731.62 -28053731.38 0.0133 0.0058
 Uranus -81519-01-29 23:30 J -28053362.72 -28053362.52 -28053362.31 0.0133 0.0074
 Uranus -81518-02-03 01:54 J -28052993.60 -28052993.42 -28052993.23 0.0133 0.0091
 Uranus -81517-02-07 04:32 J -28052624.44 -28052624.31 -28052624.15 0.0134 0.0107
 Jupiter -81517-09-22 07:11 J -28052396.43 -28052396.20 -28052395.97 0.0496 0.0151

Uranus -81516-02-10 07:25 J -28052255.27 -28052255.19 -28052255.07 0.0134 0.0123
 Pluto -81514-01-28 05:44 J -28051538.45 -28051538.26 -28051538.03 0.0079 0.0045
 Neptune -81512-03-29 18:28 J -28050746.75 -28050746.73 -28050746.69 0.0089 0.0088
 Saturn -81512-05-27 10:04 J -28050688.14 -28050688.08 -28050688.00 0.0267 0.0255
 Jupiter -81511-03-17 11:44 J -28050394.11 -28050394.01 -28050393.90 0.0533 0.0468
 Neptune -81511-04-01 03:35 J -28050379.50 -28050379.35 -28050379.18 0.0089 0.0067
 Saturn -81511-06-08 06:28 J -28050311.40 -28050311.23 -28050311.04 0.0268 0.0182
 Neptune -81510-04-03 12:56 J -28050012.17 -28050011.96 -28050011.75 0.0089 0.0046
 Saturn -81510-06-20 09:20 J -28049934.33 -28049934.11 -28049933.88 0.0269 0.0099
 Neptune -81509-04-04 22:04 J -28049644.82 -28049644.58 -28049644.34 0.0089 0.0025
 Saturn -81509-07-01 19:40 J -28049556.93 -28049556.68 -28049556.43 0.0271 0.0009
 Neptune -81508-04-07 07:11 J -28049277.45 -28049277.20 -28049276.95 0.0089 0.0004
 Saturn -81508-07-14 14:23 J -28049179.13 -28049178.90 -28049178.66 0.0274 0.0087
 Neptune -81507-04-09 16:04 J -28048910.06 -28048909.83 -28048909.57 0.0089 0.0017
 Saturn -81507-07-27 18:42 J -28048800.90 -28048800.72 -28048800.53 0.0276 0.0182
 Neptune -81506-04-12 01:11 J -28048542.66 -28048542.45 -28048542.21 0.0089 0.0038
 Saturn -81506-08-10 08:23 J -28048422.18 -28048422.15 -28048422.10 0.0279 0.0276
 Neptune -81505-04-13 10:18 J -28048175.23 -28048175.07 -28048174.86 0.0089 0.0060
 Jupiter -81505-09-26 23:30 J -28048008.76 -28048008.52 -28048008.29 0.0497 0.0083
 Neptune -81504-04-15 19:25 J -28047807.77 -28047807.69 -28047807.55 0.0089 0.0080
 Jupiter -81499-03-22 02:52 J -28046006.59 -28046006.38 -28046006.17 0.0532 0.0206
 Mars -81499-12-22 15:49 J -28045730.95 -28045730.84 -28045730.72 0.1964 0.1605
 Saturn -81498-12-04 11:01 J -28045384.11 -28045384.04 -28045383.96 0.0294 0.0279
 Saturn -81497-12-17 22:04 J -28045004.77 -28045004.58 -28045004.37 0.0292 0.0172
 Saturn -81496-12-31 23:59 J -28044625.73 -28044625.50 -28044625.26 0.0290 0.0059
 Saturn -81494-01-14 15:35 J -28044247.09 -28044246.85 -28044246.61 0.0288 0.0052
 Saturn -81493-01-27 20:37 J -28043868.83 -28043868.64 -28043868.43 0.0285 0.0154
 Jupiter -81493-10-01 16:18 J -28043620.99 -28043620.82 -28043620.63 0.0499 0.0318
 Saturn -81492-02-08 16:04 J -28043490.94 -28043490.83 -28043490.70 0.0282 0.0242
 Uranus -81489-06-07 15:35 J -28042275.90 -28042275.85 -28042275.76 0.0147 0.0141

Uranus	-81488-06-12 20:37 J	-28041905.79	-28041905.64	-28041905.49	0.0147	0.0119
Jupiter	-81487-03-26 21:35 J	-28041618.83	-28041618.60	-28041618.38	0.0530	0.0063
Uranus	-81487-06-18 01:54 J	-28041535.61	-28041535.42	-28041535.22	0.0147	0.0097
Uranus	-81486-06-23 08:08 J	-28041165.38	-28041165.16	-28041164.93	0.0147	0.0073
Uranus	-81485-06-27 14:37 J	-28040795.12	-28040794.89	-28040794.64	0.0147	0.0050
Uranus	-81484-07-02 21:49 J	-28040424.84	-28040424.59	-28040424.33	0.0147	0.0025
Uranus	-81483-07-08 05:30 J	-28040054.53	-28040054.27	-28040054.01	0.0147	0.0001
Saturn	-81482-06-03 13:54 J	-28039724.06	-28039723.92	-28039723.77	0.0267	0.0212
Uranus	-81482-07-13 12:42 J	-28039684.22	-28039683.97	-28039683.71	0.0147	0.0025
Saturn	-81481-06-14 13:11 J	-28039347.16	-28039346.95	-28039346.74	0.0269	0.0133
Uranus	-81481-07-17 20:37 J	-28039313.89	-28039313.64	-28039313.40	0.0146	0.0049
Saturn	-81480-06-26 19:11 J	-28038969.94	-28038969.70	-28038969.45	0.0270	0.0045
Uranus	-81480-07-23 03:35 J	-28038943.56	-28038943.35	-28038943.11	0.0146	0.0073
Saturn	-81479-07-09 09:49 J	-28038592.34	-28038592.09	-28038591.85	0.0273	0.0049
Uranus	-81479-07-28 11:16 J	-28038573.22	-28038573.03	-28038572.83	0.0146	0.0096
Saturn	-81478-07-22 09:06 J	-28038214.32	-28038214.12	-28038213.90	0.0275	0.0145
Uranus	-81478-08-02 17:59 J	-28038202.89	-28038202.75	-28038202.59	0.0145	0.0118
Saturn	-81477-08-03 17:59 J	-28037835.86	-28037835.75	-28037835.61	0.0278	0.0240
Uranus	-81477-08-07 00:13 J	-28037832.53	-28037832.49	-28037832.40	0.0145	0.0140
Jupiter	-81475-03-31 16:47 J	-28037230.97	-28037230.80	-28037230.62	0.0529	0.0330
Mars	-81475-06-11 08:52 J	-28037159.31	-28037159.13	-28037158.94	0.1579	0.0321
Saturn	-81468-12-11 19:54 J	-28034418.82	-28034418.67	-28034418.50	0.0292	0.0222
Saturn	-81467-12-26 01:40 J	-28034039.65	-28034039.43	-28034039.20	0.0291	0.0111
Saturn	-81465-01-08 21:49 J	-28033660.83	-28033660.59	-28033660.35	0.0288	0.0002
Saturn	-81464-01-21 07:54 J	-28033282.39	-28033282.17	-28033281.95	0.0286	0.0108
Saturn	-81463-02-03 07:54 J	-28032904.34	-28032904.17	-28032904.00	0.0283	0.0203
Saturn	-81453-05-28 18:42 J	-28029136.81	-28029136.72	-28029136.61	0.0267	0.0242
Saturn	-81452-06-09 15:49 J	-28028760.03	-28028759.84	-28028759.64	0.0268	0.0168
Saturn	-81451-06-21 19:25 J	-28028382.92	-28028382.69	-28028382.45	0.0270	0.0084
Saturn	-81450-07-04 06:56 J	-28028005.46	-28028005.21	-28028004.96	0.0272	0.0008

Saturn -81449-07-16 02:52 J -28027627.61 -28027627.38 -28027627.15 0.0274 0.0103
 Saturn -81448-07-29 08:08 J -28027249.32 -28027249.16 -28027248.97 0.0277 0.0199
 Uranus -81448-12-14 22:04 J -28027110.64 -28027110.58 -28027110.48 0.0131 0.0125
 Uranus -81447-12-19 02:23 J -28026741.53 -28026741.40 -28026741.25 0.0131 0.0109
 Jupiter -81446-09-17 15:20 J -28026468.98 -28026468.86 -28026468.71 0.0494 0.0405
 Uranus -81446-12-23 06:28 J -28026372.40 -28026372.23 -28026372.04 0.0131 0.0093
 Uranus -81445-12-26 09:49 J -28026003.28 -28026003.09 -28026002.87 0.0131 0.0077
 Uranus -81444-12-30 13:11 J -28025634.17 -28025633.95 -28025633.72 0.0131 0.0060
 Uranus -81442-01-03 16:04 J -28025265.06 -28025264.83 -28025264.58 0.0131 0.0043
 Uranus -81441-01-07 19:11 J -28024895.94 -28024895.70 -28024895.45 0.0132 0.0025
 Uranus -81440-01-10 21:49 J -28024526.84 -28024526.59 -28024526.34 0.0132 0.0008
 Uranus -81439-01-15 00:13 J -28024157.74 -28024157.49 -28024157.24 0.0132 0.0009
 Saturn -81439-12-06 04:32 J -28023832.42 -28023832.31 -28023832.19 0.0293 0.0261
 Uranus -81438-01-19 02:08 J -28023788.65 -28023788.41 -28023788.15 0.0132 0.0027
 Saturn -81438-12-20 14:37 J -28023453.09 -28023452.89 -28023452.68 0.0292 0.0152
 Uranus -81437-01-23 04:32 J -28023419.54 -28023419.31 -28023419.07 0.0132 0.0044
 Saturn -81436-01-02 15:20 J -28023074.10 -28023073.86 -28023073.62 0.0290 0.0039
 Uranus -81436-01-26 06:42 J -28023050.43 -28023050.22 -28023049.99 0.0133 0.0062
 Saturn -81435-01-16 05:30 J -28022695.50 -28022695.27 -28022695.03 0.0287 0.0070
 Uranus -81435-01-30 09:06 J -28022681.31 -28022681.12 -28022680.91 0.0133 0.0078
 Saturn -81434-01-29 09:35 J -28022317.29 -28022317.10 -28022316.90 0.0284 0.0170
 Uranus -81434-02-03 11:16 J -28022312.18 -28022312.03 -28022311.83 0.0133 0.0096
 Jupiter -81434-09-22 07:40 J -28022081.40 -28022081.18 -28022080.95 0.0495 0.0177
 Uranus -81433-02-07 14:23 J -28021943.02 -28021942.90 -28021942.75 0.0134 0.0112
 Saturn -81433-02-11 03:49 J -28021939.43 -28021939.34 -28021939.23 0.0281 0.0255
 Uranus -81432-02-10 17:44 J -28021573.82 -28021573.76 -28021573.68 0.0134 0.0128
 Neptune -81430-10-02 13:54 J -28020610.02 -28020609.92 -28020609.78 0.0088 0.0079
 Neptune -81429-10-04 04:32 J -28020242.50 -28020242.31 -28020242.09 0.0088 0.0057
 Jupiter -81428-03-16 08:23 J -28020079.21 -28020079.15 -28020079.09 0.0534 0.0513
 Neptune -81428-10-06 18:42 J -28019874.94 -28019874.72 -28019874.46 0.0088 0.0036

Neptune -81427-10-09 09:06 J -28019507.37 -28019507.12 -28019506.85 0.0088 0.0014
 Neptune -81426-10-11 23:30 J -28019139.78 -28019139.52 -28019139.26 0.0088 0.0008
 Neptune -81425-10-13 13:25 J -28018772.18 -28018771.94 -28018771.68 0.0088 0.0030
 Neptune -81424-10-16 03:49 J -28018404.55 -28018404.34 -28018404.12 0.0088 0.0052
 Saturn -81423-06-04 23:01 J -28018172.70 -28018172.54 -28018172.37 0.0267 0.0198
 Neptune -81423-10-18 17:16 J -28018036.91 -28018036.78 -28018036.62 0.0088 0.0074
 Saturn -81422-06-16 23:01 J -28017795.76 -28017795.54 -28017795.32 0.0269 0.0118
 Jupiter -81422-09-26 22:47 J -28017693.79 -28017693.55 -28017693.31 0.0497 0.0051
 Saturn -81421-06-28 05:59 J -28017418.49 -28017418.25 -28017418.00 0.0271 0.0030
 Saturn -81420-07-10 21:35 J -28017040.84 -28017040.60 -28017040.35 0.0273 0.0065
 Saturn -81419-07-23 22:04 J -28016662.77 -28016662.58 -28016662.36 0.0276 0.0162
 Saturn -81418-08-06 08:37 J -28016284.24 -28016284.14 -28016284.04 0.0279 0.0255
 Jupiter -81416-03-21 05:16 J -28015691.48 -28015691.28 -28015691.08 0.0532 0.0239
 Jupiter -81410-10-01 15:49 J -28013306.03 -28013305.84 -28013305.64 0.0498 0.0285
 Saturn -81409-12-13 13:25 J -28012867.10 -28012866.94 -28012866.75 0.0292 0.0204
 Saturn -81408-12-27 18:28 J -28012487.96 -28012487.73 -28012487.50 0.0290 0.0091
 Saturn -81406-01-10 13:11 J -28012109.19 -28012108.95 -28012108.70 0.0288 0.0021
 Saturn -81405-01-23 21:49 J -28011730.80 -28011730.59 -28011730.37 0.0285 0.0125
 Uranus -81405-06-08 01:54 J -28011594.49 -28011594.42 -28011594.33 0.0147 0.0140
 Saturn -81404-02-04 20:23 J -28011352.79 -28011352.65 -28011352.49 0.0282 0.0218
 Jupiter -81404-03-26 01:11 J -28011303.68 -28011303.45 -28011303.23 0.0530 0.0035
 Uranus -81404-06-13 06:13 J -28011224.37 -28011224.24 -28011224.07 0.0147 0.0119
 Uranus -81403-06-18 11:44 J -28010854.19 -28010854.01 -28010853.80 0.0147 0.0095
 Uranus -81402-06-23 17:59 J -28010483.97 -28010483.75 -28010483.52 0.0147 0.0071
 Uranus -81401-06-28 00:28 J -28010113.71 -28010113.48 -28010113.23 0.0147 0.0047
 Uranus -81400-07-03 07:40 J -28009743.43 -28009743.18 -28009742.93 0.0147 0.0022
 Uranus -81399-07-08 14:52 J -28009373.13 -28009372.88 -28009372.62 0.0147 0.0004
 Uranus -81398-07-13 22:04 J -28009002.82 -28009002.58 -28009002.32 0.0147 0.0029
 Uranus -81397-07-18 05:30 J -28008632.50 -28008632.27 -28008632.02 0.0146 0.0053
 Mars -81396-06-13 08:08 J -28008302.34 -28008302.16 -28008301.97 0.1579 0.0278

Uranus	-81396-07-23 12:56 J	-28008262.17	-28008261.96	-28008261.74	0.0146	0.0077
Uranus	-81395-07-28 20:08 J	-28007891.84	-28007891.66	-28007891.47	0.0146	0.0101
Saturn	-81394-05-31 01:54 J	-28007585.54	-28007585.42	-28007585.29	0.0267	0.0229
Uranus	-81394-08-03 02:37 J	-28007521.51	-28007521.39	-28007521.24	0.0145	0.0123
Saturn	-81393-06-10 23:16 J	-28007208.72	-28007208.53	-28007208.31	0.0268	0.0154
Uranus	-81393-08-07 09:35 J	-28007151.10	-28007151.10	-28007151.10	0.0145	0.0145
Jupiter	-81392-03-30 17:59 J	-28006915.93	-28006915.75	-28006915.56	0.0529	0.0295
Saturn	-81392-06-23 03:49 J	-28006831.58	-28006831.34	-28006831.10	0.0270	0.0068
Saturn	-81391-07-05 16:04 J	-28006454.08	-28006453.83	-28006453.58	0.0272	0.0024
Saturn	-81390-07-18 12:56 J	-28006076.17	-28006075.96	-28006075.72	0.0274	0.0120
Saturn	-81389-07-30 19:40 J	-28005697.83	-28005697.68	-28005697.51	0.0277	0.0214
Saturn	-81380-12-07 20:52 J	-28002280.75	-28002280.63	-28002280.48	0.0293	0.0244
Saturn	-81379-12-22 06:13 J	-28001901.45	-28001901.24	-28001901.01	0.0292	0.0133
Saturn	-81377-01-05 05:59 J	-28001522.49	-28001522.25	-28001522.01	0.0290	0.0020
Saturn	-81376-01-17 19:11 J	-28001143.93	-28001143.70	-28001143.47	0.0287	0.0089
Saturn	-81375-01-30 22:04 J	-28000765.76	-28000765.58	-28000765.40	0.0284	0.0186
Saturn	-81374-02-12 15:06 J	-28000387.93	-28000387.87	-28000387.80	0.0281	0.0269
Saturn	-81365-05-25 11:44 J	-27996998.06	-27996998.01	-27996997.93	0.0266	0.0257
Saturn	-81364-06-06 06:13 J	-27996621.40	-27996621.24	-27996621.05	0.0267	0.0185
Uranus	-81364-12-15 06:56 J	-27996429.26	-27996429.21	-27996429.10	0.0132	0.0125
Saturn	-81363-06-18 06:56 J	-27996244.43	-27996244.21	-27996243.97	0.0269	0.0103
Jupiter	-81363-09-16 16:47 J	-27996153.91	-27996153.80	-27996153.68	0.0494	0.0429
Uranus	-81363-12-19 11:16 J	-27996060.15	-27996060.03	-27996059.86	0.0131	0.0109
Saturn	-81362-06-30 15:06 J	-27995867.12	-27995866.87	-27995866.62	0.0271	0.0013
Uranus	-81362-12-23 15:49 J	-27995691.01	-27995690.84	-27995690.65	0.0131	0.0092
Saturn	-81361-07-12 07:25 J	-27995489.42	-27995489.19	-27995488.94	0.0273	0.0082
Uranus	-81361-12-26 19:25 J	-27995321.89	-27995321.69	-27995321.47	0.0131	0.0075
Saturn	-81360-07-25 09:20 J	-27995111.30	-27995111.11	-27995110.92	0.0276	0.0177
Uranus	-81360-12-30 22:47 J	-27994952.77	-27994952.55	-27994952.31	0.0131	0.0058
Saturn	-81359-08-07 20:37 J	-27994732.69	-27994732.64	-27994732.57	0.0279	0.0270

Uranus -81358-01-04 01:40 J -27994583.66 -27994583.43 -27994583.18 0.0132 0.0041
 Uranus -81357-01-08 04:47 J -27994214.55 -27994214.30 -27994214.05 0.0132 0.0023
 Uranus -81356-01-11 07:11 J -27993845.44 -27993845.20 -27993844.94 0.0132 0.0006
 Uranus -81355-01-15 09:35 J -27993476.35 -27993476.10 -27993475.85 0.0132 0.0013
 Pluto -81355-07-25 03:20 J -27993285.53 -27993285.36 -27993285.13 0.0066 0.0044
 Uranus -81354-01-19 11:44 J -27993107.25 -27993107.01 -27993106.76 0.0132 0.0030
 Pluto -81354-07-26 18:42 J -27992918.85 -27992918.72 -27992918.54 0.0066 0.0054
 Uranus -81353-01-23 14:08 J -27992738.14 -27992737.91 -27992737.67 0.0132 0.0048
 Uranus -81352-01-26 16:04 J -27992369.03 -27992368.83 -27992368.60 0.0133 0.0066
 Uranus -81351-01-30 18:42 J -27991999.90 -27991999.72 -27991999.51 0.0133 0.0083
 Jupiter -81351-09-21 08:37 J -27991766.36 -27991766.14 -27991765.92 0.0495 0.0204
 Saturn -81351-12-01 16:18 J -27991694.85 -27991694.82 -27991694.78 0.0293 0.0290
 Uranus -81350-02-03 21:20 J -27991630.76 -27991630.61 -27991630.44 0.0133 0.0100
 Saturn -81350-12-16 05:16 J -27991315.46 -27991315.28 -27991315.08 0.0292 0.0184
 Uranus -81349-02-08 00:28 J -27991261.59 -27991261.48 -27991261.35 0.0134 0.0116
 Mars -81349-06-07 20:23 J -27991140.78 -27991140.65 -27991140.51 0.1582 0.1072
 Saturn -81349-12-29 09:20 J -27990936.35 -27990936.11 -27990935.87 0.0290 0.0072
 Uranus -81348-02-11 03:35 J -27990892.37 -27990892.35 -27990892.30 0.0134 0.0133
 Saturn -81347-01-12 02:52 J -27990557.62 -27990557.38 -27990557.14 0.0288 0.0039
 Neptune -81347-03-31 16:04 J -27990478.94 -27990478.83 -27990478.68 0.0089 0.0076
 Saturn -81346-01-25 10:04 J -27990179.28 -27990179.08 -27990178.87 0.0285 0.0143
 Neptune -81346-04-03 01:11 J -27990111.62 -27990111.45 -27990111.23 0.0089 0.0055
 Saturn -81345-02-07 07:25 J -27989801.32 -27989801.19 -27989801.05 0.0282 0.0233
 Neptune -81345-04-04 10:32 J -27989744.28 -27989744.06 -27989743.82 0.0089 0.0034
 Neptune -81344-04-06 19:54 J -27989376.91 -27989376.67 -27989376.42 0.0089 0.0013
 Neptune -81343-04-09 05:16 J -27989009.53 -27989009.28 -27989009.03 0.0089 0.0008
 Neptune -81342-04-11 14:23 J -27988642.13 -27988641.90 -27988641.65 0.0089 0.0029
 Neptune -81341-04-12 23:16 J -27988274.71 -27988274.53 -27988274.30 0.0089 0.0050
 Neptune -81340-04-15 08:23 J -27987907.27 -27987907.15 -27987906.97 0.0089 0.0071
 Jupiter -81339-09-26 00:13 J -27987378.73 -27987378.49 -27987378.25 0.0497 0.0028

Saturn	-81335-06-01 07:11 J	-27986034.33	-27986034.20	-27986034.04	0.0267	0.0216
Saturn	-81334-06-13 05:01 J	-27985657.49	-27985657.29	-27985657.07	0.0268	0.0139
Jupiter	-81333-03-20 08:23 J	-27985376.35	-27985376.15	-27985375.96	0.0532	0.0268
Saturn	-81333-06-24 09:49 J	-27985280.33	-27985280.09	-27985279.85	0.0270	0.0052
Saturn	-81332-07-06 22:47 J	-27984902.80	-27984902.55	-27984902.31	0.0272	0.0040
Saturn	-81331-07-19 20:37 J	-27984524.85	-27984524.64	-27984524.41	0.0275	0.0135
Saturn	-81330-08-02 04:32 J	-27984146.45	-27984146.31	-27984146.17	0.0278	0.0229
Jupiter	-81327-09-30 17:59 J	-27982990.95	-27982990.75	-27982990.54	0.0498	0.0262
Jupiter	-81321-03-24 22:18 J	-27980988.80	-27980988.57	-27980988.35	0.0531	0.0012
Uranus	-81321-06-08 12:42 J	-27980913.03	-27980912.97	-27980912.86	0.0147	0.0139
Saturn	-81321-12-09 10:32 J	-27980729.21	-27980729.06	-27980728.90	0.0293	0.0226
Uranus	-81320-06-13 17:44 J	-27980542.90	-27980542.76	-27980542.60	0.0147	0.0116
Saturn	-81320-12-23 19:25 J	-27980349.91	-27980349.69	-27980349.46	0.0292	0.0114
Uranus	-81319-06-18 22:47 J	-27980172.73	-27980172.55	-27980172.34	0.0147	0.0094
Saturn	-81318-01-06 18:13 J	-27979970.98	-27979970.74	-27979970.50	0.0289	0.0002
Uranus	-81318-06-24 04:47 J	-27979802.51	-27979802.30	-27979802.05	0.0147	0.0070
Saturn	-81317-01-20 06:42 J	-27979592.44	-27979592.22	-27979591.99	0.0287	0.0107
Mars	-81317-06-15 07:54 J	-27979445.33	-27979445.17	-27979445.01	0.1578	0.0871
Uranus	-81317-06-28 11:16 J	-27979432.26	-27979432.03	-27979431.77	0.0147	0.0044
Saturn	-81316-02-01 08:23 J	-27979214.30	-27979214.15	-27979213.97	0.0284	0.0203
Uranus	-81316-07-03 18:28 J	-27979061.98	-27979061.73	-27979061.48	0.0147	0.0019
Uranus	-81315-07-09 01:25 J	-27978691.69	-27978691.44	-27978691.18	0.0147	0.0008
Jupiter	-81315-10-05 12:28 J	-27978603.00	-27978602.98	-27978602.96	0.0499	0.0497
Uranus	-81314-07-14 08:23 J	-27978321.39	-27978321.15	-27978320.89	0.0147	0.0033
Uranus	-81313-07-18 15:49 J	-27977951.07	-27977950.84	-27977950.60	0.0146	0.0057
Uranus	-81312-07-23 22:47 J	-27977580.75	-27977580.55	-27977580.33	0.0146	0.0082
Uranus	-81311-07-29 05:44 J	-27977210.43	-27977210.26	-27977210.07	0.0145	0.0106
Uranus	-81310-08-03 12:28 J	-27976840.09	-27976839.98	-27976839.86	0.0145	0.0128
Jupiter	-81309-03-29 16:04 J	-27976601.03	-27976600.83	-27976600.63	0.0530	0.0253
Saturn	-81306-05-27 16:47 J	-27975446.89	-27975446.80	-27975446.70	0.0266	0.0244

Saturn	-81305-06-07 11:16 J	-27975070.20	-27975070.03	-27975069.83	0.0267	0.0172
Saturn	-81304-06-19 12:42 J	-27974693.20	-27974692.97	-27974692.74	0.0269	0.0088
Saturn	-81303-07-01 21:06 J	-27974315.86	-27974315.62	-27974315.37	0.0271	0.0006
Saturn	-81302-07-14 14:23 J	-27973938.13	-27973937.90	-27973937.67	0.0273	0.0097
Saturn	-81301-07-26 16:47 J	-27973559.97	-27973559.80	-27973559.61	0.0276	0.0192
Jupiter	-81297-04-03 11:44 J	-27972213.05	-27972213.01	-27972212.96	0.0528	0.0517
Mars	-81294-12-17 00:13 J	-27970860.65	-27970860.49	-27970860.32	0.1961	0.1220
Saturn	-81292-12-03 05:30 J	-27970143.34	-27970143.27	-27970143.17	0.0293	0.0274
Saturn	-81291-12-17 18:13 J	-27969763.93	-27969763.74	-27969763.53	0.0292	0.0166
Saturn	-81290-12-31 21:35 J	-27969384.84	-27969384.60	-27969384.36	0.0290	0.0053
Saturn	-81288-01-13 14:23 J	-27969006.13	-27969005.90	-27969005.66	0.0287	0.0058
Saturn	-81287-01-26 20:37 J	-27968627.83	-27968627.64	-27968627.44	0.0284	0.0159
Saturn	-81286-02-08 17:01 J	-27968249.90	-27968249.79	-27968249.68	0.0281	0.0247
Jupiter	-81280-09-15 19:54 J	-27965838.77	-27965838.67	-27965838.57	0.0494	0.0451
Uranus	-81280-12-15 15:35 J	-27965747.92	-27965747.85	-27965747.75	0.0131	0.0124
Uranus	-81279-12-19 19:40 J	-27965378.80	-27965378.68	-27965378.51	0.0131	0.0108
Uranus	-81278-12-23 23:59 J	-27965009.67	-27965009.50	-27965009.30	0.0131	0.0091
Uranus	-81277-12-27 03:35 J	-27964640.54	-27964640.35	-27964640.12	0.0131	0.0074
Saturn	-81276-06-02 10:32 J	-27964483.21	-27964483.06	-27964482.89	0.0267	0.0203
Uranus	-81276-12-31 07:25 J	-27964271.42	-27964271.19	-27964270.96	0.0131	0.0056
Saturn	-81275-06-14 08:23 J	-27964106.36	-27964106.15	-27964105.92	0.0268	0.0125
Uranus	-81274-01-04 10:04 J	-27963902.31	-27963902.08	-27963901.82	0.0132	0.0039
Saturn	-81274-06-26 13:25 J	-27963729.18	-27963728.94	-27963728.69	0.0270	0.0038
Uranus	-81273-01-08 13:11 J	-27963533.19	-27963532.95	-27963532.70	0.0132	0.0021
Saturn	-81273-07-08 02:52 J	-27963351.62	-27963351.38	-27963351.13	0.0272	0.0055
Uranus	-81272-01-11 15:35 J	-27963164.10	-27963163.85	-27963163.59	0.0132	0.0003
Saturn	-81272-07-21 01:25 J	-27962973.64	-27962973.44	-27962973.22	0.0275	0.0150
Uranus	-81271-01-15 17:59 J	-27962795.00	-27962794.75	-27962794.50	0.0132	0.0016
Saturn	-81271-08-03 10:04 J	-27962595.20	-27962595.08	-27962594.96	0.0278	0.0243
Uranus	-81270-01-19 20:08 J	-27962425.90	-27962425.66	-27962425.41	0.0132	0.0034

Mars -81270-06-10 19:54 J -27962283.85 -27962283.67 -27962283.49 0.1581 0.0478
 Uranus -81269-01-23 22:32 J -27962056.79 -27962056.56 -27962056.32 0.0133 0.0052
 Uranus -81268-01-27 00:42 J -27961687.67 -27961687.47 -27961687.25 0.0133 0.0069
 Pluto -81268-01-28 21:06 J -27961685.70 -27961685.62 -27961685.49 0.0079 0.0072
 Jupiter -81268-09-20 12:42 J -27961451.18 -27961450.97 -27961450.75 0.0495 0.0222
 Uranus -81267-01-31 03:20 J -27961318.54 -27961318.36 -27961318.17 0.0133 0.0087
 Uranus -81266-02-04 05:59 J -27960949.40 -27960949.25 -27960949.09 0.0133 0.0104
 Neptune -81266-10-01 22:32 J -27960709.59 -27960709.56 -27960709.48 0.0088 0.0087
 Uranus -81265-02-08 08:52 J -27960580.21 -27960580.13 -27960580.00 0.0134 0.0121
 Neptune -81265-10-03 13:54 J -27960342.10 -27960341.92 -27960341.74 0.0088 0.0065
 Neptune -81264-10-06 03:49 J -27959974.55 -27959974.34 -27959974.09 0.0088 0.0044
 Neptune -81263-10-08 18:42 J -27959606.98 -27959606.72 -27959606.47 0.0088 0.0022
 Neptune -81262-10-11 08:52 J -27959239.40 -27959239.13 -27959238.87 0.0088 0.0001
 Saturn -81262-12-11 20:37 J -27959177.80 -27959177.64 -27959177.46 0.0293 0.0210
 Neptune -81261-10-12 22:47 J -27958871.79 -27958871.55 -27958871.28 0.0088 0.0022
 Saturn -81261-12-25 05:01 J -27958798.51 -27958798.29 -27958798.05 0.0292 0.0097
 Neptune -81260-10-15 13:11 J -27958504.19 -27958503.95 -27958503.72 0.0088 0.0043
 Saturn -81259-01-08 03:20 J -27958419.60 -27958419.36 -27958419.11 0.0289 0.0018
 Neptune -81259-10-18 02:37 J -27958136.55 -27958136.39 -27958136.18 0.0088 0.0065
 Saturn -81258-01-21 15:06 J -27958041.08 -27958040.87 -27958040.65 0.0287 0.0124
 Neptune -81258-10-20 16:47 J -27957768.84 -27957768.80 -27957768.72 0.0088 0.0086
 Saturn -81257-02-03 16:18 J -27957662.97 -27957662.82 -27957662.66 0.0283 0.0217
 Jupiter -81256-09-25 06:42 J -27957063.46 -27957063.22 -27957062.98 0.0496 0.0011
 Jupiter -81250-03-20 06:13 J -27955061.42 -27955061.24 -27955061.05 0.0533 0.0312
 Saturn -81247-05-28 19:40 J -27953895.80 -27953895.68 -27953895.56 0.0266 0.0232
 Saturn -81246-06-09 14:08 J -27953519.09 -27953518.91 -27953518.70 0.0267 0.0158
 Saturn -81245-06-20 15:35 J -27953142.09 -27953141.85 -27953141.61 0.0269 0.0074
 Saturn -81244-07-03 00:28 J -27952764.73 -27952764.48 -27952764.23 0.0271 0.0017
 Jupiter -81244-09-29 22:04 J -27952675.79 -27952675.58 -27952675.37 0.0497 0.0240
 Saturn -81243-07-15 17:59 J -27952386.97 -27952386.75 -27952386.52 0.0274 0.0111

Saturn -81242-07-28 21:06 J -27952008.77 -27952008.62 -27952008.44 0.0276 0.0207
 Jupiter -81238-03-25 03:06 J -27950673.59 -27950673.37 -27950673.14 0.0532 0.0040
 Mars -81238-06-18 06:56 J -27950588.28 -27950588.21 -27950588.15 0.1577 0.1466
 Uranus -81237-06-08 22:18 J -27950231.64 -27950231.57 -27950231.47 0.0147 0.0138
 Uranus -81236-06-14 03:06 J -27949861.51 -27949861.37 -27949861.19 0.0147 0.0116
 Uranus -81235-06-19 08:37 J -27949491.33 -27949491.14 -27949490.93 0.0147 0.0091
 Uranus -81234-06-24 14:37 J -27949121.11 -27949120.89 -27949120.66 0.0147 0.0067
 Uranus -81233-06-28 20:52 J -27948750.87 -27948750.63 -27948750.37 0.0147 0.0042
 Saturn -81233-12-04 15:20 J -27948591.98 -27948591.86 -27948591.75 0.0294 0.0258
 Uranus -81232-07-04 03:49 J -27948380.59 -27948380.34 -27948380.08 0.0147 0.0016
 Jupiter -81232-10-04 15:20 J -27948287.92 -27948287.86 -27948287.77 0.0499 0.0472
 Saturn -81232-12-19 03:20 J -27948212.56 -27948212.36 -27948212.14 0.0292 0.0149
 Uranus -81231-07-09 10:47 J -27948010.31 -27948010.05 -27948009.79 0.0147 0.0010
 Saturn -81230-01-02 06:28 J -27947833.48 -27947833.23 -27947832.99 0.0290 0.0035
 Uranus -81230-07-14 17:44 J -27947640.00 -27947639.76 -27947639.50 0.0147 0.0037
 Saturn -81229-01-15 22:32 J -27947454.78 -27947454.56 -27947454.32 0.0287 0.0076
 Uranus -81229-07-19 00:42 J -27947269.69 -27947269.47 -27947269.22 0.0146 0.0062
 Saturn -81228-01-28 04:18 J -27947076.50 -27947076.32 -27947076.12 0.0284 0.0175
 Uranus -81228-07-24 07:40 J -27946899.37 -27946899.18 -27946898.95 0.0146 0.0087
 Saturn -81227-02-09 23:44 J -27946698.59 -27946698.51 -27946698.42 0.0281 0.0261
 Uranus -81227-07-29 14:52 J -27946529.04 -27946528.88 -27946528.70 0.0145 0.0111
 Jupiter -81226-03-30 00:28 J -27946285.68 -27946285.48 -27946285.27 0.0530 0.0234
 Uranus -81226-08-03 21:20 J -27946158.70 -27946158.61 -27946158.50 0.0145 0.0133
 Saturn -81218-05-23 20:08 J -27943308.70 -27943308.66 -27943308.62 0.0266 0.0262
 Saturn -81217-06-03 11:44 J -27942932.17 -27942932.01 -27942931.83 0.0267 0.0191
 Saturn -81216-06-15 09:35 J -27942555.32 -27942555.10 -27942554.87 0.0268 0.0111
 Saturn -81215-06-27 14:37 J -27942178.13 -27942177.89 -27942177.64 0.0270 0.0023
 Mars -81215-12-21 05:01 J -27942001.47 -27942001.29 -27942001.12 0.1963 0.1036
 Jupiter -81214-04-03 18:56 J -27941897.78 -27941897.71 -27941897.63 0.0528 0.0495
 Saturn -81214-07-10 04:04 J -27941800.56 -27941800.33 -27941800.08 0.0272 0.0069

Saturn	-81213-07-22 02:52 J	-27941422.57	-27941422.38	-27941422.17	0.0275	0.0164
Saturn	-81212-08-04 11:44 J	-27941044.09	-27941044.01	-27941043.90	0.0278	0.0257
Saturn	-81203-12-13 03:06 J	-27937626.55	-27937626.37	-27937626.18	0.0294	0.0195
Saturn	-81202-12-27 11:30 J	-27937247.25	-27937247.02	-27937246.78	0.0292	0.0081
Saturn	-81200-01-09 09:35 J	-27936868.34	-27936868.10	-27936867.86	0.0289	0.0034
Saturn	-81199-01-22 20:52 J	-27936489.84	-27936489.63	-27936489.41	0.0286	0.0139
Saturn	-81198-02-04 21:35 J	-27936111.73	-27936111.60	-27936111.46	0.0283	0.0231
Jupiter	-81197-09-15 05:01 J	-27935523.37	-27935523.29	-27935523.21	0.0493	0.0461
Uranus	-81196-12-15 23:30 J	-27935066.58	-27935066.52	-27935066.41	0.0131	0.0124
Uranus	-81195-12-20 04:18 J	-27934697.45	-27934697.32	-27934697.16	0.0131	0.0107
Uranus	-81194-12-24 08:37 J	-27934328.31	-27934328.14	-27934327.94	0.0131	0.0089
Uranus	-81193-12-27 12:28 J	-27933959.19	-27933958.98	-27933958.77	0.0131	0.0072
Uranus	-81192-12-31 15:35 J	-27933590.07	-27933589.85	-27933589.60	0.0131	0.0054
Mars	-81191-06-12 18:56 J	-27933426.90	-27933426.71	-27933426.52	0.1580	0.0113
Uranus	-81190-01-04 18:28 J	-27933220.96	-27933220.73	-27933220.47	0.0131	0.0037
Uranus	-81189-01-08 21:35 J	-27932851.85	-27932851.60	-27932851.35	0.0132	0.0018
Uranus	-81188-01-11 23:59 J	-27932482.75	-27932482.50	-27932482.25	0.0132	0.0001
Saturn	-81188-05-29 20:23 J	-27932344.78	-27932344.65	-27932344.51	0.0266	0.0221
Uranus	-81187-01-16 02:08 J	-27932113.66	-27932113.41	-27932113.16	0.0132	0.0019
Saturn	-81187-06-10 15:06 J	-27931968.07	-27931967.87	-27931967.66	0.0267	0.0145
Uranus	-81186-01-20 04:04 J	-27931744.56	-27931744.33	-27931744.07	0.0132	0.0038
Saturn	-81186-06-22 16:04 J	-27931591.07	-27931590.83	-27931590.58	0.0269	0.0061
Uranus	-81185-01-24 06:42 J	-27931375.44	-27931375.22	-27931374.99	0.0132	0.0055
Saturn	-81185-07-04 01:11 J	-27931213.69	-27931213.45	-27931213.20	0.0271	0.0030
Jupiter	-81185-09-19 19:40 J	-27931135.88	-27931135.68	-27931135.46	0.0494	0.0237
Uranus	-81184-01-27 08:37 J	-27931006.33	-27931006.14	-27931005.92	0.0133	0.0073
Saturn	-81184-07-16 19:11 J	-27930835.91	-27930835.70	-27930835.47	0.0274	0.0125
Uranus	-81183-01-31 11:16 J	-27930637.20	-27930637.03	-27930636.83	0.0133	0.0090
Neptune	-81183-03-31 06:42 J	-27930578.30	-27930578.22	-27930578.13	0.0089	0.0083
Saturn	-81183-07-29 22:47 J	-27930457.69	-27930457.55	-27930457.39	0.0277	0.0220

Uranus -81182-02-04 14:08 J -27930268.05 -27930267.91 -27930267.76 0.0133 0.0108
 Neptune -81182-04-02 15:06 J -27930211.02 -27930210.87 -27930210.67 0.0089 0.0064
 Uranus -81181-02-08 17:01 J -27929898.86 -27929898.79 -27929898.68 0.0134 0.0125
 Neptune -81181-04-04 00:28 J -27929843.69 -27929843.48 -27929843.25 0.0089 0.0042
 Neptune -81180-04-06 09:20 J -27929476.34 -27929476.11 -27929475.85 0.0089 0.0022
 Neptune -81179-04-08 18:56 J -27929108.96 -27929108.71 -27929108.46 0.0089 0.0001
 Neptune -81178-04-11 03:49 J -27928741.57 -27928741.34 -27928741.08 0.0089 0.0020
 Neptune -81177-04-12 12:56 J -27928374.16 -27928373.96 -27928373.72 0.0089 0.0041
 Neptune -81176-04-14 22:04 J -27928006.73 -27928006.58 -27928006.37 0.0089 0.0062
 Neptune -81175-04-17 07:25 J -27927639.26 -27927639.19 -27927639.07 0.0089 0.0083
 Saturn -81174-12-06 21:20 J -27927040.74 -27927040.61 -27927040.47 0.0294 0.0244
 Jupiter -81173-09-24 11:59 J -27926748.24 -27926748.00 -27926747.76 0.0495 0.0010
 Saturn -81173-12-20 09:35 J -27926661.32 -27926661.10 -27926660.88 0.0292 0.0133
 Saturn -81171-01-03 11:59 J -27926282.24 -27926282.00 -27926281.75 0.0290 0.0019
 Saturn -81170-01-17 04:04 J -27925903.55 -27925903.33 -27925903.10 0.0287 0.0091
 Saturn -81169-01-30 09:20 J -27925525.28 -27925525.11 -27925524.92 0.0284 0.0190
 Saturn -81168-02-11 04:04 J -27925147.37 -27925147.33 -27925147.27 0.0281 0.0273
 Jupiter -81167-03-19 15:35 J -27924746.02 -27924745.85 -27924745.67 0.0534 0.0328
 Jupiter -81161-09-29 04:18 J -27922360.53 -27922360.32 -27922360.10 0.0497 0.0222
 Saturn -81159-05-24 19:25 J -27921757.75 -27921757.69 -27921757.59 0.0266 0.0252
 Saturn -81158-06-05 11:16 J -27921381.20 -27921381.03 -27921380.84 0.0267 0.0180
 Saturn -81157-06-16 09:06 J -27921004.35 -27921004.12 -27921003.89 0.0268 0.0098
 Saturn -81156-06-28 14:08 J -27920627.16 -27920626.91 -27920626.66 0.0270 0.0010
 Jupiter -81155-03-24 12:28 J -27920358.20 -27920357.98 -27920357.75 0.0532 0.0057
 Saturn -81155-07-11 03:35 J -27920249.59 -27920249.35 -27920249.12 0.0272 0.0083
 Saturn -81154-07-24 02:08 J -27919871.59 -27919871.41 -27919871.21 0.0275 0.0177
 Uranus -81153-06-09 05:30 J -27919550.33 -27919550.27 -27919550.16 0.0147 0.0139
 Saturn -81153-08-05 11:16 J -27919493.07 -27919493.03 -27919492.95 0.0278 0.0269
 Uranus -81152-06-14 10:47 J -27919180.20 -27919180.05 -27919179.89 0.0147 0.0114
 Uranus -81151-06-19 15:49 J -27918810.03 -27918809.84 -27918809.63 0.0147 0.0090

Uranus	-81150-06-24 21:49 J	-27918439.81	-27918439.59	-27918439.35	0.0147	0.0065
Uranus	-81149-06-29 04:18 J	-27918069.56	-27918069.32	-27918069.07	0.0147	0.0039
Jupiter	-81149-10-03 23:59 J	-27917972.59	-27917972.50	-27917972.41	0.0499	0.0458
Uranus	-81148-07-04 11:01 J	-27917699.29	-27917699.04	-27917698.78	0.0147	0.0013
Uranus	-81147-07-09 18:13 J	-27917329.00	-27917328.74	-27917328.49	0.0147	0.0014
Uranus	-81146-07-15 01:11 J	-27916958.70	-27916958.45	-27916958.20	0.0147	0.0040
Uranus	-81145-07-19 08:23 J	-27916588.38	-27916588.15	-27916587.92	0.0146	0.0066
Saturn	-81145-11-29 11:59 J	-27916455.03	-27916455.00	-27916454.95	0.0295	0.0290
Mars	-81144-06-07 07:25 J	-27916265.30	-27916265.19	-27916265.07	0.1585	0.1240
Uranus	-81144-07-24 15:06 J	-27916218.06	-27916217.87	-27916217.65	0.0146	0.0091
Saturn	-81144-12-14 05:16 J	-27916075.46	-27916075.28	-27916075.07	0.0294	0.0182
Jupiter	-81143-03-29 02:08 J	-27915970.62	-27915970.41	-27915970.20	0.0530	0.0198
Uranus	-81143-07-29 22:18 J	-27915847.72	-27915847.57	-27915847.41	0.0145	0.0115
Saturn	-81143-12-28 13:54 J	-27915696.15	-27915695.92	-27915695.68	0.0292	0.0066
Uranus	-81142-08-04 04:47 J	-27915477.36	-27915477.30	-27915477.21	0.0145	0.0138
Saturn	-81141-01-11 11:59 J	-27915317.23	-27915317.00	-27915316.75	0.0289	0.0049
Saturn	-81140-01-23 23:16 J	-27914938.73	-27914938.53	-27914938.33	0.0286	0.0153
Saturn	-81139-02-05 23:44 J	-27914560.63	-27914560.51	-27914560.39	0.0283	0.0244
Jupiter	-81131-04-02 20:08 J	-27911582.77	-27911582.66	-27911582.55	0.0529	0.0458
Saturn	-81129-05-30 19:54 J	-27910793.82	-27910793.67	-27910793.52	0.0266	0.0211
Saturn	-81128-06-11 14:08 J	-27910417.11	-27910416.91	-27910416.69	0.0267	0.0134
Saturn	-81127-06-23 15:20 J	-27910040.11	-27910039.86	-27910039.62	0.0269	0.0048
Saturn	-81126-07-06 00:28 J	-27909662.73	-27909662.48	-27909662.24	0.0271	0.0043
Saturn	-81125-07-17 18:13 J	-27909284.94	-27909284.74	-27909284.51	0.0274	0.0138
Saturn	-81124-07-30 22:04 J	-27908906.70	-27908906.58	-27908906.43	0.0277	0.0232
Saturn	-81115-12-07 23:30 J	-27905489.66	-27905489.52	-27905489.36	0.0294	0.0231
Jupiter	-81114-09-15 12:28 J	-27905208.04	-27905207.98	-27905207.92	0.0493	0.0473
Saturn	-81114-12-22 11:44 J	-27905110.22	-27905110.01	-27905109.78	0.0292	0.0119
Saturn	-81112-01-04 14:37 J	-27904731.14	-27904730.89	-27904730.65	0.0290	0.0006
Mars	-81112-06-14 18:42 J	-27904569.89	-27904569.72	-27904569.56	0.1579	0.0717

Uranus -81112-12-16 07:40 J -27904385.27 -27904385.18 -27904385.09 0.0131 0.0123
 Saturn -81111-01-18 06:28 J -27904352.45 -27904352.23 -27904352.00 0.0287 0.0106
 Uranus -81111-12-20 12:13 J -27904016.14 -27904015.99 -27904015.84 0.0131 0.0106
 Saturn -81110-01-31 11:30 J -27903974.18 -27903974.02 -27903973.84 0.0284 0.0204
 Uranus -81110-12-24 16:18 J -27903647.00 -27903646.82 -27903646.62 0.0131 0.0088
 Pluto -81109-07-25 20:37 J -27903432.73 -27903432.64 -27903432.55 0.0066 0.0061
 Uranus -81109-12-27 19:54 J -27903277.87 -27903277.67 -27903277.45 0.0131 0.0070
 Pluto -81108-07-27 11:01 J -27903066.24 -27903066.04 -27903065.80 0.0066 0.0036
 Uranus -81108-12-31 23:01 J -27902908.76 -27902908.54 -27902908.29 0.0131 0.0053
 Uranus -81106-01-05 02:08 J -27902539.65 -27902539.41 -27902539.16 0.0131 0.0034
 Uranus -81105-01-09 04:47 J -27902170.54 -27902170.30 -27902170.04 0.0132 0.0016
 Uranus -81104-01-12 07:11 J -27901801.45 -27901801.20 -27901800.95 0.0132 0.0003
 Uranus -81103-01-16 09:35 J -27901432.35 -27901432.10 -27901431.86 0.0132 0.0021
 Uranus -81102-01-20 11:30 J -27901063.25 -27901063.02 -27901062.77 0.0132 0.0040
 Jupiter -81102-09-20 03:20 J -27900820.56 -27900820.36 -27900820.15 0.0494 0.0251
 Uranus -81101-01-24 13:40 J -27900694.14 -27900693.93 -27900693.69 0.0132 0.0059
 Neptune -81101-10-02 22:04 J -27900441.70 -27900441.58 -27900441.40 0.0088 0.0074
 Uranus -81100-01-27 16:18 J -27900325.02 -27900324.82 -27900324.61 0.0133 0.0076
 Saturn -81100-05-25 18:28 J -27900206.82 -27900206.73 -27900206.62 0.0266 0.0242
 Neptune -81100-10-05 12:56 J -27900074.16 -27900073.96 -27900073.73 0.0088 0.0052
 Uranus -81099-01-31 18:42 J -27899955.88 -27899955.72 -27899955.53 0.0133 0.0094
 Saturn -81099-06-06 10:04 J -27899830.26 -27899830.08 -27899829.88 0.0267 0.0168
 Neptune -81099-10-08 03:20 J -27899706.59 -27899706.36 -27899706.09 0.0088 0.0031
 Uranus -81098-02-04 21:35 J -27899586.72 -27899586.60 -27899586.46 0.0133 0.0112
 Saturn -81098-06-18 07:25 J -27899453.42 -27899453.19 -27899452.95 0.0268 0.0086
 Neptune -81098-10-10 18:13 J -27899339.00 -27899338.74 -27899338.48 0.0088 0.0009
 Uranus -81097-02-09 00:56 J -27899217.52 -27899217.46 -27899217.39 0.0134 0.0129
 Saturn -81097-06-29 12:13 J -27899076.24 -27899075.99 -27899075.74 0.0270 0.0003
 Neptune -81097-10-12 08:23 J -27898971.41 -27898971.15 -27898970.89 0.0088 0.0013
 Saturn -81096-07-12 01:25 J -27898698.67 -27898698.44 -27898698.20 0.0272 0.0096

Neptune -81096-10-14 22:18 J -27898603.80 -27898603.57 -27898603.31 0.0088 0.0034
 Saturn -81095-07-25 00:28 J -27898320.66 -27898320.48 -27898320.30 0.0275 0.0190
 Neptune -81095-10-17 12:13 J -27898236.18 -27898235.99 -27898235.77 0.0088 0.0055
 Neptune -81094-10-20 02:08 J -27897868.52 -27897868.41 -27897868.26 0.0088 0.0077
 Jupiter -81090-09-24 21:49 J -27896432.83 -27896432.59 -27896432.34 0.0495 0.0020
 Saturn -81086-12-01 12:13 J -27894904.05 -27894903.99 -27894903.90 0.0295 0.0280
 Saturn -81085-12-15 05:59 J -27894524.45 -27894524.25 -27894524.05 0.0294 0.0169
 Jupiter -81084-03-18 18:56 J -27894430.87 -27894430.71 -27894430.54 0.0533 0.0360
 Saturn -81084-12-29 14:23 J -27894145.14 -27894144.90 -27894144.66 0.0292 0.0052
 Saturn -81082-01-12 12:28 J -27893766.21 -27893765.98 -27893765.74 0.0289 0.0062
 Saturn -81081-01-25 23:44 J -27893387.71 -27893387.51 -27893387.32 0.0287 0.0167
 Saturn -81080-02-06 23:59 J -27893009.60 -27893009.50 -27893009.40 0.0283 0.0257
 Jupiter -81078-09-29 16:32 J -27892045.02 -27892044.81 -27892044.59 0.0497 0.0216
 Jupiter -81072-03-23 13:54 J -27890043.14 -27890042.92 -27890042.69 0.0532 0.0093
 Saturn -81070-06-01 17:59 J -27889242.89 -27889242.75 -27889242.58 0.0266 0.0202
 Uranus -81069-06-09 11:01 J -27888869.10 -27888869.04 -27888868.93 0.0147 0.0138
 Saturn -81069-06-12 12:28 J -27888866.19 -27888865.98 -27888865.76 0.0267 0.0123
 Uranus -81068-06-14 15:49 J -27888498.98 -27888498.84 -27888498.67 0.0147 0.0114
 Saturn -81068-06-24 13:40 J -27888489.18 -27888488.93 -27888488.69 0.0268 0.0037
 Uranus -81067-06-19 20:52 J -27888128.81 -27888128.63 -27888128.41 0.0147 0.0090
 Saturn -81067-07-06 22:32 J -27888111.80 -27888111.56 -27888111.31 0.0271 0.0055
 Uranus -81066-06-25 02:52 J -27887758.60 -27887758.38 -27887758.14 0.0147 0.0064
 Saturn -81066-07-19 16:32 J -27887734.01 -27887733.81 -27887733.59 0.0273 0.0149
 Jupiter -81066-10-04 08:37 J -27887657.24 -27887657.14 -27887657.03 0.0498 0.0445
 Mars -81065-06-09 06:56 J -27887408.39 -27887408.21 -27887408.04 0.1584 0.0646
 Uranus -81065-06-29 09:06 J -27887388.36 -27887388.12 -27887387.86 0.0147 0.0037
 Saturn -81065-07-31 20:37 J -27887355.75 -27887355.64 -27887355.52 0.0276 0.0243
 Uranus -81064-07-04 16:04 J -27887018.09 -27887017.83 -27887017.57 0.0147 0.0010
 Uranus -81063-07-09 22:47 J -27886647.81 -27886647.55 -27886647.29 0.0147 0.0016
 Uranus -81062-07-15 05:59 J -27886277.50 -27886277.25 -27886277.01 0.0147 0.0043

Uranus	-81061-07-19 12:42 J	-27885907.18	-27885906.97	-27885906.72	0.0146	0.0070
Jupiter	-81060-03-28 10:18 J	-27885655.28	-27885655.07	-27885654.85	0.0531	0.0178
Uranus	-81060-07-24 19:40 J	-27885536.85	-27885536.68	-27885536.46	0.0146	0.0095
Uranus	-81059-07-30 02:52 J	-27885166.51	-27885166.38	-27885166.21	0.0146	0.0120
Uranus	-81058-08-04 10:18 J	-27884796.12	-27884796.07	-27884796.03	0.0145	0.0143
Saturn	-81056-12-08 23:16 J	-27883938.68	-27883938.53	-27883938.35	0.0294	0.0220
Saturn	-81055-12-23 11:59 J	-27883559.23	-27883559.00	-27883558.77	0.0293	0.0105
Saturn	-81053-01-06 14:37 J	-27883180.13	-27883179.89	-27883179.65	0.0290	0.0011
Saturn	-81052-01-19 06:28 J	-27882801.44	-27882801.23	-27882801.00	0.0287	0.0120
Saturn	-81051-02-01 11:30 J	-27882423.17	-27882423.02	-27882422.86	0.0284	0.0216
Jupiter	-81048-04-02 07:54 J	-27881267.29	-27881267.17	-27881267.05	0.0529	0.0448
Saturn	-81041-05-26 17:16 J	-27878655.89	-27878655.78	-27878655.66	0.0265	0.0233
Saturn	-81040-06-07 08:37 J	-27878279.33	-27878279.14	-27878278.94	0.0266	0.0158
Saturn	-81039-06-19 05:30 J	-27877902.50	-27877902.27	-27877902.03	0.0268	0.0075
Saturn	-81038-07-01 10:04 J	-27877525.32	-27877525.08	-27877524.83	0.0270	0.0015
Saturn	-81037-07-12 23:16 J	-27877147.75	-27877147.53	-27877147.30	0.0272	0.0108
Saturn	-81036-07-25 22:04 J	-27876769.75	-27876769.58	-27876769.41	0.0275	0.0201
Mars	-81033-06-16 18:13 J	-27875712.85	-27875712.74	-27875712.64	0.1578	0.1312
Jupiter	-81031-09-14 23:01 J	-27874892.59	-27874892.54	-27874892.49	0.0493	0.0480
Uranus	-81028-12-16 15:49 J	-27873703.92	-27873703.84	-27873703.74	0.0131	0.0123
Saturn	-81027-12-02 10:04 J	-27873353.17	-27873353.08	-27873352.97	0.0295	0.0270
Uranus	-81027-12-20 20:08 J	-27873334.79	-27873334.66	-27873334.48	0.0131	0.0106
Saturn	-81026-12-17 03:49 J	-27872973.54	-27872973.34	-27872973.13	0.0294	0.0158
Uranus	-81026-12-25 00:28 J	-27872965.65	-27872965.48	-27872965.27	0.0131	0.0088
Uranus	-81025-12-28 03:49 J	-27872596.53	-27872596.34	-27872596.10	0.0131	0.0070
Saturn	-81025-12-30 12:13 J	-27872594.23	-27872593.99	-27872593.74	0.0292	0.0040
Uranus	-81023-01-01 07:25 J	-27872227.41	-27872227.19	-27872226.95	0.0131	0.0050
Saturn	-81023-01-13 10:32 J	-27872215.29	-27872215.06	-27872214.82	0.0290	0.0075
Uranus	-81022-01-05 10:32 J	-27871858.31	-27871858.06	-27871857.82	0.0131	0.0032
Saturn	-81022-01-26 21:49 J	-27871836.77	-27871836.59	-27871836.39	0.0287	0.0179

Uranus -81021-01-09 13:11 J -27871489.20 -27871488.95 -27871488.70 0.0132 0.0013
 Pluto -81021-02-01 10:47 J -27871466.23 -27871466.05 -27871465.82 0.0078 0.0047
 Saturn -81021-02-08 22:18 J -27871458.64 -27871458.57 -27871458.49 0.0283 0.0267
 Uranus -81020-01-12 15:35 J -27871120.11 -27871119.85 -27871119.60 0.0132 0.0006
 Uranus -81019-01-16 17:44 J -27870751.00 -27870750.76 -27870750.50 0.0132 0.0025
 Jupiter -81019-09-19 16:18 J -27870505.02 -27870504.82 -27870504.61 0.0494 0.0254
 Uranus -81018-01-20 19:54 J -27870381.89 -27870381.67 -27870381.42 0.0132 0.0044
 Neptune -81018-04-02 05:44 J -27870310.41 -27870310.26 -27870310.10 0.0089 0.0070
 Uranus -81017-01-24 22:32 J -27870012.78 -27870012.56 -27870012.33 0.0132 0.0062
 Neptune -81017-04-03 14:23 J -27869943.09 -27869942.90 -27869942.68 0.0089 0.0050
 Uranus -81016-01-28 00:42 J -27869643.66 -27869643.47 -27869643.26 0.0133 0.0080
 Neptune -81016-04-05 23:16 J -27869575.75 -27869575.53 -27869575.27 0.0089 0.0030
 Uranus -81015-02-01 03:20 J -27869274.51 -27869274.36 -27869274.18 0.0133 0.0098
 Neptune -81015-04-08 08:37 J -27869208.38 -27869208.14 -27869207.88 0.0089 0.0009
 Uranus -81014-02-05 06:13 J -27868905.34 -27868905.24 -27868905.10 0.0133 0.0116
 Neptune -81014-04-10 17:44 J -27868841.00 -27868840.76 -27868840.50 0.0089 0.0012
 Uranus -81013-02-09 09:35 J -27868536.10 -27868536.10 -27868536.08 0.0134 0.0133
 Neptune -81013-04-12 02:52 J -27868473.60 -27868473.38 -27868473.13 0.0089 0.0032
 Neptune -81012-04-14 11:59 J -27868106.18 -27868106.00 -27868105.78 0.0089 0.0053
 Saturn -81012-05-22 03:06 J -27868068.39 -27868068.37 -27868068.33 0.0265 0.0262
 Neptune -81011-04-16 21:49 J -27867738.72 -27867738.59 -27867738.44 0.0089 0.0073
 Saturn -81011-06-02 16:18 J -27867691.98 -27867691.82 -27867691.64 0.0265 0.0192
 Saturn -81010-06-14 10:47 J -27867315.28 -27867315.05 -27867314.83 0.0267 0.0112
 Mars -81010-12-15 13:54 J -27867131.00 -27867130.92 -27867130.84 0.1957 0.1801
 Saturn -81009-06-25 11:44 J -27866938.26 -27866938.01 -27866937.77 0.0268 0.0025
 Saturn -81008-07-07 20:37 J -27866560.88 -27866560.64 -27866560.40 0.0271 0.0067
 Saturn -81007-07-20 14:23 J -27866183.10 -27866182.90 -27866182.69 0.0273 0.0161
 Jupiter -81007-09-24 07:54 J -27866117.41 -27866117.17 -27866116.93 0.0495 0.0027
 Saturn -81006-08-02 18:13 J -27865804.82 -27865804.74 -27865804.62 0.0276 0.0254
 Jupiter -81001-03-18 02:23 J -27864115.56 -27864115.40 -27864115.24 0.0534 0.0380

81ST MILLENNIUM BCE

This is a list of transits of Earth in the 81st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-80997-12-09 23:16 J		-27862387.70	-27862387.53	-27862387.35	0.0294	0.0208	
Saturn	-80996-12-24 11:44 J		-27862008.24	-27862008.01	-27862007.78	0.0293	0.0092	
Jupiter	-80995-09-29 00:13 J		-27861729.70	-27861729.49	-27861729.26	0.0496	0.0202	
Saturn	-80994-01-07 14:23 J		-27861629.14	-27861628.90	-27861628.66	0.0290	0.0024	
Saturn	-80993-01-21 06:13 J		-27861250.45	-27861250.24	-27861250.03	0.0288	0.0133	
Saturn	-80992-02-02 10:47 J		-27860872.18	-27860872.05	-27860871.89	0.0284	0.0229	
Jupiter	-80989-03-23 01:11 J		-27859727.67	-27859727.45	-27859727.23	0.0533	0.0104	
Mars	-80986-06-12 06:28 J		-27858551.42	-27858551.23	-27858551.04	0.1582	0.0050	
Uranus	-80985-06-09 17:01 J		-27858187.85	-27858187.79	-27858187.68	0.0147	0.0139	
Uranus	-80984-06-14 21:49 J		-27857817.74	-27857817.59	-27857817.42	0.0147	0.0114	
Uranus	-80983-06-20 02:37 J		-27857447.58	-27857447.39	-27857447.17	0.0147	0.0089	
Jupiter	-80983-10-03 17:01 J		-27857341.89	-27857341.79	-27857341.66	0.0498	0.0432	
Saturn	-80982-05-28 15:49 J		-27857104.96	-27857104.84	-27857104.70	0.0265	0.0224	
Uranus	-80982-06-25 08:23 J		-27857077.37	-27857077.15	-27857076.90	0.0147	0.0063	
Saturn	-80981-06-08 07:11 J		-27856728.40	-27856728.20	-27856727.99	0.0266	0.0148	
Uranus	-80981-06-29 14:37 J		-27856707.13	-27856706.89	-27856706.63	0.0147	0.0036	
Saturn	-80980-06-20 04:04 J		-27856351.56	-27856351.33	-27856351.08	0.0268	0.0064	
Uranus	-80980-07-04 21:20 J		-27856336.87	-27856336.61	-27856336.35	0.0147	0.0008	
Saturn	-80979-07-02 08:37 J		-27855974.38	-27855974.14	-27855973.89	0.0270	0.0027	

Uranus	-80979-07-10 04:04 J	-27855966.58	-27855966.33	-27855966.07	0.0147	0.0019
Saturn	-80978-07-14 21:35 J	-27855596.81	-27855596.60	-27855596.37	0.0272	0.0120
Uranus	-80978-07-15 11:01 J	-27855596.28	-27855596.04	-27855595.79	0.0147	0.0046
Jupiter	-80977-03-27 22:32 J	-27855339.77	-27855339.56	-27855339.34	0.0531	0.0166
Uranus	-80977-07-19 17:59 J	-27855225.96	-27855225.75	-27855225.52	0.0146	0.0073
Saturn	-80977-07-26 20:23 J	-27855218.80	-27855218.65	-27855218.49	0.0275	0.0213
Uranus	-80976-07-25 01:11 J	-27854855.63	-27854855.45	-27854855.25	0.0146	0.0098
Uranus	-80975-07-30 08:23 J	-27854485.28	-27854485.15	-27854485.01	0.0145	0.0123
Saturn	-80968-12-03 07:54 J	-27851802.28	-27851802.17	-27851802.05	0.0295	0.0260
Saturn	-80967-12-18 01:25 J	-27851422.64	-27851422.44	-27851422.22	0.0294	0.0147
Saturn	-80965-01-01 10:04 J	-27851043.32	-27851043.08	-27851042.84	0.0292	0.0029
Jupiter	-80965-04-01 12:42 J	-27850952.10	-27850951.97	-27850951.82	0.0529	0.0419
Saturn	-80964-01-14 08:08 J	-27850664.38	-27850664.16	-27850663.92	0.0290	0.0087
Saturn	-80963-01-27 19:40 J	-27850285.86	-27850285.68	-27850285.50	0.0287	0.0190
Saturn	-80962-02-09 20:08 J	-27849907.70	-27849907.66	-27849907.61	0.0283	0.0278
Saturn	-80953-05-23 01:40 J	-27846517.48	-27846517.43	-27846517.35	0.0265	0.0254
Saturn	-80952-06-03 15:06 J	-27846141.04	-27846140.87	-27846140.68	0.0265	0.0182
Saturn	-80951-06-15 09:35 J	-27845764.32	-27845764.10	-27845763.87	0.0267	0.0102
Saturn	-80950-06-27 10:47 J	-27845387.30	-27845387.05	-27845386.80	0.0268	0.0014
Saturn	-80949-07-08 19:25 J	-27845009.92	-27845009.69	-27845009.44	0.0271	0.0079
Saturn	-80948-07-21 13:25 J	-27844632.12	-27844631.94	-27844631.73	0.0273	0.0172
Jupiter	-80948-09-14 08:52 J	-27844577.16	-27844577.13	-27844577.09	0.0493	0.0486
Saturn	-80947-08-03 17:44 J	-27844253.83	-27844253.76	-27844253.68	0.0276	0.0264
Uranus	-80944-12-16 23:01 J	-27843022.61	-27843022.54	-27843022.42	0.0131	0.0123
Uranus	-80943-12-21 03:49 J	-27842653.47	-27842653.34	-27842653.17	0.0131	0.0105
Uranus	-80942-12-25 08:08 J	-27842284.34	-27842284.16	-27842283.95	0.0131	0.0086
Uranus	-80941-12-28 11:44 J	-27841915.21	-27841915.01	-27841914.78	0.0131	0.0068
Uranus	-80939-01-01 15:20 J	-27841546.09	-27841545.86	-27841545.62	0.0131	0.0049
Mars	-80939-06-06 18:13 J	-27841389.82	-27841389.74	-27841389.65	0.1588	0.1424
Uranus	-80938-01-05 18:13 J	-27841176.98	-27841176.74	-27841176.49	0.0132	0.0030

Saturn -80938-12-11 22:04 J -27840836.75 -27840836.58 -27840836.38 0.0295 0.0197
 Uranus -80937-01-09 21:06 J -27840807.87 -27840807.62 -27840807.37 0.0132 0.0011
 Neptune -80937-10-02 07:40 J -27840541.26 -27840541.18 -27840541.05 0.0088 0.0081
 Saturn -80937-12-25 10:32 J -27840457.30 -27840457.06 -27840456.82 0.0293 0.0079
 Uranus -80936-01-12 23:30 J -27840438.77 -27840438.52 -27840438.27 0.0132 0.0008
 Jupiter -80936-09-19 00:28 J -27840189.68 -27840189.48 -27840189.27 0.0494 0.0264
 Neptune -80936-10-04 22:18 J -27840173.75 -27840173.57 -27840173.36 0.0088 0.0060
 Saturn -80935-01-08 13:11 J -27840078.19 -27840077.95 -27840077.71 0.0291 0.0037
 Uranus -80935-01-17 02:08 J -27840069.65 -27840069.41 -27840069.16 0.0132 0.0027
 Neptune -80935-10-07 12:56 J -27839806.18 -27839805.96 -27839805.70 0.0088 0.0039
 Uranus -80934-01-21 04:32 J -27839700.54 -27839700.31 -27839700.07 0.0132 0.0046
 Saturn -80934-01-22 05:01 J -27839699.49 -27839699.29 -27839699.08 0.0288 0.0145
 Neptune -80934-10-10 03:35 J -27839438.60 -27839438.35 -27839438.08 0.0088 0.0017
 Uranus -80933-01-25 06:42 J -27839331.42 -27839331.22 -27839330.99 0.0132 0.0066
 Saturn -80933-02-04 09:49 J -27839321.21 -27839321.09 -27839320.95 0.0284 0.0240
 Neptune -80933-10-11 18:13 J -27839071.00 -27839070.74 -27839070.47 0.0088 0.0005
 Uranus -80932-01-28 09:20 J -27838962.29 -27838962.11 -27838961.90 0.0133 0.0084
 Neptune -80932-10-14 08:23 J -27838703.40 -27838703.15 -27838702.89 0.0088 0.0026
 Uranus -80931-02-01 12:28 J -27838593.13 -27838592.98 -27838592.81 0.0133 0.0102
 Neptune -80931-10-16 22:32 J -27838335.78 -27838335.56 -27838335.33 0.0088 0.0047
 Mars -80931-12-19 17:44 J -27838271.96 -27838271.76 -27838271.56 0.1960 0.0442
 Uranus -80930-02-05 15:06 J -27838223.96 -27838223.87 -27838223.75 0.0133 0.0120
 Neptune -80930-10-19 12:28 J -27837968.13 -27837967.98 -27837967.79 0.0088 0.0068
 Jupiter -80924-09-23 15:49 J -27835802.08 -27835801.84 -27835801.60 0.0495 0.0040
 Saturn -80923-05-29 15:20 J -27835553.99 -27835553.86 -27835553.70 0.0265 0.0215
 Saturn -80922-06-10 06:42 J -27835177.42 -27835177.22 -27835177.00 0.0266 0.0137
 Saturn -80921-06-21 04:04 J -27834800.57 -27834800.33 -27834800.09 0.0268 0.0052
 Saturn -80920-07-03 08:37 J -27834423.38 -27834423.14 -27834422.89 0.0270 0.0038
 Saturn -80919-07-15 21:20 J -27834045.82 -27834045.61 -27834045.38 0.0272 0.0132
 Jupiter -80918-03-18 13:54 J -27833800.06 -27833799.92 -27833799.76 0.0534 0.0393

Saturn	-80918-07-28 19:54 J	-27833667.80	-27833667.67	-27833667.51	0.0275	0.0225
Jupiter	-80912-09-28 10:32 J	-27831414.27	-27831414.06	-27831413.83	0.0496	0.0192
Saturn	-80909-12-04 07:25 J	-27830251.32	-27830251.19	-27830251.06	0.0295	0.0250
Saturn	-80908-12-19 00:28 J	-27829871.68	-27829871.48	-27829871.25	0.0294	0.0136
Mars	-80907-06-14 05:30 J	-27829694.44	-27829694.27	-27829694.09	0.1581	0.0551
Saturn	-80906-01-02 09:06 J	-27829492.36	-27829492.12	-27829491.87	0.0292	0.0017
Jupiter	-80906-03-23 06:42 J	-27829412.43	-27829412.22	-27829412.00	0.0532	0.0131
Saturn	-80905-01-16 07:25 J	-27829113.42	-27829113.19	-27829112.97	0.0290	0.0098
Saturn	-80904-01-28 18:28 J	-27828734.90	-27828734.73	-27828734.56	0.0287	0.0201
Uranus	-80901-06-10 01:25 J	-27827506.51	-27827506.44	-27827506.34	0.0147	0.0138
Uranus	-80900-06-15 05:59 J	-27827136.41	-27827136.25	-27827136.09	0.0147	0.0113
Jupiter	-80900-10-03 04:47 J	-27827026.41	-27827026.30	-27827026.17	0.0498	0.0425
Uranus	-80899-06-20 10:47 J	-27826766.25	-27826766.05	-27826765.84	0.0147	0.0087
Uranus	-80898-06-25 16:04 J	-27826396.05	-27826395.83	-27826395.58	0.0147	0.0061
Uranus	-80897-06-29 22:04 J	-27826025.82	-27826025.58	-27826025.32	0.0147	0.0033
Uranus	-80896-07-05 04:47 J	-27825655.55	-27825655.30	-27825655.04	0.0147	0.0005
Uranus	-80895-07-10 11:16 J	-27825285.28	-27825285.03	-27825284.77	0.0147	0.0022
Jupiter	-80894-03-28 00:56 J	-27825024.68	-27825024.46	-27825024.24	0.0531	0.0132
Saturn	-80894-05-25 01:11 J	-27824966.52	-27824966.45	-27824966.35	0.0265	0.0246
Uranus	-80894-07-15 18:13 J	-27824914.97	-27824914.74	-27824914.49	0.0147	0.0050
Saturn	-80893-06-04 15:06 J	-27824590.05	-27824589.87	-27824589.68	0.0266	0.0173
Uranus	-80893-07-20 01:11 J	-27824544.65	-27824544.45	-27824544.21	0.0146	0.0077
Saturn	-80892-06-16 09:49 J	-27824213.32	-27824213.09	-27824212.85	0.0267	0.0091
Uranus	-80892-07-25 08:37 J	-27824174.32	-27824174.14	-27824173.95	0.0146	0.0102
Saturn	-80891-06-28 11:16 J	-27823836.28	-27823836.03	-27823835.79	0.0268	0.0005
Uranus	-80891-07-30 15:35 J	-27823803.96	-27823803.85	-27823803.72	0.0145	0.0128
Saturn	-80890-07-10 20:23 J	-27823458.89	-27823458.65	-27823458.42	0.0271	0.0090
Saturn	-80889-07-22 14:37 J	-27823081.07	-27823080.89	-27823080.70	0.0273	0.0184
Saturn	-80888-08-04 18:42 J	-27822702.73	-27822702.72	-27822702.68	0.0276	0.0275
Jupiter	-80882-04-01 19:25 J	-27820636.83	-27820636.69	-27820636.53	0.0530	0.0397

Saturn -80880-11-28 03:35 J -27819665.37 -27819665.35 -27819665.33 0.0295 0.0294
 Saturn -80879-12-12 23:30 J -27819285.71 -27819285.52 -27819285.32 0.0295 0.0184
 Saturn -80878-12-27 11:16 J -27818906.26 -27818906.03 -27818905.79 0.0293 0.0067
 Saturn -80876-01-09 13:40 J -27818527.17 -27818526.93 -27818526.69 0.0291 0.0050
 Saturn -80875-01-23 05:30 J -27818148.47 -27818148.27 -27818148.07 0.0288 0.0157
 Saturn -80874-02-05 10:04 J -27817770.18 -27817770.08 -27817769.96 0.0284 0.0251
 Saturn -80864-05-30 16:47 J -27814002.94 -27814002.80 -27814002.64 0.0265 0.0205
 Saturn -80863-06-11 08:23 J -27813626.36 -27813626.15 -27813625.93 0.0266 0.0127
 Saturn -80862-06-23 06:13 J -27813249.49 -27813249.24 -27813249.00 0.0268 0.0041
 Pluto -80862-07-29 01:25 J -27813213.70 -27813213.44 -27813213.17 0.0066 0.0010
 Saturn -80861-07-04 11:01 J -27812872.29 -27812872.04 -27812871.80 0.0270 0.0051
 Mars -80860-06-08 17:44 J -27812532.92 -27812532.76 -27812532.60 0.1586 0.0818
 Saturn -80860-07-16 23:59 J -27812494.71 -27812494.50 -27812494.28 0.0272 0.0144
 Uranus -80860-12-17 07:54 J -27812341.25 -27812341.17 -27812341.07 0.0132 0.0122
 Saturn -80859-07-29 22:47 J -27812116.67 -27812116.55 -27812116.41 0.0275 0.0236
 Uranus -80859-12-21 12:28 J -27811972.12 -27811971.98 -27811971.81 0.0131 0.0104
 Uranus -80858-12-25 16:47 J -27811602.99 -27811602.80 -27811602.60 0.0131 0.0085
 Uranus -80857-12-28 20:23 J -27811233.86 -27811233.65 -27811233.43 0.0131 0.0066
 Uranus -80855-01-01 23:44 J -27810864.74 -27810864.51 -27810864.26 0.0131 0.0047
 Uranus -80854-01-06 02:52 J -27810495.62 -27810495.38 -27810495.13 0.0132 0.0028
 Neptune -80854-04-01 19:40 J -27810409.77 -27810409.68 -27810409.54 0.0089 0.0078
 Uranus -80853-01-10 05:44 J -27810126.51 -27810126.26 -27810126.01 0.0132 0.0008
 Neptune -80853-04-03 04:32 J -27810042.48 -27810042.31 -27810042.10 0.0089 0.0058
 Jupiter -80853-09-18 09:20 J -27809874.31 -27809874.11 -27809873.91 0.0494 0.0275
 Uranus -80852-01-13 08:23 J -27809757.40 -27809757.15 -27809756.90 0.0132 0.0011
 Neptune -80852-04-05 13:54 J -27809675.14 -27809674.92 -27809674.69 0.0089 0.0037
 Uranus -80851-01-17 11:16 J -27809388.28 -27809388.03 -27809387.79 0.0132 0.0030
 Neptune -80851-04-07 22:47 J -27809307.79 -27809307.55 -27809307.30 0.0089 0.0017
 Uranus -80850-01-21 13:40 J -27809019.16 -27809018.93 -27809018.70 0.0132 0.0050
 Neptune -80850-04-10 07:54 J -27808940.42 -27808940.17 -27808939.92 0.0089 0.0003

Saturn -80850-12-06 09:06 J -27808700.25 -27808700.12 -27808699.97 0.0295 0.0239
 Uranus -80849-01-25 16:18 J -27808650.03 -27808649.82 -27808649.60 0.0132 0.0069
 Neptune -80849-04-11 16:32 J -27808573.04 -27808572.81 -27808572.55 0.0089 0.0024
 Saturn -80849-12-20 01:54 J -27808320.64 -27808320.42 -27808320.20 0.0294 0.0123
 Uranus -80848-01-28 18:42 J -27808280.89 -27808280.72 -27808280.52 0.0133 0.0088
 Neptune -80848-04-14 01:54 J -27808205.62 -27808205.42 -27808205.19 0.0089 0.0044
 Saturn -80847-01-03 09:49 J -27807941.33 -27807941.09 -27807940.85 0.0292 0.0004
 Uranus -80847-02-01 22:04 J -27807911.73 -27807911.58 -27807911.43 0.0133 0.0106
 Neptune -80847-04-16 11:30 J -27807838.19 -27807838.02 -27807837.85 0.0089 0.0065
 Saturn -80846-01-17 07:40 J -27807562.41 -27807562.18 -27807561.96 0.0290 0.0110
 Uranus -80846-02-06 00:28 J -27807542.54 -27807542.48 -27807542.37 0.0133 0.0126
 Neptune -80846-04-18 20:08 J -27807470.70 -27807470.66 -27807470.55 0.0089 0.0086
 Saturn -80845-01-30 18:13 J -27807183.89 -27807183.74 -27807183.57 0.0287 0.0212
 Jupiter -80841-09-23 01:54 J -27805486.66 -27805486.42 -27805486.18 0.0495 0.0048
 Jupiter -80835-03-17 16:18 J -27803484.95 -27803484.82 -27803484.68 0.0534 0.0423
 Saturn -80835-05-26 02:37 J -27803415.48 -27803415.39 -27803415.27 0.0265 0.0237
 Saturn -80834-06-06 17:01 J -27803038.99 -27803038.79 -27803038.60 0.0266 0.0162
 Saturn -80833-06-17 11:59 J -27802662.23 -27802662.00 -27802661.76 0.0267 0.0079
 Saturn -80832-06-29 13:40 J -27802285.17 -27802284.93 -27802284.68 0.0268 0.0011
 Saturn -80831-07-11 23:01 J -27801907.76 -27801907.54 -27801907.30 0.0271 0.0103
 Saturn -80830-07-24 17:59 J -27801529.92 -27801529.75 -27801529.57 0.0273 0.0195
 Jupiter -80829-09-27 17:30 J -27801098.99 -27801098.77 -27801098.55 0.0496 0.0180
 Mars -80828-06-16 05:01 J -27800837.42 -27800837.29 -27800837.17 0.1580 0.1160
 Jupiter -80823-03-22 11:01 J -27799097.26 -27799097.04 -27799096.82 0.0533 0.0157
 Saturn -80821-11-29 07:25 J -27798114.25 -27798114.19 -27798114.11 0.0295 0.0283
 Saturn -80820-12-14 03:20 J -27797734.56 -27797734.36 -27797734.16 0.0295 0.0171
 Saturn -80819-12-28 14:52 J -27797355.12 -27797354.88 -27797354.64 0.0293 0.0053
 Saturn -80817-01-11 16:47 J -27796976.03 -27796975.80 -27796975.56 0.0291 0.0064
 Uranus -80817-06-10 11:44 J -27796825.09 -27796825.01 -27796824.90 0.0147 0.0137
 Jupiter -80817-10-02 09:49 J -27796711.22 -27796711.09 -27796710.95 0.0497 0.0406

Saturn -80816-01-24 08:08 J -27796597.35 -27796597.16 -27796596.96 0.0288 0.0170
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 Saturn -80805-05-31 20:08 J -27792451.81 -27792451.66 -27792451.48 0.0265 0.0195
 Saturn -80804-06-12 12:28 J -27792075.20 -27792074.98 -27792074.76 0.0266 0.0115
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 Saturn -80732-12-09 00:13 J -27765597.65 -27765597.49 -27765597.31 0.0295 0.0211
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 Saturn -80731-12-23 15:20 J -27765218.09 -27765217.86 -27765217.63 0.0293 0.0094
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Uranus -80724-07-26 04:18 J -27762811.47 -27762811.32 -27762811.14 0.0146 0.0112
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 Saturn -80715-06-20 23:30 J -27759559.76 -27759559.52 -27759559.28 0.0267 0.0054
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 Saturn -80702-12-17 22:04 J -27754631.79 -27754631.58 -27754631.35 0.0294 0.0140
 Saturn -80701-12-31 08:23 J -27754252.39 -27754252.15 -27754251.91 0.0293 0.0020
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 Saturn -80698-01-27 22:18 J -27753494.75 -27753494.57 -27753494.40 0.0287 0.0198
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 Uranus -80690-12-26 09:06 J -27750240.30 -27750240.12 -27750239.91 0.0131 0.0083
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 Uranus -80608-12-18 08:08 J -27720297.25 -27720297.16 -27720297.04 0.0131 0.0120
 Neptune -80607-10-06 07:11 J -27720005.38 -27720005.20 -27720004.96 0.0088 0.0055
 Uranus -80607-12-22 12:42 J -27719928.12 -27719927.97 -27719927.80 0.0131 0.0101
 Neptune -80606-10-08 21:49 J -27719637.82 -27719637.59 -27719637.33 0.0088 0.0033
 Uranus -80606-12-26 16:32 J -27719558.99 -27719558.81 -27719558.59 0.0131 0.0082
 Neptune -80605-10-10 12:28 J -27719270.23 -27719269.98 -27719269.71 0.0088 0.0012
 Uranus -80605-12-29 20:23 J -27719189.86 -27719189.65 -27719189.41 0.0131 0.0062
 Jupiter -80604-09-16 17:30 J -27718928.95 -27718928.77 -27718928.59 0.0493 0.0335
 Neptune -80604-10-13 03:06 J -27718902.63 -27718902.37 -27718902.10 0.0088 0.0009
 Uranus -80603-01-02 23:59 J -27718820.73 -27718820.50 -27718820.25 0.0131 0.0042
 Neptune -80603-10-15 17:16 J -27718535.02 -27718534.78 -27718534.52 0.0088 0.0030
 Uranus -80602-01-07 03:06 J -27718451.61 -27718451.37 -27718451.11 0.0131 0.0021
 Neptune -80602-10-18 07:40 J -27718167.39 -27718167.18 -27718166.95 0.0088 0.0051
 Uranus -80601-01-11 06:13 J -27718082.49 -27718082.24 -27718081.98 0.0132 0.0002
 Neptune -80601-10-19 21:20 J -27717799.74 -27717799.61 -27717799.43 0.0088 0.0072
 Uranus -80600-01-14 09:06 J -27717713.37 -27717713.12 -27717712.87 0.0132 0.0019
 Saturn -80600-05-20 14:52 J -27717586.90 -27717586.88 -27717586.82 0.0266 0.0262
 Uranus -80599-01-18 11:59 J -27717344.24 -27717344.00 -27717343.76 0.0132 0.0039
 Saturn -80599-06-01 03:20 J -27717210.52 -27717210.36 -27717210.18 0.0266 0.0190
 Uranus -80598-01-22 14:37 J -27716975.11 -27716974.89 -27716974.67 0.0132 0.0060
 Saturn -80598-06-12 20:08 J -27716833.88 -27716833.66 -27716833.43 0.0267 0.0110
 Uranus -80597-01-26 17:01 J -27716605.98 -27716605.79 -27716605.58 0.0132 0.0080
 Saturn -80597-06-23 18:28 J -27716456.97 -27716456.73 -27716456.48 0.0268 0.0023
 Uranus -80596-01-29 19:25 J -27716236.84 -27716236.69 -27716236.51 0.0133 0.0100

Saturn	-80596-07-05 23:30 J	-27716079.76	-27716079.52	-27716079.28	0.0269	0.0068
Uranus	-80595-02-02 22:04 J	-27715867.67	-27715867.58	-27715867.45	0.0133	0.0119
Saturn	-80595-07-18 12:56 J	-27715702.16	-27715701.96	-27715701.76	0.0272	0.0160
Saturn	-80594-07-31 11:16 J	-27715324.12	-27715324.03	-27715323.92	0.0274	0.0251
Jupiter	-80592-09-21 08:37 J	-27714541.37	-27714541.14	-27714540.90	0.0494	0.0112
Jupiter	-80586-03-15 19:40 J	-27712539.73	-27712539.68	-27712539.63	0.0535	0.0519
Saturn	-80585-12-06 13:25 J	-27711908.10	-27711907.94	-27711907.77	0.0295	0.0218
Saturn	-80584-12-21 05:59 J	-27711528.48	-27711528.25	-27711528.02	0.0294	0.0101
Saturn	-80582-01-04 13:54 J	-27711149.16	-27711148.92	-27711148.68	0.0292	0.0018
Saturn	-80581-01-18 11:44 J	-27710770.22	-27710770.01	-27710769.79	0.0290	0.0130
Saturn	-80580-01-30 23:16 J	-27710391.67	-27710391.53	-27710391.38	0.0287	0.0229
Jupiter	-80580-09-26 00:28 J	-27710153.71	-27710153.48	-27710153.25	0.0495	0.0111
Mars	-80576-06-10 03:49 J	-27708800.52	-27708800.34	-27708800.16	0.1588	0.0396
Jupiter	-80574-03-20 15:35 J	-27708152.05	-27708151.85	-27708151.65	0.0534	0.0255
Saturn	-80570-05-27 15:35 J	-27706622.98	-27706622.85	-27706622.71	0.0265	0.0220
Saturn	-80569-06-07 05:30 J	-27706246.47	-27706246.27	-27706246.06	0.0266	0.0143
Saturn	-80568-06-19 00:28 J	-27705869.71	-27705869.48	-27705869.23	0.0267	0.0059
Jupiter	-80568-09-30 14:52 J	-27705766.05	-27705765.88	-27705765.69	0.0496	0.0332
Saturn	-80567-07-01 02:08 J	-27705492.66	-27705492.41	-27705492.17	0.0269	0.0031
Saturn	-80566-07-13 11:01 J	-27705115.26	-27705115.04	-27705114.82	0.0271	0.0124
Uranus	-80565-06-11 14:37 J	-27704780.99	-27704780.89	-27704780.79	0.0147	0.0134
Saturn	-80565-07-25 04:32 J	-27704737.46	-27704737.31	-27704737.15	0.0273	0.0216
Uranus	-80564-06-16 18:13 J	-27704410.90	-27704410.74	-27704410.55	0.0147	0.0108
Uranus	-80563-06-21 23:16 J	-27704040.73	-27704040.53	-27704040.31	0.0147	0.0080
Jupiter	-80562-03-25 12:42 J	-27703764.20	-27703763.97	-27703763.74	0.0533	0.0014
Uranus	-80562-06-27 04:47 J	-27703670.53	-27703670.30	-27703670.05	0.0147	0.0052
Uranus	-80561-07-01 11:01 J	-27703300.29	-27703300.04	-27703299.79	0.0147	0.0022
Uranus	-80560-07-06 17:44 J	-27702930.01	-27702929.76	-27702929.50	0.0147	0.0007
Uranus	-80559-07-12 00:42 J	-27702559.72	-27702559.47	-27702559.22	0.0147	0.0036
Uranus	-80558-07-17 07:40 J	-27702189.40	-27702189.18	-27702188.94	0.0147	0.0066

Uranus -80557-07-21 14:52 J -27701819.07 -27701818.88 -27701818.68 0.0146 0.0094
 Uranus -80556-07-26 22:04 J -27701448.72 -27701448.58 -27701448.44 0.0146 0.0121
 Saturn -80556-11-30 05:30 J -27701322.35 -27701322.27 -27701322.16 0.0295 0.0269
 Saturn -80555-12-15 01:11 J -27700942.65 -27700942.45 -27700942.23 0.0294 0.0156
 Saturn -80554-12-29 13:11 J -27700563.19 -27700562.95 -27700562.70 0.0293 0.0037
 Saturn -80552-01-11 15:49 J -27700184.07 -27700183.84 -27700183.61 0.0290 0.0079
 Saturn -80551-01-25 07:54 J -27699805.35 -27699805.17 -27699804.98 0.0288 0.0185
 Saturn -80550-02-07 13:40 J -27699426.98 -27699426.93 -27699426.86 0.0285 0.0275
 Jupiter -80550-03-30 08:23 J -27699376.34 -27699376.15 -27699375.96 0.0531 0.0280
 Saturn -80541-05-21 23:44 J -27696035.58 -27696035.51 -27696035.42 0.0266 0.0249
 Saturn -80540-06-02 12:42 J -27695659.15 -27695658.97 -27695658.79 0.0266 0.0175
 Saturn -80539-06-14 05:44 J -27695282.49 -27695282.26 -27695282.03 0.0267 0.0094
 Saturn -80538-06-26 04:47 J -27694905.55 -27694905.30 -27694905.06 0.0268 0.0008
 Saturn -80537-07-07 10:47 J -27694528.29 -27694528.05 -27694527.82 0.0270 0.0084
 Saturn -80536-07-20 00:56 J -27694150.64 -27694150.46 -27694150.26 0.0272 0.0177
 Saturn -80535-08-02 00:42 J -27693772.52 -27693772.47 -27693772.40 0.0275 0.0266
 Pluto -80529-02-03 05:01 J -27691761.45 -27691761.29 -27691761.10 0.0079 0.0056
 Saturn -80526-12-09 07:40 J -27690356.35 -27690356.18 -27690355.99 0.0295 0.0199
 Neptune -80525-04-02 09:06 J -27690241.26 -27690241.12 -27690240.97 0.0089 0.0072
 Saturn -80525-12-22 23:44 J -27689976.75 -27689976.51 -27689976.27 0.0294 0.0080
 Neptune -80524-04-04 17:59 J -27689873.94 -27689873.75 -27689873.54 0.0089 0.0052
 Uranus -80524-12-18 16:18 J -27689615.90 -27689615.82 -27689615.69 0.0131 0.0120
 Saturn -80523-01-06 06:42 J -27689597.46 -27689597.22 -27689596.98 0.0292 0.0038
 Neptune -80523-04-07 02:37 J -27689506.61 -27689506.39 -27689506.14 0.0089 0.0033
 Uranus -80523-12-22 20:52 J -27689246.78 -27689246.63 -27689246.45 0.0131 0.0100
 Saturn -80522-01-20 03:20 J -27689218.56 -27689218.36 -27689218.15 0.0290 0.0149
 Neptune -80522-04-09 11:44 J -27689139.24 -27689139.01 -27689138.75 0.0089 0.0013
 Uranus -80522-12-27 01:11 J -27688877.64 -27688877.45 -27688877.24 0.0131 0.0080
 Saturn -80521-02-02 13:25 J -27688840.05 -27688839.94 -27688839.80 0.0287 0.0246
 Neptune -80521-04-10 20:52 J -27688771.87 -27688771.63 -27688771.37 0.0089 0.0008

Jupiter -80521-09-15 18:56 J -27688613.87 -27688613.71 -27688613.54 0.0493 0.0356
 Uranus -80521-12-30 05:01 J -27688508.51 -27688508.29 -27688508.06 0.0131 0.0060
 Neptune -80520-04-13 05:44 J -27688404.48 -27688404.26 -27688404.01 0.0089 0.0028
 Uranus -80519-01-03 08:23 J -27688139.39 -27688139.15 -27688138.90 0.0131 0.0039
 Neptune -80519-04-15 15:06 J -27688037.08 -27688036.87 -27688036.66 0.0089 0.0047
 Uranus -80518-01-07 11:30 J -27687770.26 -27687770.02 -27687769.76 0.0131 0.0019
 Neptune -80518-04-18 00:13 J -27687669.65 -27687669.49 -27687669.32 0.0089 0.0067
 Uranus -80517-01-11 14:37 J -27687401.14 -27687400.89 -27687400.63 0.0131 0.0002
 Neptune -80517-04-19 09:20 J -27687302.14 -27687302.11 -27687302.05 0.0089 0.0087
 Uranus -80516-01-14 17:30 J -27687032.02 -27687031.77 -27687031.52 0.0132 0.0022
 Uranus -80515-01-18 20:08 J -27686662.89 -27686662.66 -27686662.41 0.0132 0.0043
 Uranus -80514-01-22 22:32 J -27686293.77 -27686293.56 -27686293.33 0.0132 0.0063
 Uranus -80513-01-27 00:56 J -27685924.64 -27685924.46 -27685924.25 0.0132 0.0084
 Uranus -80512-01-30 03:20 J -27685555.49 -27685555.36 -27685555.18 0.0133 0.0104
 Uranus -80511-02-03 05:44 J -27685186.33 -27685186.26 -27685186.14 0.0133 0.0123
 Saturn -80511-05-29 00:28 J -27685071.62 -27685071.48 -27685071.31 0.0265 0.0207
 Saturn -80510-06-09 15:06 J -27684695.07 -27684694.87 -27684694.64 0.0266 0.0128
 Saturn -80509-06-20 11:01 J -27684318.28 -27684318.04 -27684317.79 0.0267 0.0043
 Jupiter -80509-09-20 08:37 J -27684226.37 -27684226.14 -27684225.91 0.0493 0.0140
 Saturn -80508-07-02 13:25 J -27683941.18 -27683940.94 -27683940.70 0.0269 0.0048
 Saturn -80507-07-14 23:30 J -27683563.73 -27683563.52 -27683563.31 0.0271 0.0140
 Saturn -80506-07-27 17:59 J -27683185.87 -27683185.75 -27683185.60 0.0274 0.0232
 Mars -80497-06-12 03:20 J -27679943.55 -27679943.36 -27679943.18 0.1586 0.0215
 Jupiter -80497-09-25 00:13 J -27679838.73 -27679838.49 -27679838.25 0.0495 0.0082
 Saturn -80497-12-02 01:40 J -27679770.55 -27679770.43 -27679770.29 0.0295 0.0250
 Saturn -80496-12-16 20:52 J -27679390.85 -27679390.63 -27679390.41 0.0294 0.0135
 Saturn -80495-12-31 07:40 J -27679011.42 -27679011.18 -27679010.93 0.0292 0.0016
 Saturn -80493-01-14 08:52 J -27678632.36 -27678632.13 -27678631.90 0.0290 0.0099
 Saturn -80492-01-26 23:30 J -27678253.68 -27678253.52 -27678253.34 0.0287 0.0203
 Jupiter -80491-03-19 18:42 J -27677836.90 -27677836.72 -27677836.52 0.0534 0.0282

Jupiter	-80485-09-29 14:52 J	-27675451.07	-27675450.88	-27675450.69	0.0496	0.0305
Saturn	-80482-05-24 07:40 J	-27674484.28	-27674484.18	-27674484.06	0.0266	0.0236
Saturn	-80481-06-03 20:37 J	-27674107.83	-27674107.64	-27674107.44	0.0266	0.0161
Uranus	-80481-06-11 19:11 J	-27674099.78	-27674099.70	-27674099.57	0.0147	0.0135
Saturn	-80480-06-15 14:08 J	-27673731.14	-27673730.91	-27673730.67	0.0267	0.0079
Uranus	-80480-06-16 23:44 J	-27673729.68	-27673729.51	-27673729.33	0.0147	0.0107
Jupiter	-80479-03-24 13:54 J	-27673449.15	-27673448.92	-27673448.69	0.0533	0.0018
Uranus	-80479-06-22 04:18 J	-27673359.52	-27673359.32	-27673359.09	0.0147	0.0080
Saturn	-80479-06-27 13:54 J	-27673354.16	-27673353.92	-27673353.67	0.0268	0.0010
Uranus	-80478-06-27 10:18 J	-27672989.31	-27672989.07	-27672988.83	0.0147	0.0050
Saturn	-80478-07-09 20:37 J	-27672976.86	-27672976.64	-27672976.40	0.0270	0.0101
Uranus	-80477-07-01 16:32 J	-27672619.07	-27672618.81	-27672618.56	0.0147	0.0021
Saturn	-80477-07-21 12:13 J	-27672599.16	-27672598.99	-27672598.81	0.0272	0.0192
Uranus	-80476-07-06 23:01 J	-27672248.79	-27672248.54	-27672248.28	0.0147	0.0010
Uranus	-80475-07-12 05:59 J	-27671878.49	-27671878.25	-27671878.00	0.0147	0.0039
Uranus	-80474-07-17 12:56 J	-27671508.17	-27671507.96	-27671507.72	0.0147	0.0069
Uranus	-80473-07-21 20:08 J	-27671137.84	-27671137.66	-27671137.46	0.0146	0.0097
Uranus	-80472-07-27 03:20 J	-27670767.48	-27670767.36	-27670767.22	0.0146	0.0125
Saturn	-80468-11-26 02:52 J	-27669184.41	-27669184.38	-27669184.33	0.0295	0.0291
Jupiter	-80467-03-29 04:04 J	-27669061.53	-27669061.33	-27669061.12	0.0532	0.0234
Saturn	-80467-12-11 01:11 J	-27668804.64	-27668804.45	-27668804.25	0.0295	0.0179
Saturn	-80466-12-25 16:18 J	-27668425.06	-27668424.82	-27668424.58	0.0294	0.0060
Saturn	-80464-01-07 22:18 J	-27668045.80	-27668045.57	-27668045.33	0.0292	0.0059
Saturn	-80463-01-21 17:59 J	-27667666.94	-27667666.75	-27667666.55	0.0289	0.0167
Saturn	-80462-02-04 02:52 J	-27667288.46	-27667288.38	-27667288.27	0.0286	0.0261
Jupiter	-80455-04-02 22:04 J	-27664673.66	-27664673.58	-27664673.49	0.0530	0.0491
Saturn	-80453-05-18 21:35 J	-27663896.61	-27663896.60	-27663896.56	0.0265	0.0264
Saturn	-80452-05-30 08:37 J	-27663520.29	-27663520.14	-27663519.96	0.0265	0.0192
Saturn	-80451-06-10 23:44 J	-27663143.72	-27663143.51	-27663143.28	0.0266	0.0113
Mars	-80450-06-07 14:52 J	-27662782.01	-27662781.88	-27662781.76	0.1594	0.1195

Saturn -80450-06-22 20:23 J -27662766.90 -27662766.65 -27662766.41 0.0267 0.0027
 Saturn -80449-07-03 23:16 J -27662389.77 -27662389.53 -27662389.29 0.0269 0.0064
 Saturn -80448-07-16 10:04 J -27662012.28 -27662012.08 -27662011.87 0.0271 0.0156
 Saturn -80447-07-29 05:59 J -27661634.34 -27661634.25 -27661634.13 0.0274 0.0247
 Neptune -80444-10-03 01:25 J -27660472.50 -27660472.44 -27660472.31 0.0088 0.0083
 Neptune -80443-10-05 16:18 J -27660105.00 -27660104.82 -27660104.62 0.0088 0.0062
 Neptune -80442-10-08 06:28 J -27659737.44 -27659737.23 -27659736.97 0.0088 0.0042
 Neptune -80441-10-09 21:20 J -27659369.86 -27659369.61 -27659369.34 0.0088 0.0021
 Neptune -80440-10-12 11:59 J -27659002.27 -27659002.00 -27659001.74 0.0088 0.0001
 Uranus -80440-12-19 00:13 J -27658934.58 -27658934.49 -27658934.36 0.0131 0.0118
 Neptune -80439-10-15 02:08 J -27658634.65 -27658634.41 -27658634.14 0.0088 0.0022
 Uranus -80439-12-23 05:01 J -27658565.45 -27658565.29 -27658565.11 0.0131 0.0099
 Jupiter -80438-09-15 19:54 J -27658298.82 -27658298.67 -27658298.52 0.0492 0.0381
 Neptune -80438-10-17 16:04 J -27658267.04 -27658266.83 -27658266.57 0.0088 0.0043
 Saturn -80438-12-04 19:25 J -27658218.84 -27658218.69 -27658218.54 0.0295 0.0231
 Uranus -80438-12-27 09:06 J -27658196.31 -27658196.12 -27658195.90 0.0131 0.0079
 Neptune -80437-10-19 06:42 J -27657899.39 -27657899.22 -27657899.01 0.0088 0.0063
 Saturn -80437-12-18 13:40 J -27657839.15 -27657838.93 -27657838.70 0.0294 0.0115
 Uranus -80437-12-30 12:56 J -27657827.17 -27657826.96 -27657826.72 0.0131 0.0058
 Neptune -80436-10-21 21:35 J -27657531.69 -27657531.60 -27657531.51 0.0088 0.0083
 Saturn -80435-01-01 23:44 J -27657459.75 -27657459.51 -27657459.26 0.0292 0.0008
 Uranus -80435-01-03 16:32 J -27657458.04 -27657457.81 -27657457.56 0.0131 0.0038
 Uranus -80434-01-07 19:54 J -27657088.92 -27657088.67 -27657088.42 0.0131 0.0017
 Saturn -80434-01-15 23:44 J -27657080.72 -27657080.51 -27657080.28 0.0290 0.0119
 Uranus -80433-01-11 23:01 J -27656719.79 -27656719.54 -27656719.28 0.0131 0.0005
 Saturn -80433-01-29 13:25 J -27656702.09 -27656701.94 -27656701.78 0.0287 0.0220
 Uranus -80432-01-15 01:54 J -27656350.66 -27656350.42 -27656350.17 0.0132 0.0025
 Uranus -80431-01-19 04:18 J -27655981.54 -27655981.32 -27655981.07 0.0132 0.0046
 Uranus -80430-01-23 06:42 J -27655612.42 -27655612.22 -27655611.99 0.0132 0.0067
 Uranus -80429-01-27 09:06 J -27655243.29 -27655243.12 -27655242.91 0.0132 0.0087

Uranus -80428-01-30 11:59 J -27654874.14 -27654874.00 -27654873.85 0.0133 0.0107
 Uranus -80427-02-03 14:08 J -27654504.96 -27654504.91 -27654504.82 0.0133 0.0127
 Jupiter -80426-09-20 09:20 J -27653911.34 -27653911.11 -27653910.89 0.0493 0.0165
 Saturn -80423-05-25 14:08 J -27652933.03 -27652932.91 -27652932.77 0.0266 0.0223
 Saturn -80422-06-06 03:06 J -27652556.57 -27652556.37 -27652556.16 0.0266 0.0147
 Saturn -80421-06-16 21:06 J -27652179.86 -27652179.62 -27652179.38 0.0267 0.0063
 Saturn -80420-06-28 21:06 J -27651802.87 -27651802.62 -27651802.37 0.0268 0.0025
 Saturn -80419-07-11 04:32 J -27651425.52 -27651425.31 -27651425.08 0.0270 0.0117
 Mars -80418-06-15 02:08 J -27651086.57 -27651086.41 -27651086.25 0.1584 0.0821
 Saturn -80418-07-23 20:52 J -27651047.78 -27651047.63 -27651047.46 0.0273 0.0208
 Jupiter -80414-09-25 01:25 J -27649523.68 -27649523.44 -27649523.20 0.0494 0.0060
 Saturn -80409-11-27 18:42 J -27647632.80 -27647632.72 -27647632.62 0.0295 0.0274
 Jupiter -80408-03-18 14:37 J -27647522.06 -27647521.89 -27647521.71 0.0534 0.0329
 Saturn -80408-12-12 16:47 J -27647253.00 -27647252.80 -27647252.59 0.0295 0.0161
 Saturn -80407-12-27 07:25 J -27646873.43 -27646873.19 -27646872.94 0.0294 0.0040
 Saturn -80405-01-10 12:42 J -27646494.20 -27646493.97 -27646493.73 0.0292 0.0078
 Saturn -80404-01-23 07:25 J -27646115.37 -27646115.19 -27646115.00 0.0289 0.0185
 Saturn -80403-02-05 15:20 J -27645736.91 -27645736.86 -27645736.79 0.0286 0.0276
 Jupiter -80402-09-29 18:42 J -27645135.92 -27645135.72 -27645135.52 0.0495 0.0284
 Uranus -80397-06-12 02:08 J -27643418.50 -27643418.41 -27643418.30 0.0147 0.0134
 Jupiter -80396-03-23 10:04 J -27643134.31 -27643134.08 -27643133.86 0.0534 0.0065
 Uranus -80396-06-17 05:59 J -27643048.41 -27643048.25 -27643048.06 0.0147 0.0107
 Uranus -80395-06-22 11:01 J -27642678.24 -27642678.04 -27642677.81 0.0147 0.0078
 Saturn -80394-05-21 03:49 J -27642345.41 -27642345.34 -27642345.26 0.0265 0.0251
 Uranus -80394-06-27 16:47 J -27642308.03 -27642307.80 -27642307.55 0.0147 0.0049
 Saturn -80393-05-31 14:37 J -27641969.06 -27641968.89 -27641968.70 0.0265 0.0179
 Uranus -80393-07-01 23:01 J -27641937.79 -27641937.54 -27641937.28 0.0147 0.0018
 Saturn -80392-06-12 06:13 J -27641592.47 -27641592.24 -27641592.02 0.0266 0.0098
 Uranus -80392-07-07 05:44 J -27641567.51 -27641567.26 -27641567.00 0.0147 0.0012
 Saturn -80391-06-24 02:52 J -27641215.63 -27641215.38 -27641215.13 0.0267 0.0012

Uranus -80391-07-12 12:42 J -27641197.21 -27641196.97 -27641196.72 0.0147 0.0042
 Saturn -80390-07-06 06:28 J -27640838.47 -27640838.23 -27640838.00 0.0269 0.0079
 Uranus -80390-07-17 19:40 J -27640826.90 -27640826.68 -27640826.45 0.0147 0.0072
 Saturn -80389-07-17 17:59 J -27640460.93 -27640460.75 -27640460.55 0.0271 0.0172
 Uranus -80389-07-22 02:23 J -27640456.57 -27640456.40 -27640456.20 0.0146 0.0102
 Uranus -80388-07-27 09:20 J -27640086.20 -27640086.11 -27640085.97 0.0146 0.0130
 Saturn -80388-07-30 15:06 J -27640082.94 -27640082.87 -27640082.79 0.0274 0.0261
 Jupiter -80384-03-28 06:56 J -27638746.42 -27638746.21 -27638746.00 0.0532 0.0203
 Saturn -80379-12-06 10:18 J -27636667.24 -27636667.07 -27636666.90 0.0295 0.0213
 Saturn -80378-12-21 04:18 J -27636287.56 -27636287.32 -27636287.09 0.0294 0.0095
 Saturn -80376-01-03 13:25 J -27635908.18 -27635907.94 -27635907.69 0.0292 0.0025
 Saturn -80375-01-17 12:42 J -27635529.18 -27635528.97 -27635528.76 0.0290 0.0137
 Saturn -80374-01-31 01:11 J -27635150.58 -27635150.45 -27635150.31 0.0287 0.0236
 Jupiter -80372-04-02 03:49 J -27634358.43 -27634358.34 -27634358.22 0.0531 0.0469
 Mars -80371-06-09 13:40 J -27633925.10 -27633924.93 -27633924.76 0.1592 0.0590
 Pluto -80369-07-31 11:16 J -27633142.26 -27633142.03 -27633141.78 0.0066 0.0030
 Saturn -80364-05-26 18:28 J -27631381.87 -27631381.73 -27631381.58 0.0265 0.0211
 Saturn -80363-06-07 07:25 J -27631005.39 -27631005.19 -27631004.97 0.0266 0.0133
 Mars -80363-12-16 18:13 J -27630812.93 -27630812.74 -27630812.54 0.1952 0.0792
 Saturn -80362-06-19 01:25 J -27630628.67 -27630628.44 -27630628.19 0.0267 0.0049
 Neptune -80361-04-01 22:04 J -27630340.66 -27630340.58 -27630340.44 0.0089 0.0080
 Saturn -80361-06-30 01:54 J -27630251.66 -27630251.42 -27630251.18 0.0268 0.0041
 Neptune -80360-04-04 07:11 J -27629973.36 -27629973.20 -27629973.00 0.0089 0.0060
 Saturn -80360-07-12 09:49 J -27629874.30 -27629874.09 -27629873.87 0.0270 0.0132
 Neptune -80359-04-06 16:32 J -27629606.02 -27629605.81 -27629605.58 0.0089 0.0040
 Saturn -80359-07-25 02:37 J -27629496.52 -27629496.39 -27629496.24 0.0273 0.0223
 Neptune -80358-04-09 01:40 J -27629238.67 -27629238.43 -27629238.18 0.0089 0.0020
 Neptune -80357-04-10 10:47 J -27628871.30 -27628871.05 -27628870.80 0.0089 0.0001
 Neptune -80356-04-12 19:40 J -27628503.92 -27628503.68 -27628503.43 0.0089 0.0019
 Uranus -80356-12-19 09:20 J -27628253.21 -27628253.11 -27628252.99 0.0131 0.0118

Neptune -80355-04-15 04:18 J -27628136.53 -27628136.32 -27628136.08 0.0089 0.0039
 Jupiter -80355-09-14 23:16 J -27627983.66 -27627983.53 -27627983.38 0.0492 0.0400
 Uranus -80355-12-23 13:54 J -27627884.08 -27627883.92 -27627883.74 0.0131 0.0098
 Neptune -80354-04-17 13:25 J -27627769.11 -27627768.94 -27627768.73 0.0089 0.0059
 Uranus -80354-12-27 18:13 J -27627514.93 -27627514.74 -27627514.52 0.0131 0.0077
 Neptune -80353-04-18 22:04 J -27627401.66 -27627401.58 -27627401.43 0.0089 0.0080
 Uranus -80353-12-30 22:18 J -27627145.79 -27627145.57 -27627145.33 0.0131 0.0056
 Uranus -80351-01-04 01:54 J -27626776.66 -27626776.42 -27626776.17 0.0131 0.0035
 Uranus -80350-01-08 05:30 J -27626407.52 -27626407.27 -27626407.02 0.0131 0.0014
 Saturn -80350-11-30 06:13 J -27626081.35 -27626081.24 -27626081.12 0.0295 0.0259
 Uranus -80349-01-12 08:37 J -27626038.39 -27626038.14 -27626037.88 0.0131 0.0007
 Saturn -80349-12-14 04:18 J -27625701.53 -27625701.32 -27625701.10 0.0295 0.0143
 Uranus -80348-01-15 11:30 J -27625669.27 -27625669.02 -27625668.77 0.0132 0.0028
 Saturn -80348-12-28 18:28 J -27625321.97 -27625321.73 -27625321.48 0.0294 0.0023
 Uranus -80347-01-19 14:08 J -27625300.14 -27625299.91 -27625299.68 0.0132 0.0049
 Saturn -80346-01-11 23:01 J -27624942.76 -27624942.54 -27624942.31 0.0292 0.0096
 Uranus -80346-01-23 16:18 J -27624931.02 -27624930.82 -27624930.60 0.0132 0.0070
 Saturn -80345-01-25 17:01 J -27624563.95 -27624563.79 -27624563.61 0.0289 0.0202
 Uranus -80345-01-27 18:42 J -27624561.88 -27624561.72 -27624561.52 0.0132 0.0091
 Uranus -80344-01-30 21:06 J -27624192.73 -27624192.62 -27624192.46 0.0133 0.0112
 Uranus -80343-02-03 23:44 J -27623823.53 -27623823.51 -27623823.45 0.0133 0.0131
 Jupiter -80343-09-19 15:49 J -27623596.06 -27623595.84 -27623595.61 0.0493 0.0179
 Mars -80339-06-17 01:25 J -27622229.51 -27622229.44 -27622229.36 0.1583 0.1426
 Saturn -80335-05-22 07:11 J -27620794.29 -27620794.20 -27620794.09 0.0265 0.0241
 Saturn -80334-06-02 18:28 J -27620417.92 -27620417.73 -27620417.54 0.0265 0.0166
 Saturn -80333-06-13 09:35 J -27620041.33 -27620041.10 -27620040.87 0.0266 0.0085
 Saturn -80332-06-25 06:28 J -27619664.48 -27619664.23 -27619663.98 0.0267 0.0003
 Saturn -80331-07-07 10:18 J -27619287.30 -27619287.07 -27619286.83 0.0269 0.0094
 Jupiter -80331-09-24 06:13 J -27619208.48 -27619208.24 -27619208.00 0.0494 0.0041
 Saturn -80330-07-19 22:47 J -27618909.73 -27618909.55 -27618909.37 0.0272 0.0186

Jupiter	-80325-03-17 17:59 J	-27617206.92	-27617206.75	-27617206.58	0.0535	0.0358
Saturn	-80320-12-07 21:20 J	-27615115.79	-27615115.61	-27615115.42	0.0295	0.0196
Jupiter	-80319-09-28 21:49 J	-27614820.79	-27614820.59	-27614820.39	0.0495	0.0262
Saturn	-80319-12-22 15:06 J	-27614736.11	-27614735.87	-27614735.63	0.0294	0.0077
Saturn	-80317-01-05 23:59 J	-27614356.74	-27614356.50	-27614356.26	0.0292	0.0043
Saturn	-80316-01-18 22:32 J	-27613977.76	-27613977.56	-27613977.35	0.0289	0.0155
Saturn	-80315-02-01 10:18 J	-27613599.17	-27613599.07	-27613598.94	0.0286	0.0252
Jupiter	-80313-03-22 17:16 J	-27612819.01	-27612818.78	-27612818.56	0.0534	0.0084
Uranus	-80313-06-12 10:47 J	-27612737.13	-27612737.05	-27612736.92	0.0147	0.0134
Uranus	-80312-06-17 15:20 J	-27612367.03	-27612366.86	-27612366.68	0.0147	0.0105
Uranus	-80311-06-22 20:08 J	-27611996.86	-27611996.66	-27611996.43	0.0147	0.0076
Uranus	-80310-06-28 01:54 J	-27611626.66	-27611626.42	-27611626.17	0.0147	0.0046
Uranus	-80309-07-02 08:08 J	-27611256.41	-27611256.16	-27611255.91	0.0147	0.0016
Uranus	-80308-07-07 14:37 J	-27610886.14	-27610885.89	-27610885.63	0.0147	0.0015
Uranus	-80307-07-12 21:06 J	-27610515.85	-27610515.62	-27610515.36	0.0147	0.0046
Jupiter	-80307-10-03 13:11 J	-27610432.99	-27610432.95	-27610432.90	0.0497	0.0486
Uranus	-80306-07-18 04:18 J	-27610145.53	-27610145.32	-27610145.10	0.0147	0.0076
Saturn	-80305-05-27 20:23 J	-27609830.80	-27609830.65	-27609830.48	0.0265	0.0199
Uranus	-80305-07-22 11:16 J	-27609775.20	-27609775.03	-27609774.85	0.0146	0.0106
Saturn	-80304-06-08 09:20 J	-27609454.32	-27609454.11	-27609453.88	0.0266	0.0121
Uranus	-80304-07-27 18:13 J	-27609404.83	-27609404.74	-27609404.63	0.0146	0.0134
Saturn	-80303-06-20 03:35 J	-27609077.60	-27609077.35	-27609077.11	0.0267	0.0035
Saturn	-80302-07-02 03:49 J	-27608700.59	-27608700.34	-27608700.10	0.0268	0.0055
Jupiter	-80301-03-27 13:54 J	-27608431.13	-27608430.92	-27608430.71	0.0532	0.0182
Saturn	-80301-07-13 11:44 J	-27608323.21	-27608323.01	-27608322.79	0.0271	0.0147
Saturn	-80300-07-26 05:16 J	-27607945.40	-27607945.28	-27607945.16	0.0273	0.0236
Mars	-80292-06-11 13:11 J	-27605068.13	-27605067.95	-27605067.76	0.1590	0.0049
Saturn	-80291-12-01 13:40 J	-27604530.05	-27604529.93	-27604529.78	0.0296	0.0246
Saturn	-80290-12-16 11:44 J	-27604150.22	-27604150.01	-27604149.78	0.0295	0.0128
Jupiter	-80289-04-01 03:35 J	-27604043.48	-27604043.35	-27604043.22	0.0531	0.0429

Saturn -80289-12-30 01:54 J -27603770.66 -27603770.42 -27603770.17 0.0294 0.0007
 Saturn -80287-01-13 05:59 J -27603391.47 -27603391.25 -27603391.02 0.0291 0.0113
 Saturn -80286-01-26 23:30 J -27603012.67 -27603012.52 -27603012.35 0.0289 0.0217
 Mars -80284-12-20 19:54 J -27601953.81 -27601953.67 -27601953.53 0.1956 0.1444
 Pluto -80282-02-05 09:20 J -27601542.33 -27601542.11 -27601541.86 0.0078 0.0029
 Neptune -80279-10-05 00:13 J -27600204.62 -27600204.49 -27600204.30 0.0088 0.0070
 Neptune -80278-10-07 15:20 J -27599837.07 -27599836.86 -27599836.63 0.0088 0.0049
 Neptune -80277-10-09 05:30 J -27599469.50 -27599469.27 -27599469.00 0.0088 0.0029
 Saturn -80276-05-23 08:23 J -27599243.25 -27599243.15 -27599243.02 0.0265 0.0231
 Neptune -80276-10-11 20:08 J -27599101.92 -27599101.66 -27599101.39 0.0088 0.0008
 Saturn -80275-06-03 19:25 J -27598866.88 -27598866.69 -27598866.49 0.0265 0.0155
 Neptune -80275-10-14 10:32 J -27598734.32 -27598734.06 -27598733.80 0.0088 0.0013
 Saturn -80274-06-15 10:32 J -27598490.29 -27598490.06 -27598489.82 0.0266 0.0073
 Neptune -80274-10-17 00:28 J -27598366.71 -27598366.48 -27598366.21 0.0088 0.0034
 Saturn -80273-06-26 07:40 J -27598113.43 -27598113.18 -27598112.94 0.0267 0.0016
 Neptune -80273-10-18 15:06 J -27597999.07 -27597998.87 -27597998.65 0.0088 0.0054
 Saturn -80272-07-08 11:44 J -27597736.23 -27597736.01 -27597735.78 0.0269 0.0108
 Jupiter -80272-09-14 06:28 J -27597668.35 -27597668.23 -27597668.09 0.0492 0.0412
 Neptune -80272-10-21 04:47 J -27597631.42 -27597631.30 -27597631.13 0.0088 0.0074
 Uranus -80272-12-19 17:59 J -27597571.86 -27597571.75 -27597571.63 0.0131 0.0117
 Saturn -80271-07-21 00:28 J -27597358.64 -27597358.48 -27597358.31 0.0272 0.0199
 Uranus -80271-12-23 22:47 J -27597202.71 -27597202.55 -27597202.36 0.0131 0.0097
 Uranus -80270-12-28 03:20 J -27596833.56 -27596833.36 -27596833.14 0.0131 0.0075
 Uranus -80269-12-31 07:11 J -27596464.42 -27596464.20 -27596463.95 0.0131 0.0055
 Uranus -80267-01-04 11:01 J -27596095.28 -27596095.04 -27596094.79 0.0131 0.0033
 Uranus -80266-01-08 14:37 J -27595726.14 -27595725.89 -27595725.64 0.0131 0.0011
 Uranus -80265-01-12 17:44 J -27595357.01 -27595356.76 -27595356.51 0.0132 0.0010
 Uranus -80264-01-15 20:23 J -27594987.89 -27594987.65 -27594987.40 0.0132 0.0032
 Uranus -80263-01-19 22:47 J -27594618.77 -27594618.55 -27594618.31 0.0132 0.0053
 Uranus -80262-01-24 01:11 J -27594249.64 -27594249.45 -27594249.23 0.0132 0.0075

Saturn	-80262-11-25 03:35 J	-27593944.36	-27593944.35	-27593944.31	0.0295	0.0294
Uranus	-80261-01-28 04:04 J	-27593880.50	-27593880.33	-27593880.15	0.0132	0.0095
Saturn	-80261-12-09 04:04 J	-27593564.52	-27593564.33	-27593564.13	0.0295	0.0181
Uranus	-80260-01-31 06:13 J	-27593511.34	-27593511.24	-27593511.10	0.0133	0.0116
Jupiter	-80260-09-18 21:35 J	-27593280.82	-27593280.60	-27593280.38	0.0492	0.0195
Saturn	-80260-12-23 21:35 J	-27593184.84	-27593184.60	-27593184.36	0.0294	0.0061
Saturn	-80258-01-07 06:13 J	-27592805.48	-27592805.24	-27592805.00	0.0292	0.0059
Saturn	-80257-01-21 04:32 J	-27592426.50	-27592426.31	-27592426.11	0.0289	0.0170
Saturn	-80256-02-02 15:49 J	-27592047.92	-27592047.84	-27592047.74	0.0286	0.0265
Jupiter	-80248-09-23 11:44 J	-27588893.25	-27588893.01	-27588892.77	0.0494	0.0023
Saturn	-80247-05-18 11:30 J	-27588656.05	-27588656.02	-27588655.98	0.0265	0.0261
Saturn	-80246-05-29 20:23 J	-27588279.81	-27588279.65	-27588279.47	0.0265	0.0189
Mars	-80245-06-05 23:59 J	-27587906.59	-27587906.50	-27587906.42	0.1598	0.1415
Saturn	-80245-06-09 09:20 J	-27587903.33	-27587903.11	-27587902.89	0.0265	0.0109
Saturn	-80244-06-21 03:06 J	-27587526.62	-27587526.37	-27587526.13	0.0267	0.0023
Saturn	-80243-07-03 03:06 J	-27587149.61	-27587149.37	-27587149.13	0.0268	0.0068
Jupiter	-80242-03-18 02:37 J	-27586891.54	-27586891.39	-27586891.22	0.0535	0.0375
Saturn	-80242-07-15 11:16 J	-27586772.22	-27586772.03	-27586771.82	0.0271	0.0159
Saturn	-80241-07-27 04:32 J	-27586394.40	-27586394.31	-27586394.20	0.0273	0.0249
Jupiter	-80236-09-28 05:44 J	-27584505.47	-27584505.26	-27584505.05	0.0495	0.0249
Saturn	-80232-12-02 16:47 J	-27582978.93	-27582978.80	-27582978.63	0.0296	0.0234
Saturn	-80231-12-17 15:06 J	-27582599.09	-27582598.87	-27582598.63	0.0295	0.0114
Jupiter	-80230-03-22 18:28 J	-27582503.95	-27582503.73	-27582503.51	0.0534	0.0119
Saturn	-80229-01-01 05:30 J	-27582219.52	-27582219.27	-27582219.03	0.0294	0.0010
Uranus	-80229-06-12 22:47 J	-27582055.65	-27582055.55	-27582055.43	0.0147	0.0131
Saturn	-80228-01-14 09:20 J	-27581840.32	-27581840.11	-27581839.88	0.0291	0.0128
Uranus	-80228-06-18 03:06 J	-27581685.55	-27581685.37	-27581685.19	0.0147	0.0103
Saturn	-80227-01-28 02:52 J	-27581461.52	-27581461.38	-27581461.23	0.0289	0.0231
Uranus	-80227-06-23 07:40 J	-27581315.38	-27581315.18	-27581314.94	0.0147	0.0074
Uranus	-80226-06-28 13:40 J	-27580945.18	-27580944.93	-27580944.69	0.0147	0.0043

Uranus	-80225-07-02 19:25 J	-27580574.94	-27580574.69	-27580574.43	0.0147	0.0013
Uranus	-80224-07-08 02:08 J	-27580204.67	-27580204.41	-27580204.16	0.0147	0.0019
Jupiter	-80224-10-02 23:44 J	-27580117.57	-27580117.51	-27580117.44	0.0496	0.0476
Uranus	-80223-07-13 08:37 J	-27579834.38	-27579834.14	-27579833.90	0.0147	0.0050
Uranus	-80222-07-18 15:20 J	-27579464.07	-27579463.86	-27579463.64	0.0147	0.0081
Uranus	-80221-07-22 22:18 J	-27579093.73	-27579093.57	-27579093.40	0.0146	0.0111
Uranus	-80220-07-28 04:47 J	-27578723.35	-27578723.30	-27578723.20	0.0146	0.0140
Jupiter	-80218-03-27 13:40 J	-27578116.14	-27578115.93	-27578115.71	0.0533	0.0143
Saturn	-80217-05-24 07:40 J	-27577692.30	-27577692.18	-27577692.03	0.0264	0.0221
Saturn	-80216-06-04 18:42 J	-27577315.92	-27577315.72	-27577315.52	0.0265	0.0144
Saturn	-80215-06-16 09:35 J	-27576939.33	-27576939.10	-27576938.86	0.0266	0.0061
Saturn	-80214-06-28 06:28 J	-27576562.47	-27576562.23	-27576561.98	0.0267	0.0028
Mars	-80213-06-13 12:42 J	-27576211.14	-27576210.97	-27576210.80	0.1588	0.0639
Saturn	-80213-07-09 10:47 J	-27576185.28	-27576185.05	-27576184.83	0.0269	0.0119
Saturn	-80212-07-21 23:16 J	-27575807.68	-27575807.53	-27575807.37	0.0272	0.0211
Jupiter	-80206-04-01 10:18 J	-27573728.21	-27573728.07	-27573727.92	0.0532	0.0408
Saturn	-80203-11-26 06:56 J	-27572393.28	-27572393.21	-27572393.13	0.0296	0.0282
Saturn	-80202-12-11 07:25 J	-27572013.39	-27572013.19	-27572012.98	0.0295	0.0168
Saturn	-80201-12-25 01:11 J	-27571633.70	-27571633.45	-27571633.21	0.0294	0.0046
Saturn	-80199-01-08 09:20 J	-27571254.34	-27571254.11	-27571253.87	0.0292	0.0075
Saturn	-80198-01-22 07:25 J	-27570875.37	-27570875.19	-27570875.00	0.0289	0.0185
Saturn	-80197-02-04 18:28 J	-27570496.77	-27570496.73	-27570496.66	0.0286	0.0278
Neptune	-80197-04-01 10:47 J	-27570440.07	-27570440.05	-27570439.97	0.0089	0.0087
Neptune	-80196-04-03 19:40 J	-27570072.81	-27570072.68	-27570072.49	0.0089	0.0068
Neptune	-80195-04-06 04:47 J	-27569705.49	-27569705.30	-27569705.07	0.0089	0.0048
Neptune	-80194-04-08 14:23 J	-27569338.14	-27569337.90	-27569337.66	0.0089	0.0028
Neptune	-80193-04-09 23:16 J	-27568970.77	-27568970.53	-27568970.27	0.0089	0.0009
Neptune	-80192-04-12 08:23 J	-27568603.39	-27568603.15	-27568602.90	0.0089	0.0011
Neptune	-80191-04-14 17:16 J	-27568236.00	-27568235.78	-27568235.53	0.0089	0.0031
Neptune	-80190-04-17 02:23 J	-27567868.60	-27567868.40	-27567868.18	0.0089	0.0050

Neptune -80189-04-18 11:16 J -27567501.16 -27567501.03 -27567500.85 0.0089 0.0070
 Jupiter -80189-09-13 14:08 J -27567353.02 -27567352.91 -27567352.78 0.0492 0.0424
 Saturn -80188-05-19 10:04 J -27567105.14 -27567105.08 -27567105.00 0.0265 0.0253
 Uranus -80188-12-20 03:35 J -27566890.44 -27566890.35 -27566890.20 0.0131 0.0117
 Saturn -80187-05-30 19:11 J -27566728.88 -27566728.70 -27566728.52 0.0265 0.0179
 Uranus -80187-12-24 08:37 J -27566521.29 -27566521.14 -27566520.94 0.0131 0.0096
 Saturn -80186-06-11 07:25 J -27566352.41 -27566352.19 -27566351.96 0.0265 0.0098
 Uranus -80186-12-28 13:40 J -27566152.14 -27566151.93 -27566151.72 0.0131 0.0074
 Saturn -80185-06-22 00:56 J -27565975.71 -27565975.46 -27565975.21 0.0266 0.0011
 Uranus -80185-12-31 17:30 J -27565782.99 -27565782.77 -27565782.52 0.0131 0.0053
 Saturn -80184-07-04 00:56 J -27565598.69 -27565598.46 -27565598.22 0.0268 0.0080
 Uranus -80183-01-04 21:06 J -27565413.86 -27565413.62 -27565413.36 0.0131 0.0031
 Saturn -80183-07-16 09:06 J -27565221.30 -27565221.12 -27565220.92 0.0270 0.0172
 Uranus -80182-01-09 00:42 J -27565044.72 -27565044.47 -27565044.22 0.0131 0.0009
 Saturn -80182-07-29 02:37 J -27564843.46 -27564843.39 -27564843.32 0.0273 0.0261
 Uranus -80181-01-13 03:35 J -27564675.60 -27564675.35 -27564675.09 0.0132 0.0013
 Uranus -80180-01-16 06:13 J -27564306.48 -27564306.24 -27564305.99 0.0132 0.0035
 Uranus -80179-01-20 08:37 J -27563937.35 -27563937.14 -27563936.90 0.0132 0.0057
 Uranus -80178-01-24 11:01 J -27563568.22 -27563568.04 -27563567.82 0.0132 0.0079
 Uranus -80177-01-28 13:54 J -27563199.08 -27563198.92 -27563198.75 0.0132 0.0099
 Jupiter -80177-09-18 06:56 J -27562965.43 -27562965.21 -27562964.99 0.0493 0.0205
 Uranus -80176-01-31 16:18 J -27562829.91 -27562829.82 -27562829.70 0.0133 0.0120
 Saturn -80173-12-03 17:01 J -27561427.94 -27561427.79 -27561427.62 0.0296 0.0223
 Saturn -80172-12-18 15:20 J -27561048.09 -27561047.86 -27561047.63 0.0295 0.0101
 Saturn -80170-01-02 05:44 J -27560668.51 -27560668.26 -27560668.02 0.0294 0.0023
 Saturn -80169-01-16 09:49 J -27560289.30 -27560289.09 -27560288.87 0.0292 0.0140
 Saturn -80168-01-29 03:20 J -27559910.49 -27559910.36 -27559910.23 0.0289 0.0243
 Mars -80166-06-08 23:44 J -27559049.67 -27559049.51 -27559049.35 0.1596 0.0788
 Jupiter -80165-09-23 00:13 J -27558577.73 -27558577.49 -27558577.25 0.0494 0.0019
 Jupiter -80159-03-17 04:04 J -27556576.47 -27556576.33 -27556576.18 0.0535 0.0409

Saturn	-80158-05-26 05:44 J	-27556141.39	-27556141.26	-27556141.11	0.0264	0.0212
Saturn	-80157-06-05 16:18 J	-27555765.02	-27555764.82	-27555764.60	0.0264	0.0135
Saturn	-80156-06-17 07:25 J	-27555388.43	-27555388.19	-27555387.95	0.0265	0.0050
Saturn	-80155-06-29 04:04 J	-27555011.58	-27555011.33	-27555011.09	0.0267	0.0039
Saturn	-80154-07-11 07:54 J	-27554634.38	-27554634.17	-27554633.95	0.0269	0.0131
Saturn	-80153-07-22 20:37 J	-27554256.78	-27554256.64	-27554256.49	0.0271	0.0222
Jupiter	-80153-09-27 15:20 J	-27554190.07	-27554189.86	-27554189.65	0.0494	0.0240
Jupiter	-80147-03-22 01:11 J	-27552188.66	-27552188.45	-27552188.23	0.0535	0.0140
Uranus	-80145-06-13 10:04 J	-27551374.17	-27551374.08	-27551373.94	0.0147	0.0131
Uranus	-80144-06-18 14:37 J	-27551004.06	-27551003.89	-27551003.70	0.0147	0.0101
Saturn	-80144-11-27 06:28 J	-27550842.31	-27550842.23	-27550842.12	0.0296	0.0272
Uranus	-80143-06-23 19:40 J	-27550633.89	-27550633.68	-27550633.45	0.0147	0.0071
Saturn	-80143-12-12 07:40 J	-27550462.39	-27550462.18	-27550461.97	0.0296	0.0155
Uranus	-80142-06-29 01:11 J	-27550263.69	-27550263.45	-27550263.20	0.0147	0.0040
Saturn	-80142-12-27 01:11 J	-27550082.69	-27550082.45	-27550082.20	0.0294	0.0032
Uranus	-80141-07-03 07:11 J	-27549893.45	-27549893.20	-27549892.94	0.0147	0.0009
Jupiter	-80141-10-02 07:25 J	-27549802.27	-27549802.19	-27549802.10	0.0496	0.0463
Saturn	-80140-01-09 09:35 J	-27549703.33	-27549703.10	-27549702.86	0.0292	0.0089
Uranus	-80140-07-08 13:40 J	-27549523.18	-27549522.93	-27549522.68	0.0147	0.0023
Saturn	-80139-01-23 07:40 J	-27549324.35	-27549324.18	-27549324.00	0.0290	0.0198
Uranus	-80139-07-13 19:54 J	-27549152.90	-27549152.67	-27549152.42	0.0147	0.0055
Uranus	-80138-07-19 02:37 J	-27548782.58	-27548782.39	-27548782.17	0.0147	0.0086
Uranus	-80137-07-23 09:49 J	-27548412.25	-27548412.09	-27548411.93	0.0146	0.0116
Uranus	-80136-07-28 16:04 J	-27548041.83	-27548041.83	-27548041.77	0.0146	0.0146
Jupiter	-80135-03-27 00:42 J	-27547800.69	-27547800.47	-27547800.25	0.0533	0.0132
Mars	-80134-06-16 11:16 J	-27547354.14	-27547354.03	-27547353.91	0.1586	0.1253
Saturn	-80129-05-20 08:23 J	-27545554.23	-27545554.15	-27545554.05	0.0264	0.0245
Saturn	-80128-05-31 17:01 J	-27545177.97	-27545177.79	-27545177.60	0.0264	0.0170
Saturn	-80127-06-12 05:16 J	-27544801.51	-27544801.28	-27544801.05	0.0265	0.0087
Saturn	-80126-06-23 22:18 J	-27544424.82	-27544424.57	-27544424.32	0.0266	0.0001

Saturn -80125-07-04 22:18 J -27544047.80 -27544047.57 -27544047.34 0.0268 0.0091
 Saturn -80124-07-17 05:59 J -27543670.42 -27543670.25 -27543670.06 0.0270 0.0183
 Jupiter -80123-03-31 22:04 J -27543412.72 -27543412.58 -27543412.42 0.0532 0.0396
 Saturn -80123-07-29 23:01 J -27543292.56 -27543292.54 -27543292.50 0.0273 0.0271
 Pluto -80123-08-01 16:18 J -27543290.06 -27543289.82 -27543289.56 0.0066 0.0022
 Neptune -80115-10-04 07:54 J -27540304.27 -27540304.17 -27540304.01 0.0088 0.0078
 Neptune -80114-10-06 23:16 J -27539936.73 -27539936.53 -27539936.33 0.0088 0.0057
 Saturn -80114-12-05 15:20 J -27539877.03 -27539876.86 -27539876.68 0.0296 0.0212
 Neptune -80113-10-08 13:40 J -27539569.16 -27539568.93 -27539568.68 0.0088 0.0037
 Saturn -80113-12-19 13:54 J -27539497.15 -27539496.92 -27539496.69 0.0295 0.0090
 Neptune -80112-10-11 03:49 J -27539201.59 -27539201.34 -27539201.07 0.0088 0.0017
 Saturn -80111-01-03 04:04 J -27539117.57 -27539117.33 -27539117.08 0.0294 0.0035
 Neptune -80111-10-13 18:28 J -27538833.99 -27538833.73 -27538833.46 0.0088 0.0004
 Saturn -80110-01-17 08:23 J -27538738.35 -27538738.15 -27538737.93 0.0292 0.0153
 Neptune -80110-10-16 08:37 J -27538466.38 -27538466.14 -27538465.87 0.0088 0.0025
 Saturn -80109-01-31 01:40 J -27538359.53 -27538359.43 -27538359.30 0.0289 0.0255
 Neptune -80109-10-17 22:47 J -27538098.77 -27538098.55 -27538098.31 0.0088 0.0045
 Neptune -80108-10-20 13:11 J -27537731.12 -27537730.95 -27537730.76 0.0088 0.0065
 Neptune -80107-10-23 02:37 J -27537363.42 -27537363.39 -27537363.29 0.0088 0.0086
 Jupiter -80106-09-14 02:52 J -27537037.49 -27537037.38 -27537037.26 0.0492 0.0427
 Uranus -80104-12-20 13:40 J -27536209.04 -27536208.93 -27536208.80 0.0131 0.0115
 Uranus -80103-12-24 18:42 J -27535839.89 -27535839.72 -27535839.53 0.0131 0.0093
 Uranus -80102-12-28 23:16 J -27535470.74 -27535470.53 -27535470.31 0.0131 0.0072
 Uranus -80100-01-01 02:52 J -27535101.60 -27535101.38 -27535101.13 0.0131 0.0050
 Uranus -80099-01-05 06:28 J -27534732.47 -27534732.23 -27534731.97 0.0131 0.0028
 Saturn -80099-05-27 03:06 J -27534590.51 -27534590.37 -27534590.20 0.0264 0.0205
 Uranus -80098-01-09 09:49 J -27534363.34 -27534363.09 -27534362.83 0.0131 0.0007
 Saturn -80098-06-07 14:08 J -27534214.13 -27534213.91 -27534213.70 0.0264 0.0125
 Uranus -80097-01-13 12:42 J -27533994.22 -27533993.97 -27533993.72 0.0132 0.0016
 Saturn -80097-06-18 04:47 J -27533837.54 -27533837.30 -27533837.05 0.0265 0.0040

Uranus	-80096-01-16 15:06 J	-27533625.10	-27533624.87	-27533624.62	0.0132	0.0039
Saturn	-80096-06-30 01:25 J	-27533460.68	-27533460.44	-27533460.20	0.0267	0.0050
Uranus	-80095-01-20 17:30 J	-27533255.98	-27533255.77	-27533255.53	0.0132	0.0060
Saturn	-80095-07-12 05:01 J	-27533083.49	-27533083.29	-27533083.07	0.0269	0.0142
Uranus	-80094-01-24 20:23 J	-27532886.84	-27532886.65	-27532886.45	0.0132	0.0082
Saturn	-80094-07-24 17:30 J	-27532705.88	-27532705.77	-27532705.62	0.0271	0.0233
Jupiter	-80094-09-18 17:30 J	-27532649.98	-27532649.77	-27532649.55	0.0492	0.0210
Uranus	-80093-01-28 22:47 J	-27532517.70	-27532517.55	-27532517.39	0.0132	0.0103
Uranus	-80092-02-01 00:56 J	-27532148.53	-27532148.46	-27532148.35	0.0133	0.0124
Mars	-80087-06-10 22:32 J	-27530192.75	-27530192.56	-27530192.37	0.1594	0.0176
Saturn	-80085-11-28 05:30 J	-27529291.37	-27529291.27	-27529291.15	0.0296	0.0262
Saturn	-80084-12-13 06:13 J	-27528911.45	-27528911.24	-27528911.02	0.0296	0.0144
Saturn	-80083-12-28 00:13 J	-27528531.73	-27528531.49	-27528531.24	0.0295	0.0019
Jupiter	-80082-09-23 09:06 J	-27528262.36	-27528262.12	-27528261.88	0.0493	0.0011
Saturn	-80081-01-11 08:37 J	-27528152.36	-27528152.14	-27528151.90	0.0293	0.0102
Saturn	-80080-01-24 06:42 J	-27527773.37	-27527773.22	-27527773.04	0.0290	0.0210
Mars	-80079-12-15 05:59 J	-27527083.39	-27527083.25	-27527083.11	0.1946	0.1421
Jupiter	-80076-03-16 14:08 J	-27526261.05	-27526260.91	-27526260.77	0.0536	0.0421
Saturn	-80070-05-22 06:28 J	-27524003.33	-27524003.23	-27524003.11	0.0264	0.0237
Jupiter	-80070-09-28 00:13 J	-27523874.71	-27523874.49	-27523874.28	0.0494	0.0229
Saturn	-80069-06-01 14:52 J	-27523627.06	-27523626.88	-27523626.68	0.0264	0.0161
Saturn	-80068-06-13 02:52 J	-27523250.61	-27523250.38	-27523250.14	0.0265	0.0078
Saturn	-80067-06-24 20:08 J	-27522873.91	-27522873.66	-27522873.42	0.0266	0.0011
Saturn	-80066-07-06 19:40 J	-27522496.90	-27522496.68	-27522496.44	0.0268	0.0102
Saturn	-80065-07-18 03:20 J	-27522119.52	-27522119.36	-27522119.18	0.0270	0.0193
Jupiter	-80064-03-21 13:40 J	-27521873.15	-27521872.93	-27521872.72	0.0535	0.0150
Uranus	-80061-06-13 20:37 J	-27520692.75	-27520692.64	-27520692.51	0.0147	0.0129
Uranus	-80060-06-19 01:11 J	-27520322.64	-27520322.45	-27520322.26	0.0147	0.0099
Uranus	-80059-06-24 06:13 J	-27519952.47	-27519952.24	-27519952.02	0.0147	0.0068
Uranus	-80058-06-29 11:44 J	-27519582.26	-27519582.01	-27519581.76	0.0147	0.0037

Jupiter -80058-10-02 18:28 J -27519486.81 -27519486.73 -27519486.63 0.0496 0.0455
 Uranus -80057-07-03 17:59 J -27519212.01 -27519211.75 -27519211.50 0.0147 0.0005
 Uranus -80056-07-09 00:13 J -27518841.74 -27518841.49 -27518841.24 0.0147 0.0028
 Uranus -80055-07-14 06:42 J -27518471.44 -27518471.22 -27518470.97 0.0147 0.0060
 Saturn -80055-12-06 12:28 J -27518326.15 -27518325.98 -27518325.79 0.0296 0.0202
 Uranus -80054-07-19 13:25 J -27518101.13 -27518100.94 -27518100.72 0.0147 0.0091
 Saturn -80054-12-21 11:01 J -27517946.27 -27517946.04 -27517945.80 0.0296 0.0079
 Uranus -80053-07-23 20:37 J -27517730.78 -27517730.64 -27517730.49 0.0147 0.0121
 Saturn -80052-01-04 01:25 J -27517566.68 -27517566.44 -27517566.20 0.0294 0.0046
 Jupiter -80052-03-26 06:28 J -27517485.45 -27517485.23 -27517485.01 0.0533 0.0108
 Saturn -80051-01-18 05:59 J -27517187.45 -27517187.25 -27517187.05 0.0292 0.0163
 Saturn -80050-01-31 23:30 J -27516808.61 -27516808.52 -27516808.43 0.0289 0.0264
 Jupiter -80040-03-31 01:11 J -27513097.61 -27513097.45 -27513097.29 0.0532 0.0364
 Saturn -80040-05-28 01:25 J -27513039.59 -27513039.44 -27513039.27 0.0264 0.0195
 Saturn -80039-06-08 11:59 J -27512663.21 -27512663.00 -27512662.77 0.0264 0.0116
 Saturn -80038-06-20 02:52 J -27512286.62 -27512286.38 -27512286.14 0.0265 0.0029
 Saturn -80037-06-30 23:16 J -27511909.76 -27511909.53 -27511909.28 0.0267 0.0061
 Pluto -80036-02-05 06:28 J -27511690.34 -27511690.23 -27511690.06 0.0079 0.0065
 Saturn -80036-07-13 03:20 J -27511532.56 -27511532.36 -27511532.16 0.0269 0.0152
 Saturn -80035-07-25 15:35 J -27511154.95 -27511154.85 -27511154.73 0.0271 0.0242
 Neptune -80032-04-03 08:37 J -27510172.26 -27510172.14 -27510171.99 0.0089 0.0075
 Neptune -80031-04-05 17:30 J -27509804.95 -27509804.77 -27509804.56 0.0089 0.0056
 Neptune -80030-04-08 02:08 J -27509437.62 -27509437.41 -27509437.16 0.0089 0.0037
 Neptune -80029-04-09 11:16 J -27509070.27 -27509070.03 -27509069.77 0.0089 0.0017
 Neptune -80028-04-11 20:37 J -27508702.89 -27508702.64 -27508702.39 0.0089 0.0002
 Neptune -80027-04-14 05:30 J -27508335.51 -27508335.27 -27508335.02 0.0089 0.0022
 Neptune -80026-04-16 14:52 J -27507968.10 -27507967.88 -27507967.66 0.0089 0.0041
 Saturn -80026-11-30 04:18 J -27507740.44 -27507740.32 -27507740.19 0.0296 0.0252
 Neptune -80025-04-17 23:16 J -27507600.69 -27507600.53 -27507600.32 0.0089 0.0061
 Saturn -80025-12-14 05:01 J -27507360.50 -27507360.29 -27507360.06 0.0296 0.0132

Neptune -80024-04-20 08:37 J -27507233.23 -27507233.14 -27507233.02 0.0089 0.0081
 Saturn -80024-12-28 23:01 J -27506980.79 -27506980.54 -27506980.30 0.0295 0.0007
 Jupiter -80023-09-13 12:28 J -27506722.09 -27506721.98 -27506721.87 0.0491 0.0433
 Saturn -80022-01-12 07:40 J -27506601.40 -27506601.18 -27506600.95 0.0293 0.0114
 Saturn -80021-01-26 05:44 J -27506222.40 -27506222.26 -27506222.09 0.0290 0.0222
 Uranus -80020-12-20 23:44 J -27505527.62 -27505527.51 -27505527.37 0.0131 0.0114
 Uranus -80019-12-25 05:01 J -27505158.47 -27505158.29 -27505158.11 0.0131 0.0092
 Uranus -80018-12-29 08:52 J -27504789.33 -27504789.13 -27504788.90 0.0131 0.0070
 Uranus -80016-01-01 12:42 J -27504420.19 -27504419.97 -27504419.71 0.0131 0.0049
 Uranus -80015-01-05 16:18 J -27504051.06 -27504050.82 -27504050.57 0.0131 0.0026
 Uranus -80014-01-09 19:25 J -27503681.94 -27503681.69 -27503681.43 0.0131 0.0004
 Uranus -80013-01-13 22:04 J -27503312.82 -27503312.58 -27503312.32 0.0131 0.0020
 Uranus -80012-01-17 00:28 J -27502943.71 -27502943.48 -27502943.23 0.0132 0.0042
 Uranus -80011-01-21 02:52 J -27502574.58 -27502574.38 -27502574.14 0.0132 0.0064
 Saturn -80011-05-23 05:30 J -27502452.38 -27502452.27 -27502452.14 0.0264 0.0228
 Jupiter -80011-09-18 02:23 J -27502334.61 -27502334.40 -27502334.18 0.0492 0.0220
 Uranus -80010-01-25 05:30 J -27502205.45 -27502205.27 -27502205.07 0.0132 0.0085
 Saturn -80010-06-03 13:54 J -27502076.11 -27502075.92 -27502075.71 0.0264 0.0151
 Uranus -80009-01-29 07:54 J -27501836.31 -27501836.17 -27501836.01 0.0132 0.0107
 Saturn -80009-06-14 02:08 J -27501699.64 -27501699.41 -27501699.17 0.0265 0.0067
 Uranus -80008-02-01 10:18 J -27501467.11 -27501467.07 -27501466.98 0.0132 0.0128
 Mars -80008-06-12 22:04 J -27501335.76 -27501335.58 -27501335.40 0.1592 0.0448
 Saturn -80008-06-25 19:11 J -27501322.94 -27501322.70 -27501322.45 0.0266 0.0022
 Saturn -80007-07-07 18:56 J -27500945.93 -27500945.71 -27500945.48 0.0268 0.0113
 Saturn -80006-07-20 02:23 J -27500568.55 -27500568.40 -27500568.23 0.0270 0.0204

80TH MILLENNIUM BCE

This is a list of transits of Earth in the 80th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Mars	-80000-12-19 06:56 J	-27498224.40	-27498224.21	-27498224.02	0.1951	0.0790		
Jupiter	-79999-09-22 19:25 J	-27497946.93	-27497946.69	-27497946.45	0.0493	0.0003		
Saturn	-79996-12-07 11:01 J	-27496775.21	-27496775.04	-27496774.84	0.0296	0.0193		
Saturn	-79995-12-22 09:35 J	-27496395.34	-27496395.10	-27496394.86	0.0296	0.0067		
Saturn	-79993-01-05 23:44 J	-27496015.75	-27496015.51	-27496015.27	0.0294	0.0058		
Jupiter	-79993-03-15 21:06 J	-27495945.75	-27495945.62	-27495945.49	0.0535	0.0439		
Saturn	-79992-01-19 04:04 J	-27495636.52	-27495636.33	-27495636.13	0.0292	0.0174		
Saturn	-79991-02-01 21:35 J	-27495257.67	-27495257.60	-27495257.52	0.0289	0.0274		
Jupiter	-79987-09-27 11:59 J	-27493559.21	-27493559.00	-27493558.78	0.0495	0.0226		
Saturn	-79982-05-18 16:32 J	-27491864.84	-27491864.81	-27491864.75	0.0265	0.0260		
Jupiter	-79981-03-20 16:47 J	-27491558.01	-27491557.80	-27491557.58	0.0534	0.0178		
Saturn	-79981-05-29 00:42 J	-27491488.63	-27491488.47	-27491488.29	0.0264	0.0186		
Saturn	-79980-06-09 11:16 J	-27491112.24	-27491112.03	-27491111.79	0.0264	0.0106		
Saturn	-79979-06-21 02:23 J	-27490735.65	-27490735.40	-27490735.15	0.0265	0.0018		
Saturn	-79978-07-02 23:16 J	-27490358.77	-27490358.53	-27490358.29	0.0267	0.0072		
Uranus	-79977-06-14 04:04 J	-27490011.43	-27490011.33	-27490011.19	0.0147	0.0128		
Saturn	-79977-07-14 03:06 J	-27489981.56	-27489981.37	-27489981.16	0.0269	0.0163		
Uranus	-79976-06-19 08:37 J	-27489641.32	-27489641.14	-27489640.95	0.0147	0.0098		
Saturn	-79976-07-26 15:35 J	-27489603.93	-27489603.85	-27489603.75	0.0271	0.0252		
Uranus	-79975-06-24 13:40 J	-27489271.15	-27489270.93	-27489270.70	0.0148	0.0067		
Jupiter	-79975-10-02 03:35 J	-27489171.44	-27489171.35	-27489171.24	0.0495	0.0447		
Uranus	-79974-06-29 19:11 J	-27488900.94	-27488900.70	-27488900.45	0.0148	0.0034		

Uranus -79973-07-04 01:25 J -27488530.69 -27488530.44 -27488530.18 0.0147 0.0003
 Uranus -79972-07-09 07:54 J -27488160.42 -27488160.17 -27488159.92 0.0147 0.0031
 Uranus -79971-07-14 14:23 J -27487790.12 -27487789.90 -27487789.66 0.0147 0.0063
 Uranus -79970-07-19 21:35 J -27487419.79 -27487419.60 -27487419.40 0.0147 0.0094
 Jupiter -79969-03-25 12:28 J -27487170.20 -27487169.98 -27487169.75 0.0534 0.0087
 Uranus -79969-07-24 04:18 J -27487049.43 -27487049.32 -27487049.17 0.0147 0.0126
 Saturn -79967-12-01 04:18 J -27486189.46 -27486189.32 -27486189.18 0.0296 0.0241
 Saturn -79966-12-16 05:01 J -27485809.52 -27485809.29 -27485809.07 0.0296 0.0120
 Saturn -79965-12-29 22:32 J -27485429.80 -27485429.56 -27485429.31 0.0295 0.0008
 Saturn -79963-01-13 07:11 J -27485050.41 -27485050.20 -27485049.97 0.0293 0.0127
 Saturn -79962-01-27 05:16 J -27484671.41 -27484671.28 -27484671.13 0.0290 0.0233
 Mars -79961-06-07 08:23 J -27484174.30 -27484174.15 -27484174.01 0.1601 0.1016
 Jupiter -79957-03-30 10:18 J -27482782.23 -27482782.07 -27482781.89 0.0533 0.0351
 Saturn -79952-05-24 06:28 J -27480901.36 -27480901.23 -27480901.09 0.0264 0.0219
 Saturn -79951-06-04 15:06 J -27480525.07 -27480524.87 -27480524.66 0.0264 0.0141
 Neptune -79951-10-03 13:54 J -27480403.96 -27480403.92 -27480403.82 0.0088 0.0086
 Saturn -79950-06-16 03:20 J -27480148.60 -27480148.36 -27480148.12 0.0265 0.0056
 Neptune -79950-10-06 04:47 J -27480036.45 -27480036.30 -27480036.09 0.0088 0.0066
 Saturn -79949-06-26 20:37 J -27479771.89 -27479771.64 -27479771.40 0.0266 0.0033
 Neptune -79949-10-07 19:25 J -27479668.90 -27479668.69 -27479668.44 0.0088 0.0045
 Saturn -79948-07-08 20:08 J -27479394.87 -27479394.66 -27479394.43 0.0268 0.0125
 Neptune -79948-10-10 10:32 J -27479301.32 -27479301.06 -27479300.81 0.0088 0.0025
 Saturn -79947-07-21 04:04 J -27479017.47 -27479017.33 -27479017.18 0.0270 0.0215
 Neptune -79947-10-13 00:56 J -27478933.72 -27478933.46 -27478933.19 0.0088 0.0005
 Neptune -79946-10-15 15:20 J -27478566.12 -27478565.86 -27478565.60 0.0088 0.0016
 Neptune -79945-10-17 05:30 J -27478198.50 -27478198.27 -27478198.02 0.0088 0.0036
 Neptune -79944-10-19 19:40 J -27477830.88 -27477830.68 -27477830.47 0.0088 0.0056
 Neptune -79943-10-22 09:49 J -27477463.21 -27477463.09 -27477462.94 0.0088 0.0076
 Jupiter -79940-09-12 21:35 J -27476406.70 -27476406.60 -27476406.49 0.0491 0.0442
 Saturn -79938-11-24 08:52 J -27475604.13 -27475604.13 -27475604.12 0.0296 0.0296

Saturn	-79937-12-08 11:59 J	-27475224.19	-27475224.00	-27475223.80	0.0296	0.0180
Uranus	-79936-12-21 09:35 J	-27474846.21	-27474846.10	-27474845.95	0.0131	0.0112
Saturn	-79936-12-23 09:49 J	-27474844.33	-27474844.09	-27474843.85	0.0296	0.0055
Uranus	-79935-12-25 14:23 J	-27474477.07	-27474476.90	-27474476.70	0.0131	0.0091
Saturn	-79934-01-06 23:44 J	-27474464.74	-27474464.51	-27474464.27	0.0294	0.0070
Uranus	-79934-12-29 18:28 J	-27474107.93	-27474107.73	-27474107.50	0.0131	0.0068
Saturn	-79933-01-21 03:49 J	-27474085.52	-27474085.34	-27474085.15	0.0292	0.0186
Uranus	-79932-01-01 22:18 J	-27473738.80	-27473738.57	-27473738.32	0.0131	0.0046
Saturn	-79932-02-02 21:20 J	-27473706.65	-27473706.61	-27473706.57	0.0289	0.0284
Uranus	-79931-01-06 01:40 J	-27473369.68	-27473369.43	-27473369.18	0.0131	0.0023
Uranus	-79930-01-10 04:47 J	-27473000.55	-27473000.30	-27473000.05	0.0131	0.0000
Uranus	-79929-01-14 07:11 J	-27472631.44	-27472631.20	-27472630.95	0.0131	0.0022
Mars	-79929-06-14 21:49 J	-27472478.73	-27472478.59	-27472478.45	0.1590	0.1063
Uranus	-79928-01-17 09:49 J	-27472262.32	-27472262.09	-27472261.85	0.0131	0.0045
Jupiter	-79928-09-17 12:13 J	-27472019.20	-27472018.99	-27472018.77	0.0493	0.0226
Uranus	-79927-01-21 11:59 J	-27471893.20	-27471893.00	-27471892.77	0.0132	0.0067
Uranus	-79926-01-25 14:23 J	-27471524.07	-27471523.90	-27471523.70	0.0132	0.0089
Uranus	-79925-01-29 16:47 J	-27471154.92	-27471154.80	-27471154.65	0.0132	0.0111
Uranus	-79924-02-01 19:40 J	-27470785.70	-27470785.68	-27470785.66	0.0132	0.0132
Saturn	-79923-05-19 17:30 J	-27470313.84	-27470313.77	-27470313.69	0.0265	0.0251
Saturn	-79922-05-31 01:25 J	-27469937.61	-27469937.44	-27469937.25	0.0264	0.0176
Saturn	-79921-06-10 12:28 J	-27469561.20	-27469560.98	-27469560.74	0.0264	0.0095
Saturn	-79920-06-22 04:04 J	-27469184.58	-27469184.33	-27469184.08	0.0265	0.0007
Saturn	-79919-07-04 01:11 J	-27468807.68	-27468807.45	-27468807.21	0.0267	0.0083
Saturn	-79918-07-16 05:16 J	-27468430.45	-27468430.28	-27468430.08	0.0269	0.0175
Saturn	-79917-07-27 18:13 J	-27468052.79	-27468052.74	-27468052.67	0.0271	0.0263
Jupiter	-79916-09-22 03:20 J	-27467631.60	-27467631.36	-27467631.12	0.0493	0.0009
Jupiter	-79910-03-16 00:56 J	-27465630.57	-27465630.46	-27465630.35	0.0536	0.0464
Saturn	-79908-12-02 07:54 J	-27464638.32	-27464638.17	-27464638.00	0.0296	0.0229
Saturn	-79907-12-17 08:23 J	-27464258.37	-27464258.15	-27464257.91	0.0296	0.0106

Saturn -79905-01-01 01:54 J -27463878.67 -27463878.42 -27463878.18 0.0295 0.0020
 Saturn -79904-01-14 09:49 J -27463499.30 -27463499.09 -27463498.87 0.0293 0.0140
 Jupiter -79904-09-26 18:28 J -27463243.94 -27463243.73 -27463243.51 0.0494 0.0213
 Saturn -79903-01-28 07:40 J -27463120.30 -27463120.18 -27463120.05 0.0290 0.0245
 Jupiter -79898-03-20 23:30 J -27461242.73 -27461242.52 -27461242.31 0.0535 0.0197
 Saturn -79893-05-25 08:52 J -27459350.27 -27459350.13 -27459349.97 0.0264 0.0209
 Uranus -79893-06-14 10:47 J -27459330.16 -27459330.05 -27459329.91 0.0147 0.0128
 Saturn -79892-06-05 17:59 J -27458973.95 -27458973.75 -27458973.53 0.0264 0.0130
 Uranus -79892-06-19 15:06 J -27458960.05 -27458959.87 -27458959.67 0.0148 0.0097
 Jupiter -79892-10-01 09:35 J -27458856.21 -27458856.10 -27458855.97 0.0495 0.0430
 Saturn -79891-06-17 06:28 J -27458597.46 -27458597.23 -27458596.98 0.0265 0.0045
 Uranus -79891-06-24 20:08 J -27458589.88 -27458589.66 -27458589.42 0.0148 0.0065
 Saturn -79890-06-29 00:28 J -27458220.73 -27458220.48 -27458220.24 0.0266 0.0045
 Uranus -79890-06-30 01:40 J -27458219.67 -27458219.43 -27458219.17 0.0148 0.0033
 Uranus -79889-07-04 08:08 J -27457849.42 -27457849.16 -27457848.91 0.0148 0.0001
 Saturn -79889-07-10 00:28 J -27457843.68 -27457843.48 -27457843.26 0.0268 0.0137
 Uranus -79888-07-09 14:23 J -27457479.14 -27457478.90 -27457478.65 0.0147 0.0034
 Saturn -79888-07-22 08:37 J -27457466.26 -27457466.14 -27457465.99 0.0270 0.0227
 Uranus -79887-07-14 21:06 J -27457108.84 -27457108.62 -27457108.38 0.0147 0.0066
 Jupiter -79886-03-25 22:04 J -27456854.80 -27456854.58 -27456854.35 0.0534 0.0071
 Uranus -79886-07-20 04:18 J -27456738.50 -27456738.32 -27456738.12 0.0147 0.0098
 Uranus -79885-07-24 11:16 J -27456368.13 -27456368.03 -27456367.89 0.0147 0.0130
 Mars -79882-06-10 08:23 J -27455317.34 -27455317.15 -27455316.97 0.1598 0.0382
 Saturn -79879-11-25 13:54 J -27454052.98 -27454052.92 -27454052.84 0.0296 0.0284
 Saturn -79878-12-10 16:18 J -27453673.01 -27453672.82 -27453672.60 0.0296 0.0167
 Saturn -79877-12-24 13:25 J -27453293.18 -27453292.94 -27453292.69 0.0295 0.0042
 Pluto -79876-08-03 08:23 J -27453071.41 -27453071.15 -27453070.89 0.0066 0.0011
 Saturn -79875-01-08 02:52 J -27452913.61 -27452913.38 -27452913.14 0.0294 0.0084
 Saturn -79874-01-22 06:28 J -27452534.40 -27452534.23 -27452534.05 0.0292 0.0198
 Jupiter -79874-03-30 16:04 J -27452467.00 -27452466.83 -27452466.65 0.0532 0.0328

Neptune -79868-04-02 20:08 J -27450271.72 -27450271.66 -27450271.54 0.0089 0.0083
 Neptune -79867-04-05 05:01 J -27449904.44 -27449904.29 -27449904.10 0.0089 0.0064
 Neptune -79866-04-07 13:54 J -27449537.12 -27449536.92 -27449536.69 0.0089 0.0045
 Neptune -79865-04-08 23:16 J -27449169.77 -27449169.53 -27449169.29 0.0089 0.0025
 Neptune -79864-04-11 07:54 J -27448802.41 -27448802.17 -27448801.91 0.0089 0.0006
 Saturn -79864-05-20 20:08 J -27448762.75 -27448762.66 -27448762.56 0.0265 0.0241
 Neptune -79863-04-13 17:01 J -27448435.03 -27448434.79 -27448434.54 0.0089 0.0013
 Saturn -79863-06-01 04:47 J -27448386.49 -27448386.30 -27448386.11 0.0264 0.0165
 Neptune -79862-04-16 01:40 J -27448067.64 -27448067.43 -27448067.18 0.0089 0.0033
 Saturn -79862-06-12 16:04 J -27448010.05 -27448009.83 -27448009.59 0.0265 0.0082
 Neptune -79861-04-17 11:01 J -27447700.23 -27447700.04 -27447699.82 0.0089 0.0052
 Saturn -79861-06-23 08:08 J -27447633.40 -27447633.16 -27447632.91 0.0265 0.0007
 Neptune -79860-04-19 20:08 J -27447332.79 -27447332.66 -27447332.49 0.0089 0.0071
 Saturn -79860-07-05 05:59 J -27447256.48 -27447256.25 -27447256.02 0.0267 0.0096
 Saturn -79859-07-17 10:47 J -27446879.23 -27446879.05 -27446878.87 0.0269 0.0187
 Jupiter -79857-09-12 03:20 J -27446091.45 -27446091.36 -27446091.26 0.0492 0.0451
 Uranus -79852-12-21 20:23 J -27444164.76 -27444164.65 -27444164.49 0.0131 0.0111
 Uranus -79851-12-26 01:25 J -27443795.62 -27443795.44 -27443795.24 0.0131 0.0088
 Uranus -79850-12-30 05:16 J -27443426.49 -27443426.28 -27443426.05 0.0131 0.0066
 Saturn -79849-12-03 14:37 J -27443087.05 -27443086.89 -27443086.71 0.0296 0.0215
 Uranus -79848-01-02 09:06 J -27443057.35 -27443057.12 -27443056.87 0.0131 0.0043
 Saturn -79848-12-18 14:37 J -27442707.12 -27442706.89 -27442706.65 0.0296 0.0091
 Uranus -79847-01-06 12:28 J -27442688.23 -27442687.98 -27442687.72 0.0131 0.0020
 Saturn -79846-01-02 07:25 J -27442327.43 -27442327.19 -27442326.95 0.0295 0.0035
 Uranus -79846-01-10 15:35 J -27442319.10 -27442318.85 -27442318.60 0.0131 0.0003
 Uranus -79845-01-14 18:13 J -27441949.99 -27441949.74 -27441949.49 0.0131 0.0025
 Saturn -79845-01-16 14:52 J -27441948.08 -27441947.88 -27441947.67 0.0293 0.0154
 Jupiter -79845-09-16 17:59 J -27441703.96 -27441703.75 -27441703.54 0.0492 0.0238
 Uranus -79844-01-17 20:37 J -27441580.86 -27441580.64 -27441580.39 0.0131 0.0048
 Saturn -79844-01-29 12:13 J -27441569.10 -27441568.99 -27441568.88 0.0290 0.0257

Uranus	-79843-01-21 23:01 J	-27441211.74	-27441211.54	-27441211.31	0.0132	0.0071
Uranus	-79842-01-26 01:25 J	-27440842.60	-27440842.44	-27440842.24	0.0132	0.0093
Uranus	-79841-01-30 03:35 J	-27440473.45	-27440473.35	-27440473.20	0.0132	0.0116
Saturn	-79834-05-27 13:40 J	-27437799.08	-27437798.93	-27437798.77	0.0264	0.0198
Saturn	-79833-06-06 23:01 J	-27437422.75	-27437422.54	-27437422.31	0.0264	0.0119
Jupiter	-79833-09-21 07:54 J	-27437316.41	-27437316.17	-27437315.93	0.0493	0.0025
Saturn	-79832-06-18 12:13 J	-27437046.23	-27437045.99	-27437045.74	0.0265	0.0032
Saturn	-79831-06-30 06:42 J	-27436669.46	-27436669.22	-27436668.98	0.0266	0.0059
Saturn	-79830-07-12 07:40 J	-27436292.38	-27436292.18	-27436291.97	0.0268	0.0150
Saturn	-79829-07-23 16:18 J	-27435914.92	-27435914.82	-27435914.70	0.0270	0.0240
Jupiter	-79827-03-15 08:08 J	-27435315.25	-27435315.16	-27435315.06	0.0536	0.0483
Jupiter	-79821-09-26 00:13 J	-27432928.71	-27432928.49	-27432928.27	0.0494	0.0195
Saturn	-79820-11-26 23:30 J	-27432501.61	-27432501.52	-27432501.41	0.0296	0.0270
Saturn	-79819-12-12 01:40 J	-27432121.63	-27432121.43	-27432121.21	0.0296	0.0151
Saturn	-79818-12-26 22:04 J	-27431741.83	-27431741.58	-27431741.34	0.0295	0.0025
Saturn	-79816-01-09 10:18 J	-27431362.30	-27431362.07	-27431361.84	0.0294	0.0099
Saturn	-79815-01-23 12:42 J	-27430983.12	-27430982.97	-27430982.79	0.0291	0.0212
Jupiter	-79815-03-20 04:47 J	-27430927.50	-27430927.30	-27430927.09	0.0534	0.0217
Uranus	-79809-06-14 19:25 J	-27428648.81	-27428648.69	-27428648.55	0.0147	0.0127
Jupiter	-79809-09-30 15:06 J	-27428540.99	-27428540.87	-27428540.73	0.0495	0.0417
Uranus	-79808-06-19 23:16 J	-27428278.70	-27428278.53	-27428278.32	0.0148	0.0096
Uranus	-79807-06-25 04:47 J	-27427908.53	-27427908.30	-27427908.07	0.0148	0.0063
Uranus	-79806-06-30 10:18 J	-27427538.32	-27427538.07	-27427537.83	0.0148	0.0030
Saturn	-79805-05-22 00:28 J	-27427211.59	-27427211.48	-27427211.35	0.0265	0.0230
Uranus	-79805-07-04 16:18 J	-27427168.08	-27427167.82	-27427167.57	0.0148	0.0003
Saturn	-79804-06-02 09:35 J	-27426835.29	-27426835.10	-27426834.89	0.0265	0.0153
Uranus	-79804-07-09 22:32 J	-27426797.80	-27426797.56	-27426797.30	0.0147	0.0037
Jupiter	-79803-03-24 23:44 J	-27426539.73	-27426539.51	-27426539.28	0.0533	0.0041
Mars	-79803-06-12 07:25 J	-27426460.37	-27426460.19	-27426460.00	0.1596	0.0246
Saturn	-79803-06-13 21:49 J	-27426458.83	-27426458.59	-27426458.35	0.0265	0.0069

Uranus -79803-07-15 05:30 J -27426427.49 -27426427.27 -27426427.04 0.0147 0.0070
 Saturn -79802-06-25 14:23 J -27426082.14 -27426081.90 -27426081.65 0.0266 0.0020
 Uranus -79802-07-20 12:28 J -27426057.15 -27426056.98 -27426056.78 0.0147 0.0102
 Saturn -79801-07-06 12:56 J -27425705.18 -27425704.96 -27425704.73 0.0267 0.0110
 Uranus -79801-07-24 19:54 J -27425686.76 -27425686.67 -27425686.56 0.0147 0.0134
 Saturn -79800-07-18 18:42 J -27425327.88 -27425327.72 -27425327.55 0.0269 0.0200
 Jupiter -79791-03-29 16:47 J -27422151.99 -27422151.80 -27422151.61 0.0533 0.0295
 Saturn -79790-12-06 02:08 J -27421535.59 -27421535.41 -27421535.22 0.0296 0.0198
 Pluto -79789-02-08 01:54 J -27421471.66 -27421471.42 -27421471.16 0.0079 0.0014
 Saturn -79789-12-20 01:11 J -27421155.69 -27421155.45 -27421155.21 0.0296 0.0073
 Saturn -79787-01-03 17:01 J -27420776.03 -27420775.79 -27420775.55 0.0295 0.0053
 Saturn -79786-01-17 23:44 J -27420396.70 -27420396.51 -27420396.31 0.0293 0.0170
 Neptune -79786-10-05 10:18 J -27420136.19 -27420136.07 -27420135.90 0.0088 0.0074
 Saturn -79785-01-31 19:54 J -27420017.75 -27420017.67 -27420017.58 0.0290 0.0271
 Neptune -79785-10-07 01:11 J -27419768.65 -27419768.45 -27419768.23 0.0088 0.0054
 Neptune -79784-10-09 16:04 J -27419401.07 -27419400.83 -27419400.58 0.0088 0.0034
 Neptune -79783-10-12 06:42 J -27419033.48 -27419033.22 -27419032.96 0.0088 0.0014
 Neptune -79782-10-14 21:20 J -27418665.88 -27418665.61 -27418665.35 0.0088 0.0006
 Neptune -79781-10-16 11:16 J -27418298.27 -27418298.03 -27418297.77 0.0088 0.0026
 Neptune -79780-10-19 01:25 J -27417930.65 -27417930.44 -27417930.19 0.0088 0.0047
 Neptune -79779-10-21 16:04 J -27417563.01 -27417562.83 -27417562.65 0.0088 0.0066
 Neptune -79778-10-24 05:44 J -27417195.31 -27417195.26 -27417195.18 0.0088 0.0086
 Saturn -79776-05-17 12:28 J -27416624.02 -27416623.98 -27416623.94 0.0265 0.0260
 Saturn -79775-05-28 20:08 J -27416247.82 -27416247.66 -27416247.48 0.0264 0.0186
 Saturn -79774-06-09 06:28 J -27415871.45 -27415871.23 -27415871.01 0.0264 0.0104
 Jupiter -79774-09-12 06:56 J -27415776.27 -27415776.21 -27415776.14 0.0491 0.0470
 Saturn -79773-06-19 20:23 J -27415494.90 -27415494.65 -27415494.41 0.0265 0.0017
 Saturn -79772-07-01 15:35 J -27415118.09 -27415117.85 -27415117.61 0.0266 0.0073
 Saturn -79771-07-13 17:16 J -27414740.97 -27414740.78 -27414740.58 0.0268 0.0164
 Saturn -79770-07-26 02:52 J -27414363.45 -27414363.38 -27414363.28 0.0271 0.0254

Uranus	-79768-12-22 07:11 J	-27413483.32	-27413483.20	-27413483.04	0.0131	0.0109
Uranus	-79767-12-26 11:59 J	-27413114.18	-27413114.00	-27413113.80	0.0131	0.0087
Uranus	-79766-12-30 16:04 J	-27412745.05	-27412744.83	-27412744.60	0.0131	0.0064
Uranus	-79764-01-02 19:54 J	-27412375.91	-27412375.67	-27412375.43	0.0131	0.0040
Uranus	-79763-01-06 23:01 J	-27412006.78	-27412006.54	-27412006.28	0.0131	0.0018
Uranus	-79762-01-11 02:23 J	-27411637.66	-27411637.40	-27411637.15	0.0131	0.0006
Jupiter	-79762-09-16 21:20 J	-27411388.81	-27411388.61	-27411388.40	0.0492	0.0258
Uranus	-79761-01-15 04:32 J	-27411268.54	-27411268.31	-27411268.05	0.0131	0.0030
Saturn	-79761-11-28 12:56 J	-27410950.07	-27410949.96	-27410949.82	0.0296	0.0254
Uranus	-79760-01-18 07:40 J	-27410899.41	-27410899.18	-27410898.95	0.0131	0.0052
Saturn	-79760-12-13 14:37 J	-27410570.11	-27410569.89	-27410569.67	0.0296	0.0133
Uranus	-79759-01-22 09:49 J	-27410530.28	-27410530.09	-27410529.87	0.0132	0.0075
Saturn	-79759-12-28 09:49 J	-27410190.33	-27410190.09	-27410189.84	0.0295	0.0009
Uranus	-79758-01-26 12:28 J	-27410161.14	-27410160.98	-27410160.80	0.0132	0.0097
Saturn	-79757-01-11 20:52 J	-27409810.85	-27409810.63	-27409810.40	0.0293	0.0116
Uranus	-79757-01-30 14:52 J	-27409791.97	-27409791.88	-27409791.76	0.0132	0.0119
Saturn	-79756-01-24 22:18 J	-27409431.71	-27409431.57	-27409431.41	0.0291	0.0225
Mars	-79756-06-06 17:01 J	-27409298.91	-27409298.79	-27409298.68	0.1606	0.1248
Jupiter	-79750-09-21 10:47 J	-27407001.29	-27407001.05	-27407000.81	0.0493	0.0043
Saturn	-79746-05-24 06:28 J	-27405660.35	-27405660.23	-27405660.08	0.0265	0.0218
Saturn	-79745-06-03 16:18 J	-27405284.02	-27405283.82	-27405283.61	0.0265	0.0139
Jupiter	-79744-03-14 09:35 J	-27405000.16	-27405000.10	-27405000.03	0.0535	0.0510
Saturn	-79744-06-15 05:01 J	-27404907.53	-27404907.29	-27404907.05	0.0265	0.0054
Saturn	-79743-06-26 22:18 J	-27404530.81	-27404530.57	-27404530.32	0.0266	0.0035
Saturn	-79742-07-08 21:49 J	-27404153.80	-27404153.59	-27404153.37	0.0267	0.0125
Saturn	-79741-07-20 04:47 J	-27403776.45	-27403776.30	-27403776.15	0.0269	0.0215
Jupiter	-79738-09-26 01:25 J	-27402613.66	-27402613.44	-27402613.21	0.0494	0.0177
Jupiter	-79732-03-19 02:37 J	-27400612.59	-27400612.39	-27400612.19	0.0535	0.0256
Saturn	-79732-11-22 13:54 J	-27400363.92	-27400363.92	-27400363.90	0.0296	0.0296
Saturn	-79731-12-07 17:30 J	-27399983.97	-27399983.77	-27399983.58	0.0296	0.0180

Saturn -79730-12-22 15:35 J -27399604.09 -27399603.85 -27399603.61 0.0296 0.0054
 Saturn -79728-01-05 06:28 J -27399224.46 -27399224.23 -27399223.99 0.0295 0.0071
 Saturn -79727-01-19 12:13 J -27398845.17 -27398844.99 -27398844.80 0.0292 0.0187
 Saturn -79726-02-02 07:25 J -27398466.23 -27398466.19 -27398466.15 0.0290 0.0285
 Jupiter -79726-09-30 17:16 J -27398225.92 -27398225.78 -27398225.63 0.0495 0.0394
 Uranus -79725-06-15 06:42 J -27397967.35 -27397967.22 -27397967.08 0.0148 0.0125
 Mars -79724-06-14 06:56 J -27397603.37 -27397603.21 -27397603.06 0.1594 0.0871
 Uranus -79724-06-20 11:01 J -27397597.24 -27397597.04 -27397596.85 0.0148 0.0093
 Uranus -79723-06-25 15:49 J -27397227.07 -27397226.84 -27397226.61 0.0148 0.0060
 Uranus -79722-06-30 21:20 J -27396856.86 -27396856.61 -27396856.36 0.0148 0.0027
 Uranus -79721-07-05 03:20 J -27396486.61 -27396486.36 -27396486.10 0.0148 0.0007
 Jupiter -79720-03-23 23:01 J -27396224.77 -27396224.54 -27396224.32 0.0534 0.0012
 Uranus -79720-07-10 09:35 J -27396116.34 -27396116.10 -27396115.84 0.0147 0.0041
 Uranus -79719-07-15 16:32 J -27395746.02 -27395745.81 -27395745.57 0.0147 0.0074
 Uranus -79718-07-20 23:44 J -27395375.67 -27395375.51 -27395375.32 0.0147 0.0107
 Saturn -79717-05-18 19:54 J -27395072.75 -27395072.67 -27395072.58 0.0265 0.0248
 Uranus -79717-07-25 07:11 J -27395005.26 -27395005.20 -27395005.10 0.0147 0.0139
 Saturn -79716-05-30 04:18 J -27394696.50 -27394696.32 -27394696.14 0.0264 0.0173
 Mars -79716-12-17 18:28 J -27394494.93 -27394494.73 -27394494.52 0.1945 0.0145
 Saturn -79715-06-10 15:06 J -27394320.10 -27394319.87 -27394319.64 0.0265 0.0090
 Saturn -79714-06-22 05:44 J -27393943.50 -27393943.26 -27393943.01 0.0265 0.0004
 Saturn -79713-07-03 01:54 J -27393566.65 -27393566.42 -27393566.19 0.0267 0.0089
 Saturn -79712-07-15 04:32 J -27393189.49 -27393189.31 -27393189.12 0.0268 0.0180
 Saturn -79711-07-27 15:35 J -27392811.88 -27392811.85 -27392811.81 0.0271 0.0267
 Jupiter -79708-03-28 20:23 J -27391836.85 -27391836.65 -27391836.45 0.0533 0.0268
 Neptune -79703-04-04 15:49 J -27390003.96 -27390003.84 -27390003.67 0.0089 0.0072
 Neptune -79702-04-07 00:42 J -27389636.65 -27389636.47 -27389636.25 0.0089 0.0053
 Saturn -79702-12-01 06:42 J -27389398.35 -27389398.22 -27389398.05 0.0296 0.0236
 Neptune -79701-04-08 09:35 J -27389269.32 -27389269.10 -27389268.85 0.0089 0.0034
 Saturn -79701-12-15 07:40 J -27389018.41 -27389018.18 -27389017.95 0.0296 0.0113

Neptune -79700-04-10 18:42 J -27388901.96 -27388901.72 -27388901.46 0.0089 0.0015
 Saturn -79700-12-30 01:54 J -27388638.66 -27388638.42 -27388638.17 0.0295 0.0014
 Neptune -79699-04-13 03:35 J -27388534.60 -27388534.35 -27388534.10 0.0089 0.0004
 Saturn -79698-01-13 11:30 J -27388259.23 -27388259.02 -27388258.80 0.0293 0.0134
 Neptune -79698-04-15 12:13 J -27388167.22 -27388166.99 -27388166.73 0.0089 0.0024
 Saturn -79697-01-27 11:16 J -27387880.15 -27387880.03 -27387879.89 0.0290 0.0242
 Neptune -79697-04-16 21:06 J -27387799.82 -27387799.62 -27387799.38 0.0089 0.0043
 Jupiter -79696-04-02 15:35 J -27387448.87 -27387448.85 -27387448.81 0.0531 0.0525
 Neptune -79696-04-19 06:13 J -27387432.40 -27387432.24 -27387432.04 0.0089 0.0062
 Neptune -79695-04-21 15:20 J -27387064.93 -27387064.86 -27387064.73 0.0089 0.0081
 Saturn -79687-05-25 13:54 J -27384109.06 -27384108.92 -27384108.75 0.0265 0.0205
 Saturn -79686-06-06 00:13 J -27383732.70 -27383732.49 -27383732.27 0.0265 0.0125
 Saturn -79685-06-16 13:25 J -27383356.18 -27383355.94 -27383355.69 0.0265 0.0040
 Uranus -79685-12-18 13:54 J -27383170.93 -27383170.92 -27383170.87 0.0131 0.0131
 Saturn -79684-06-28 07:40 J -27382979.42 -27382979.18 -27382978.93 0.0266 0.0050
 Uranus -79684-12-22 19:11 J -27382801.83 -27382801.70 -27382801.54 0.0131 0.0108
 Saturn -79683-07-10 08:08 J -27382602.36 -27382602.16 -27382601.94 0.0268 0.0141
 Uranus -79683-12-26 23:59 J -27382432.69 -27382432.50 -27382432.30 0.0131 0.0084
 Saturn -79682-07-22 16:18 J -27382224.95 -27382224.82 -27382224.69 0.0270 0.0230
 Uranus -79682-12-31 03:49 J -27382063.56 -27382063.34 -27382063.11 0.0131 0.0061
 Uranus -79680-01-03 07:54 J -27381694.41 -27381694.17 -27381693.93 0.0131 0.0038
 Uranus -79679-01-07 11:16 J -27381325.28 -27381325.03 -27381324.78 0.0131 0.0014
 Jupiter -79679-09-15 21:35 J -27381073.80 -27381073.60 -27381073.40 0.0492 0.0279
 Uranus -79678-01-11 14:08 J -27380956.16 -27380955.91 -27380955.65 0.0131 0.0009
 Uranus -79677-01-15 17:01 J -27380587.03 -27380586.79 -27380586.54 0.0131 0.0032
 Mars -79677-06-08 16:47 J -27380441.97 -27380441.80 -27380441.63 0.1604 0.0610
 Uranus -79676-01-18 19:40 J -27380217.89 -27380217.68 -27380217.44 0.0131 0.0056
 Uranus -79675-01-22 22:18 J -27379848.76 -27379848.57 -27379848.36 0.0132 0.0079
 Uranus -79674-01-27 00:42 J -27379479.60 -27379479.47 -27379479.28 0.0132 0.0102
 Uranus -79673-01-31 03:20 J -27379110.42 -27379110.36 -27379110.25 0.0132 0.0125

Saturn -79673-11-24 08:23 J -27378812.23 -27378812.15 -27378812.06 0.0296 0.0278
 Saturn -79672-12-09 11:01 J -27378432.24 -27378432.04 -27378431.82 0.0296 0.0160
 Saturn -79671-12-24 08:37 J -27378052.38 -27378052.14 -27378051.90 0.0296 0.0034
 Saturn -79669-01-07 22:18 J -27377672.79 -27377672.57 -27377672.33 0.0294 0.0091
 Saturn -79668-01-21 02:52 J -27377293.55 -27377293.38 -27377293.20 0.0292 0.0204
 Jupiter -79667-09-20 12:28 J -27376686.22 -27376685.98 -27376685.74 0.0493 0.0064
 Saturn -79658-05-21 04:04 J -27373521.42 -27373521.33 -27373521.21 0.0265 0.0236
 Saturn -79657-05-31 12:56 J -27373145.15 -27373144.96 -27373144.76 0.0264 0.0159
 Saturn -79656-06-12 00:13 J -27372768.72 -27372768.49 -27372768.25 0.0265 0.0075
 Saturn -79655-06-23 15:49 J -27372392.08 -27372391.84 -27372391.59 0.0265 0.0015
 Jupiter -79655-09-25 01:54 J -27372298.65 -27372298.42 -27372298.19 0.0493 0.0150
 Saturn -79654-07-05 12:42 J -27372015.19 -27372014.97 -27372014.73 0.0267 0.0105
 Saturn -79653-07-16 16:32 J -27371637.97 -27371637.81 -27371637.63 0.0269 0.0195
 Jupiter -79649-03-18 03:49 J -27370297.52 -27370297.34 -27370297.14 0.0535 0.0289
 Mars -79645-06-16 06:42 J -27368746.28 -27368746.22 -27368746.16 0.1592 0.1492
 Jupiter -79643-09-29 17:01 J -27367910.94 -27367910.79 -27367910.62 0.0494 0.0367
 Saturn -79643-12-03 02:37 J -27367846.55 -27367846.39 -27367846.22 0.0296 0.0216
 Saturn -79642-12-18 02:23 J -27367466.62 -27367466.40 -27367466.16 0.0295 0.0093
 Uranus -79641-06-15 20:23 J -27367285.77 -27367285.65 -27367285.50 0.0148 0.0123
 Saturn -79641-12-31 19:54 J -27367086.91 -27367086.67 -27367086.42 0.0294 0.0035
 Uranus -79640-06-21 00:42 J -27366915.67 -27366915.47 -27366915.27 0.0148 0.0090
 Saturn -79639-01-15 04:32 J -27366707.51 -27366707.31 -27366707.10 0.0293 0.0154
 Uranus -79639-06-26 05:30 J -27366545.50 -27366545.27 -27366545.03 0.0148 0.0057
 Saturn -79638-01-29 02:52 J -27366328.48 -27366328.38 -27366328.26 0.0290 0.0258
 Uranus -79638-07-01 11:01 J -27366175.29 -27366175.04 -27366174.79 0.0148 0.0023
 Jupiter -79637-03-23 01:54 J -27365909.65 -27365909.42 -27365909.19 0.0534 0.0021
 Uranus -79637-07-05 17:01 J -27365805.04 -27365804.79 -27365804.53 0.0148 0.0011
 Uranus -79636-07-10 23:16 J -27365434.76 -27365434.53 -27365434.27 0.0147 0.0046
 Uranus -79635-07-16 06:28 J -27365064.44 -27365064.23 -27365064.00 0.0147 0.0079
 Uranus -79634-07-21 13:40 J -27364694.08 -27364693.93 -27364693.76 0.0147 0.0112

Uranus -79633-07-25 20:52 J -27364323.65 -27364323.63 -27364323.57 0.0147 0.0145
 Pluto -79630-08-04 06:42 J -27363219.31 -27363219.22 -27363219.08 0.0066 0.0059
 Saturn -79629-05-15 13:40 J -27362933.93 -27362933.93 -27362933.92 0.0266 0.0266
 Pluto -79629-08-04 21:35 J -27362852.80 -27362852.60 -27362852.37 0.0066 0.0037
 Saturn -79628-05-26 22:04 J -27362557.73 -27362557.58 -27362557.40 0.0265 0.0191
 Saturn -79627-06-07 08:23 J -27362181.36 -27362181.15 -27362180.92 0.0265 0.0110
 Saturn -79626-06-18 22:18 J -27361804.81 -27361804.57 -27361804.32 0.0265 0.0024
 Jupiter -79625-03-27 20:52 J -27361521.83 -27361521.63 -27361521.43 0.0533 0.0235
 Saturn -79625-06-29 17:16 J -27361428.01 -27361427.78 -27361427.54 0.0266 0.0067
 Saturn -79624-07-11 18:42 J -27361050.92 -27361050.72 -27361050.52 0.0268 0.0157
 Saturn -79623-07-24 03:49 J -27360673.44 -27360673.34 -27360673.24 0.0270 0.0246
 Neptune -79622-10-04 14:08 J -27360235.98 -27360235.91 -27360235.79 0.0088 0.0083
 Neptune -79621-10-06 05:01 J -27359868.46 -27359868.29 -27359868.09 0.0088 0.0063
 Neptune -79620-10-08 19:54 J -27359500.90 -27359500.67 -27359500.43 0.0088 0.0043
 Neptune -79619-10-11 10:32 J -27359133.30 -27359133.06 -27359132.79 0.0088 0.0023
 Neptune -79618-10-14 01:11 J -27358765.71 -27358765.45 -27358765.18 0.0088 0.0003
 Neptune -79617-10-15 15:49 J -27358398.10 -27358397.84 -27358397.58 0.0088 0.0017
 Neptune -79616-10-18 05:59 J -27358030.47 -27358030.25 -27358029.99 0.0088 0.0037
 Neptune -79615-10-20 20:08 J -27357662.84 -27357662.66 -27357662.43 0.0088 0.0057
 Neptune -79614-10-23 10:32 J -27357295.18 -27357295.06 -27357294.91 0.0088 0.0076
 Saturn -79614-11-27 04:04 J -27357260.43 -27357260.33 -27357260.20 0.0296 0.0260
 Jupiter -79613-04-01 11:30 J -27357134.12 -27357134.02 -27357133.93 0.0532 0.0481
 Saturn -79613-12-11 06:42 J -27356880.43 -27356880.22 -27356880.00 0.0296 0.0139
 Saturn -79612-12-26 03:35 J -27356500.60 -27356500.35 -27356500.10 0.0296 0.0012
 Saturn -79610-01-09 16:18 J -27356121.04 -27356120.82 -27356120.59 0.0294 0.0112
 Saturn -79609-01-23 19:25 J -27355741.84 -27355741.69 -27355741.53 0.0292 0.0223
 Uranus -79601-12-19 02:23 J -27352489.43 -27352489.40 -27352489.33 0.0131 0.0129
 Uranus -79600-12-23 07:25 J -27352120.33 -27352120.19 -27352120.02 0.0131 0.0106
 Saturn -79599-05-22 12:42 J -27351970.09 -27351969.97 -27351969.83 0.0265 0.0223
 Uranus -79599-12-27 11:59 J -27351751.19 -27351751.00 -27351750.79 0.0131 0.0082

Saturn -79598-06-02 22:04 J -27351593.79 -27351593.58 -27351593.38 0.0264 0.0144
 Mars -79598-06-11 16:47 J -27351584.98 -27351584.80 -27351584.61 0.1601 0.0047
 Uranus -79598-12-31 16:04 J -27351382.05 -27351381.83 -27351381.59 0.0131 0.0059
 Saturn -79597-06-13 09:49 J -27351217.33 -27351217.09 -27351216.85 0.0265 0.0059
 Uranus -79596-01-03 19:54 J -27351012.91 -27351012.67 -27351012.42 0.0131 0.0035
 Saturn -79596-06-25 01:54 J -27350840.66 -27350840.42 -27350840.17 0.0266 0.0030
 Jupiter -79596-09-14 22:32 J -27350758.75 -27350758.56 -27350758.37 0.0491 0.0303
 Uranus -79595-01-07 23:16 J -27350643.78 -27350643.53 -27350643.28 0.0131 0.0011
 Saturn -79595-07-06 23:44 J -27350463.73 -27350463.51 -27350463.29 0.0267 0.0121
 Uranus -79594-01-12 02:23 J -27350274.65 -27350274.40 -27350274.15 0.0131 0.0013
 Saturn -79594-07-19 04:32 J -27350086.45 -27350086.31 -27350086.15 0.0269 0.0212
 Uranus -79593-01-16 05:01 J -27349905.53 -27349905.29 -27349905.04 0.0131 0.0036
 Uranus -79592-01-19 08:08 J -27349536.39 -27349536.16 -27349535.94 0.0131 0.0060
 Uranus -79591-01-23 10:32 J -27349167.25 -27349167.06 -27349166.86 0.0132 0.0083
 Uranus -79590-01-27 13:11 J -27348798.09 -27348797.95 -27348797.80 0.0132 0.0106
 Uranus -79589-01-31 15:06 J -27348428.89 -27348428.87 -27348428.79 0.0132 0.0130
 Jupiter -79584-09-19 12:28 J -27346371.22 -27346370.98 -27346370.74 0.0492 0.0090
 Saturn -79584-12-04 23:16 J -27346294.71 -27346294.53 -27346294.34 0.0296 0.0195
 Saturn -79583-12-19 22:18 J -27345914.80 -27345914.57 -27345914.32 0.0295 0.0071
 Saturn -79581-01-03 14:52 J -27345535.12 -27345534.88 -27345534.64 0.0294 0.0056
 Saturn -79580-01-16 22:18 J -27345155.76 -27345155.57 -27345155.37 0.0292 0.0173
 Saturn -79579-01-30 19:25 J -27344776.76 -27344776.69 -27344776.62 0.0290 0.0275
 Jupiter -79572-09-24 00:56 J -27341983.69 -27341983.46 -27341983.22 0.0493 0.0124
 Saturn -79570-05-17 21:35 J -27341382.67 -27341382.60 -27341382.53 0.0266 0.0253
 Saturn -79569-05-28 05:59 J -27341006.42 -27341006.25 -27341006.07 0.0265 0.0177
 Saturn -79568-06-08 16:32 J -27340630.04 -27340629.81 -27340629.58 0.0265 0.0094
 Saturn -79567-06-20 06:42 J -27340253.46 -27340253.22 -27340252.97 0.0266 0.0008
 Jupiter -79566-03-18 05:01 J -27339982.46 -27339982.29 -27339982.10 0.0535 0.0319
 Saturn -79566-07-02 02:23 J -27339876.63 -27339876.40 -27339876.17 0.0267 0.0083
 Saturn -79565-07-13 04:18 J -27339499.50 -27339499.32 -27339499.13 0.0268 0.0174

Saturn -79564-07-25 14:08 J -27339121.96 -27339121.91 -27339121.83 0.0271 0.0261
 Jupiter -79560-09-28 16:47 J -27337595.97 -27337595.80 -27337595.63 0.0494 0.0341
 Uranus -79557-06-16 09:20 J -27336604.24 -27336604.11 -27336603.95 0.0148 0.0121
 Uranus -79556-06-21 13:25 J -27336234.12 -27336233.94 -27336233.72 0.0148 0.0088
 Uranus -79555-06-26 18:42 J -27335863.94 -27335863.72 -27335863.47 0.0148 0.0054
 Saturn -79555-11-28 23:16 J -27335708.67 -27335708.53 -27335708.39 0.0296 0.0241
 Jupiter -79554-03-22 20:37 J -27335594.86 -27335594.64 -27335594.41 0.0534 0.0069
 Uranus -79554-07-02 00:28 J -27335493.73 -27335493.48 -27335493.23 0.0148 0.0019
 Saturn -79554-12-14 01:11 J -27335328.67 -27335328.45 -27335328.21 0.0296 0.0119
 Uranus -79553-07-06 06:56 J -27335123.47 -27335123.21 -27335122.96 0.0148 0.0015
 Saturn -79553-12-27 21:49 J -27334948.84 -27334948.59 -27334948.35 0.0295 0.0010
 Uranus -79552-07-11 13:11 J -27334753.17 -27334752.95 -27334752.69 0.0148 0.0051
 Saturn -79551-01-11 09:35 J -27334569.31 -27334569.10 -27334568.88 0.0294 0.0132
 Mars -79551-06-06 01:11 J -27334423.52 -27334423.45 -27334423.38 0.1612 0.1497
 Uranus -79551-07-16 20:37 J -27334382.84 -27334382.64 -27334382.42 0.0147 0.0085
 Saturn -79550-01-25 11:30 J -27334190.15 -27334190.02 -27334189.88 0.0291 0.0242
 Uranus -79550-07-22 03:49 J -27334012.47 -27334012.34 -27334012.17 0.0147 0.0119
 Pluto -79542-02-09 16:04 J -27331253.07 -27331252.83 -27331252.58 0.0078 0.0019
 Jupiter -79542-03-27 15:49 J -27331207.05 -27331206.84 -27331206.63 0.0534 0.0189
 Saturn -79540-05-23 20:37 J -27330418.77 -27330418.64 -27330418.48 0.0265 0.0210
 Neptune -79539-04-04 02:08 J -27330103.49 -27330103.41 -27330103.27 0.0089 0.0080
 Saturn -79539-06-04 05:59 J -27330042.46 -27330042.25 -27330042.03 0.0264 0.0130
 Neptune -79538-04-06 11:16 J -27329736.20 -27329736.03 -27329735.84 0.0089 0.0061
 Saturn -79538-06-15 18:13 J -27329665.98 -27329665.74 -27329665.50 0.0265 0.0044
 Neptune -79537-04-07 20:23 J -27329368.86 -27329368.65 -27329368.42 0.0089 0.0042
 Saturn -79537-06-26 10:47 J -27329289.29 -27329289.05 -27329288.81 0.0266 0.0046
 Neptune -79536-04-10 04:47 J -27329001.53 -27329001.30 -27329001.04 0.0089 0.0024
 Saturn -79536-07-08 09:06 J -27328912.32 -27328912.12 -27328911.90 0.0267 0.0137
 Neptune -79535-04-12 13:54 J -27328634.16 -27328633.92 -27328633.66 0.0089 0.0005
 Saturn -79535-07-20 14:52 J -27328534.99 -27328534.88 -27328534.73 0.0269 0.0228

Neptune -79534-04-14 23:01 J -27328266.79 -27328266.54 -27328266.30 0.0089 0.0014
 Neptune -79533-04-16 07:40 J -27327899.41 -27327899.18 -27327898.94 0.0089 0.0033
 Neptune -79532-04-18 16:32 J -27327532.00 -27327531.81 -27327531.59 0.0089 0.0052
 Neptune -79531-04-21 01:25 J -27327164.57 -27327164.44 -27327164.28 0.0089 0.0071
 Jupiter -79530-04-01 12:42 J -27326819.09 -27326818.97 -27326818.85 0.0533 0.0449
 Saturn -79526-11-22 15:06 J -27325122.91 -27325122.87 -27325122.83 0.0295 0.0291
 Saturn -79525-12-06 18:28 J -27324742.92 -27324742.73 -27324742.52 0.0296 0.0175
 Saturn -79524-12-21 17:30 J -27324363.01 -27324362.77 -27324362.53 0.0295 0.0049
 Saturn -79522-01-05 09:06 J -27323983.35 -27323983.12 -27323982.88 0.0294 0.0077
 Saturn -79521-01-19 15:35 J -27323604.03 -27323603.85 -27323603.67 0.0292 0.0193
 Mars -79519-06-13 16:32 J -27322727.98 -27322727.81 -27322727.64 0.1598 0.0667
 Uranus -79517-12-19 15:35 J -27321807.91 -27321807.85 -27321807.78 0.0131 0.0127
 Uranus -79516-12-23 20:08 J -27321438.80 -27321438.66 -27321438.49 0.0131 0.0104
 Uranus -79515-12-28 00:56 J -27321069.65 -27321069.46 -27321069.25 0.0131 0.0080
 Uranus -79513-01-01 04:47 J -27320700.52 -27320700.30 -27320700.06 0.0131 0.0056
 Jupiter -79513-09-13 22:04 J -27320443.75 -27320443.58 -27320443.40 0.0491 0.0328
 Uranus -79512-01-04 08:37 J -27320331.38 -27320331.14 -27320330.88 0.0131 0.0032
 Uranus -79511-01-08 11:59 J -27319962.25 -27319962.00 -27319961.74 0.0131 0.0008
 Saturn -79511-05-19 04:32 J -27319831.40 -27319831.31 -27319831.21 0.0265 0.0241
 Uranus -79510-01-12 15:06 J -27319593.12 -27319592.87 -27319592.62 0.0131 0.0016
 Saturn -79510-05-30 12:56 J -27319455.15 -27319454.96 -27319454.77 0.0265 0.0163
 Uranus -79509-01-16 17:44 J -27319223.99 -27319223.76 -27319223.51 0.0131 0.0040
 Saturn -79509-06-09 23:16 J -27319078.76 -27319078.53 -27319078.29 0.0265 0.0080
 Uranus -79508-01-19 20:52 J -27318854.85 -27318854.63 -27318854.41 0.0131 0.0064
 Saturn -79508-06-21 13:54 J -27318702.16 -27318701.92 -27318701.67 0.0266 0.0009
 Uranus -79507-01-23 23:01 J -27318485.72 -27318485.54 -27318485.34 0.0132 0.0088
 Saturn -79507-07-03 09:49 J -27318325.32 -27318325.09 -27318324.86 0.0267 0.0099
 Uranus -79506-01-28 01:25 J -27318116.56 -27318116.44 -27318116.29 0.0132 0.0111
 Saturn -79506-07-15 12:13 J -27317948.15 -27317947.99 -27317947.80 0.0269 0.0190
 Jupiter -79501-09-18 12:56 J -27316056.19 -27316055.96 -27316055.72 0.0492 0.0114

Saturn -79496-11-30 16:32 J -27314156.97 -27314156.81 -27314156.65 0.0296 0.0223
 Saturn -79495-12-15 18:13 J -27313776.97 -27313776.74 -27313776.50 0.0296 0.0099
 Saturn -79494-12-30 14:08 J -27313397.15 -27313396.91 -27313396.67 0.0295 0.0030
 Saturn -79492-01-13 01:25 J -27313017.65 -27313017.44 -27313017.23 0.0294 0.0152
 Saturn -79491-01-27 02:08 J -27312638.51 -27312638.41 -27312638.29 0.0291 0.0259
 Jupiter -79489-09-23 05:01 J -27311668.52 -27311668.29 -27311668.05 0.0493 0.0104
 Jupiter -79483-03-16 23:44 J -27309667.67 -27309667.51 -27309667.35 0.0536 0.0367
 Saturn -79481-05-25 03:35 J -27308867.50 -27308867.35 -27308867.18 0.0264 0.0197
 Saturn -79480-06-05 12:28 J -27308491.19 -27308490.98 -27308490.75 0.0264 0.0115
 Saturn -79479-06-17 00:42 J -27308114.71 -27308114.47 -27308114.22 0.0265 0.0029
 Saturn -79478-06-28 17:44 J -27307738.00 -27307737.76 -27307737.52 0.0266 0.0061
 Saturn -79477-07-09 16:32 J -27307361.00 -27307360.81 -27307360.60 0.0267 0.0153
 Jupiter -79477-09-27 18:56 J -27307280.90 -27307280.71 -27307280.53 0.0494 0.0318
 Saturn -79476-07-21 23:16 J -27306983.63 -27306983.53 -27306983.41 0.0270 0.0242
 Uranus -79473-06-16 22:04 J -27305922.73 -27305922.58 -27305922.43 0.0148 0.0118
 Mars -79472-06-08 01:40 J -27305566.59 -27305566.43 -27305566.28 0.1609 0.0846
 Uranus -79472-06-22 01:54 J -27305552.61 -27305552.42 -27305552.20 0.0148 0.0085
 Jupiter -79471-03-21 21:35 J -27305279.82 -27305279.60 -27305279.38 0.0535 0.0102
 Uranus -79471-06-27 07:11 J -27305182.43 -27305182.20 -27305181.95 0.0148 0.0051
 Uranus -79470-07-02 13:11 J -27304812.20 -27304811.95 -27304811.69 0.0148 0.0016
 Uranus -79469-07-06 19:40 J -27304441.93 -27304441.68 -27304441.42 0.0148 0.0020
 Uranus -79468-07-12 02:23 J -27304071.63 -27304071.40 -27304071.15 0.0148 0.0055
 Uranus -79467-07-17 09:49 J -27303701.28 -27303701.09 -27303700.88 0.0147 0.0090
 Saturn -79467-11-24 07:11 J -27303571.28 -27303571.20 -27303571.10 0.0296 0.0274
 Uranus -79466-07-22 17:16 J -27303330.91 -27303330.78 -27303330.64 0.0147 0.0124
 Saturn -79466-12-09 10:47 J -27303191.26 -27303191.05 -27303190.84 0.0296 0.0155
 Saturn -79465-12-23 09:35 J -27302811.35 -27302811.10 -27302810.86 0.0295 0.0028
 Saturn -79463-01-07 00:28 J -27302431.70 -27302431.48 -27302431.24 0.0294 0.0098
 Saturn -79462-01-21 05:59 J -27302052.41 -27302052.25 -27302052.08 0.0292 0.0212
 Jupiter -79459-03-26 20:37 J -27300891.86 -27300891.64 -27300891.43 0.0534 0.0166

Neptune -79457-10-05 08:23 J -27299968.29 -27299968.15 -27299967.98 0.0088 0.0072
 Neptune -79456-10-07 22:47 J -27299600.74 -27299600.55 -27299600.31 0.0088 0.0053
 Neptune -79455-10-10 13:25 J -27299233.17 -27299232.94 -27299232.68 0.0088 0.0033
 Neptune -79454-10-13 04:04 J -27298865.58 -27298865.33 -27298865.05 0.0088 0.0014
 Neptune -79453-10-14 18:42 J -27298497.98 -27298497.72 -27298497.45 0.0088 0.0007
 Saturn -79452-05-20 10:04 J -27298280.19 -27298280.08 -27298279.95 0.0265 0.0229
 Neptune -79452-10-17 09:06 J -27298130.36 -27298130.12 -27298129.85 0.0088 0.0027
 Saturn -79451-05-31 17:59 J -27297903.94 -27297903.75 -27297903.54 0.0265 0.0151
 Neptune -79451-10-19 23:30 J -27297762.73 -27297762.52 -27297762.28 0.0088 0.0046
 Saturn -79450-06-12 04:32 J -27297527.54 -27297527.31 -27297527.07 0.0265 0.0066
 Neptune -79450-10-22 13:40 J -27297395.09 -27297394.93 -27297394.73 0.0088 0.0066
 Saturn -79449-06-22 19:11 J -27297150.94 -27297150.70 -27297150.45 0.0266 0.0024
 Neptune -79449-10-24 04:18 J -27297027.38 -27297027.32 -27297027.24 0.0088 0.0085
 Saturn -79448-07-04 14:52 J -27296774.09 -27296773.88 -27296773.64 0.0267 0.0115
 Jupiter -79447-03-31 16:47 J -27296503.93 -27296503.80 -27296503.66 0.0533 0.0422
 Saturn -79447-07-16 17:59 J -27296396.90 -27296396.75 -27296396.58 0.0269 0.0205
 Mars -79440-06-15 16:18 J -27293870.92 -27293870.82 -27293870.71 0.1596 0.1307
 Saturn -79437-12-02 05:30 J -27292605.44 -27292605.27 -27292605.08 0.0296 0.0207
 Saturn -79436-12-17 07:40 J -27292225.41 -27292225.18 -27292224.94 0.0296 0.0080
 Saturn -79434-01-01 03:20 J -27291845.60 -27291845.36 -27291845.12 0.0295 0.0049
 Saturn -79433-01-15 13:54 J -27291466.11 -27291465.92 -27291465.71 0.0294 0.0171
 Uranus -79433-12-20 03:35 J -27291126.40 -27291126.35 -27291126.25 0.0131 0.0125
 Saturn -79432-01-28 14:23 J -27291086.96 -27291086.90 -27291086.81 0.0291 0.0276
 Mars -79432-12-16 09:20 J -27290765.32 -27290765.11 -27290764.91 0.1938 0.0451
 Uranus -79432-12-24 08:37 J -27290757.29 -27290757.14 -27290756.96 0.0131 0.0101
 Uranus -79431-12-28 13:11 J -27290388.15 -27290387.95 -27290387.74 0.0131 0.0077
 Jupiter -79430-09-14 04:32 J -27290128.48 -27290128.31 -27290128.14 0.0491 0.0342
 Uranus -79429-01-01 17:01 J -27290019.01 -27290018.79 -27290018.55 0.0131 0.0053
 Uranus -79428-01-04 20:52 J -27289649.87 -27289649.63 -27289649.38 0.0131 0.0029
 Uranus -79427-01-08 23:59 J -27289280.75 -27289280.50 -27289280.24 0.0131 0.0005

Uranus	-79426-01-13 03:06 J	-27288911.62	-27288911.37	-27288911.11	0.0131	0.0020
Uranus	-79425-01-17 05:44 J	-27288542.49	-27288542.26	-27288542.01	0.0131	0.0044
Uranus	-79424-01-20 08:23 J	-27288173.35	-27288173.15	-27288172.92	0.0131	0.0068
Uranus	-79423-01-24 10:47 J	-27287804.22	-27287804.05	-27287803.86	0.0131	0.0092
Saturn	-79423-05-16 00:56 J	-27287692.49	-27287692.46	-27287692.40	0.0265	0.0260
Uranus	-79422-01-28 12:56 J	-27287435.06	-27287434.96	-27287434.82	0.0132	0.0116
Saturn	-79422-05-27 08:23 J	-27287316.32	-27287316.15	-27287315.97	0.0264	0.0184
Saturn	-79421-06-06 17:01 J	-27286940.01	-27286939.79	-27286939.56	0.0264	0.0102
Saturn	-79420-06-18 05:16 J	-27286563.52	-27286563.28	-27286563.03	0.0265	0.0015
Saturn	-79419-06-29 22:18 J	-27286186.80	-27286186.57	-27286186.33	0.0266	0.0076
Saturn	-79418-07-11 21:49 J	-27285809.78	-27285809.59	-27285809.40	0.0267	0.0167
Jupiter	-79418-09-18 17:59 J	-27285740.98	-27285740.75	-27285740.52	0.0492	0.0130
Saturn	-79417-07-23 04:32 J	-27285432.37	-27285432.31	-27285432.22	0.0270	0.0256
Saturn	-79408-11-25 20:23 J	-27282019.76	-27282019.65	-27282019.53	0.0296	0.0259
Saturn	-79407-12-10 23:44 J	-27281639.72	-27281639.51	-27281639.28	0.0296	0.0138
Jupiter	-79406-09-23 08:23 J	-27281353.39	-27281353.15	-27281352.92	0.0492	0.0083
Saturn	-79406-12-25 22:32 J	-27281259.81	-27281259.56	-27281259.32	0.0296	0.0008
Saturn	-79404-01-08 13:11 J	-27280880.17	-27280879.95	-27280879.72	0.0294	0.0117
Saturn	-79403-01-22 17:44 J	-27280500.89	-27280500.76	-27280500.60	0.0292	0.0230
Jupiter	-79400-03-16 05:16 J	-27279352.43	-27279352.28	-27279352.12	0.0536	0.0388
Jupiter	-79394-09-27 21:35 J	-27276965.78	-27276965.60	-27276965.40	0.0494	0.0297
Saturn	-79393-05-21 13:40 J	-27276729.05	-27276728.93	-27276728.78	0.0265	0.0219
Mars	-79393-06-10 01:40 J	-27276709.62	-27276709.43	-27276709.25	0.1607	0.0197
Saturn	-79392-06-01 21:20 J	-27276352.80	-27276352.61	-27276352.39	0.0264	0.0139
Saturn	-79391-06-13 07:54 J	-27275976.41	-27275976.17	-27275975.93	0.0265	0.0052
Saturn	-79390-06-24 22:18 J	-27275599.82	-27275599.57	-27275599.33	0.0265	0.0038
Uranus	-79389-06-17 05:59 J	-27275241.38	-27275241.25	-27275241.07	0.0148	0.0118
Saturn	-79389-07-05 17:59 J	-27275222.96	-27275222.75	-27275222.53	0.0267	0.0129
Jupiter	-79388-03-21 03:49 J	-27274964.56	-27274964.34	-27274964.12	0.0535	0.0124
Uranus	-79388-06-22 11:01 J	-27274871.25	-27274871.04	-27274870.83	0.0148	0.0083

Saturn -79388-07-17 21:06 J -27274845.74 -27274845.62 -27274845.46 0.0269 0.0219
 Uranus -79387-06-27 16:18 J -27274501.05 -27274500.82 -27274500.57 0.0148 0.0049
 Uranus -79386-07-02 22:18 J -27274130.82 -27274130.57 -27274130.31 0.0148 0.0013
 Uranus -79385-07-07 05:01 J -27273760.53 -27273760.29 -27273760.03 0.0148 0.0023
 Uranus -79384-07-12 11:59 J -27273390.22 -27273390.00 -27273389.75 0.0148 0.0059
 Uranus -79383-07-17 19:40 J -27273019.87 -27273019.68 -27273019.48 0.0147 0.0094
 Pluto -79383-08-05 16:04 J -27273001.00 -27273000.83 -27273000.63 0.0066 0.0046
 Uranus -79382-07-23 03:06 J -27272649.48 -27272649.37 -27272649.24 0.0147 0.0129
 Pluto -79382-08-07 06:56 J -27272634.37 -27272634.21 -27272634.03 0.0066 0.0050
 Saturn -79378-12-04 14:08 J -27271054.09 -27271053.91 -27271053.71 0.0296 0.0193
 Saturn -79377-12-18 16:32 J -27270674.05 -27270673.81 -27270673.57 0.0296 0.0064
 Jupiter -79376-03-25 19:25 J -27270576.91 -27270576.69 -27270576.47 0.0534 0.0125
 Saturn -79375-01-02 11:59 J -27270294.23 -27270294.00 -27270293.76 0.0295 0.0066
 Neptune -79375-04-03 11:16 J -27270203.04 -27270203.03 -27270202.97 0.0089 0.0088
 Saturn -79374-01-16 22:32 J -27269914.74 -27269914.56 -27269914.37 0.0294 0.0187
 Neptune -79374-04-05 20:37 J -27269835.79 -27269835.64 -27269835.48 0.0089 0.0069
 Saturn -79373-01-30 22:32 J -27269535.56 -27269535.56 -27269535.54 0.0291 0.0291
 Neptune -79373-04-07 05:01 J -27269468.47 -27269468.29 -27269468.06 0.0089 0.0051
 Neptune -79372-04-09 14:08 J -27269101.13 -27269100.91 -27269100.67 0.0089 0.0032
 Neptune -79371-04-11 23:01 J -27268733.78 -27268733.54 -27268733.29 0.0089 0.0014
 Neptune -79370-04-14 07:54 J -27268366.42 -27268366.17 -27268365.91 0.0089 0.0006
 Neptune -79369-04-15 16:47 J -27267999.03 -27267998.80 -27267998.55 0.0089 0.0024
 Neptune -79368-04-18 01:25 J -27267631.64 -27267631.44 -27267631.21 0.0089 0.0043
 Neptune -79367-04-20 10:32 J -27267264.23 -27267264.06 -27267263.86 0.0089 0.0061
 Neptune -79366-04-22 19:25 J -27266896.78 -27266896.69 -27266896.56 0.0089 0.0080
 Jupiter -79364-03-30 14:37 J -27266189.04 -27266188.89 -27266188.73 0.0533 0.0381
 Saturn -79364-05-17 04:18 J -27266141.40 -27266141.32 -27266141.24 0.0265 0.0250
 Saturn -79363-05-28 11:01 J -27265765.21 -27265765.04 -27265764.85 0.0264 0.0173
 Saturn -79362-06-08 19:40 J -27265388.91 -27265388.68 -27265388.45 0.0264 0.0090
 Saturn -79361-06-19 07:54 J -27265012.42 -27265012.17 -27265011.93 0.0264 0.0004

Saturn	-79360-07-01 00:56 J	-27264635.70	-27264635.46	-27264635.23	0.0266	0.0089
Saturn	-79359-07-13 00:13 J	-27264258.67	-27264258.49	-27264258.31	0.0267	0.0180
Saturn	-79358-07-25 07:11 J	-27263881.21	-27263881.20	-27263881.16	0.0270	0.0268
Mars	-79353-12-20 11:44 J	-27261906.08	-27261906.01	-27261905.94	0.1944	0.1818
Saturn	-79349-11-27 04:04 J	-27260468.46	-27260468.33	-27260468.18	0.0296	0.0245
Uranus	-79349-12-20 16:47 J	-27260444.86	-27260444.80	-27260444.69	0.0131	0.0123
Saturn	-79348-12-12 07:40 J	-27260088.39	-27260088.18	-27260087.94	0.0296	0.0122
Uranus	-79348-12-24 21:35 J	-27260075.75	-27260075.60	-27260075.41	0.0131	0.0100
Jupiter	-79347-09-13 10:18 J	-27259813.23	-27259813.07	-27259812.90	0.0491	0.0356
Saturn	-79347-12-27 06:28 J	-27259708.48	-27259708.23	-27259707.99	0.0296	0.0009
Uranus	-79347-12-29 02:08 J	-27259706.60	-27259706.41	-27259706.18	0.0131	0.0075
Uranus	-79345-01-02 06:42 J	-27259337.46	-27259337.22	-27259336.99	0.0131	0.0050
Saturn	-79345-01-10 20:52 J	-27259328.84	-27259328.63	-27259328.41	0.0294	0.0134
Uranus	-79344-01-05 10:04 J	-27258968.32	-27258968.08	-27258967.82	0.0131	0.0026
Saturn	-79344-01-24 01:40 J	-27258949.56	-27258949.43	-27258949.30	0.0292	0.0245
Uranus	-79343-01-09 13:25 J	-27258599.19	-27258598.94	-27258598.68	0.0131	0.0002
Uranus	-79342-01-13 16:18 J	-27258230.06	-27258229.82	-27258229.56	0.0131	0.0024
Uranus	-79341-01-17 19:11 J	-27257860.93	-27257860.70	-27257860.46	0.0131	0.0048
Uranus	-79340-01-20 21:35 J	-27257491.80	-27257491.60	-27257491.38	0.0131	0.0073
Uranus	-79339-01-24 23:44 J	-27257122.67	-27257122.51	-27257122.33	0.0131	0.0097
Uranus	-79338-01-29 01:54 J	-27256753.51	-27256753.42	-27256753.30	0.0132	0.0120
Jupiter	-79335-09-17 23:01 J	-27255425.76	-27255425.54	-27255425.31	0.0492	0.0147
Saturn	-79334-05-23 15:35 J	-27255177.99	-27255177.85	-27255177.69	0.0264	0.0208
Saturn	-79333-06-02 23:01 J	-27254801.75	-27254801.54	-27254801.33	0.0264	0.0127
Saturn	-79332-06-14 08:52 J	-27254425.37	-27254425.13	-27254424.89	0.0264	0.0040
Saturn	-79331-06-25 23:01 J	-27254048.78	-27254048.54	-27254048.30	0.0265	0.0050
Saturn	-79330-07-07 18:42 J	-27253671.92	-27253671.72	-27253671.50	0.0267	0.0142
Saturn	-79329-07-18 22:04 J	-27253294.70	-27253294.58	-27253294.45	0.0269	0.0231
Jupiter	-79323-09-22 15:20 J	-27251038.10	-27251037.86	-27251037.62	0.0492	0.0070
Saturn	-79319-12-05 19:11 J	-27249502.89	-27249502.70	-27249502.50	0.0297	0.0179

Saturn -79318-12-20 21:49 J -27249122.83 -27249122.59 -27249122.35 0.0297 0.0049
 Jupiter -79317-03-15 06:28 J -27249037.36 -27249037.23 -27249037.08 0.0536 0.0421
 Saturn -79316-01-03 17:16 J -27248743.01 -27248742.78 -27248742.54 0.0296 0.0082
 Saturn -79315-01-18 03:35 J -27248363.51 -27248363.35 -27248363.16 0.0294 0.0202
 Mars -79314-06-13 01:54 J -27247852.60 -27247852.42 -27247852.24 0.1604 0.0453
 Jupiter -79311-09-27 08:08 J -27246650.35 -27246650.16 -27246649.96 0.0493 0.0288
 Jupiter -79305-03-20 03:06 J -27244649.58 -27244649.37 -27244649.15 0.0535 0.0162
 Saturn -79305-05-18 04:47 J -27244590.38 -27244590.30 -27244590.19 0.0265 0.0242
 Uranus -79305-06-17 16:04 J -27244559.97 -27244559.83 -27244559.66 0.0148 0.0116
 Saturn -79304-05-29 11:30 J -27244214.20 -27244214.02 -27244213.83 0.0264 0.0163
 Uranus -79304-06-22 20:37 J -27244189.84 -27244189.64 -27244189.42 0.0148 0.0082
 Saturn -79303-06-09 19:54 J -27243837.89 -27243837.67 -27243837.43 0.0264 0.0079
 Uranus -79303-06-28 02:23 J -27243819.64 -27243819.40 -27243819.16 0.0148 0.0046
 Saturn -79302-06-21 07:54 J -27243461.41 -27243461.17 -27243460.92 0.0264 0.0011
 Uranus -79302-07-03 08:23 J -27243449.40 -27243449.15 -27243448.90 0.0148 0.0010
 Saturn -79301-07-02 00:42 J -27243084.69 -27243084.47 -27243084.24 0.0265 0.0101
 Uranus -79301-07-07 14:52 J -27243079.12 -27243078.88 -27243078.62 0.0148 0.0026
 Uranus -79300-07-12 21:49 J -27242708.81 -27242708.59 -27242708.35 0.0148 0.0062
 Saturn -79300-07-13 23:59 J -27242707.66 -27242707.50 -27242707.32 0.0267 0.0192
 Uranus -79299-07-18 05:30 J -27242338.46 -27242338.27 -27242338.08 0.0148 0.0098
 Uranus -79298-07-23 12:28 J -27241968.07 -27241967.98 -27241967.85 0.0147 0.0133
 Pluto -79295-02-11 01:40 J -27241034.63 -27241034.43 -27241034.19 0.0078 0.0039
 Jupiter -79293-03-25 00:28 J -27240261.70 -27240261.48 -27240261.25 0.0535 0.0103
 Neptune -79293-10-04 10:47 J -27240068.14 -27240068.05 -27240067.93 0.0088 0.0081
 Neptune -79292-10-07 00:56 J -27239700.63 -27239700.46 -27239700.25 0.0088 0.0062
 Neptune -79291-10-09 15:35 J -27239333.06 -27239332.85 -27239332.60 0.0088 0.0042
 Neptune -79290-10-12 06:28 J -27238965.48 -27238965.23 -27238964.97 0.0088 0.0023
 Saturn -79290-11-29 07:40 J -27238917.32 -27238917.18 -27238917.01 0.0296 0.0234
 Neptune -79289-10-13 21:06 J -27238597.89 -27238597.62 -27238597.35 0.0088 0.0003
 Saturn -79289-12-13 11:44 J -27238537.24 -27238537.01 -27238536.77 0.0297 0.0107

Neptune -79288-10-16 11:30 J -27238230.27 -27238230.02 -27238229.75 0.0088 0.0016
 Saturn -79288-12-28 10:18 J -27238157.31 -27238157.07 -27238156.82 0.0296 0.0024
 Neptune -79287-10-19 01:54 J -27237862.66 -27237862.42 -27237862.17 0.0088 0.0036
 Saturn -79286-01-12 00:28 J -27237777.68 -27237777.48 -27237777.26 0.0294 0.0149
 Neptune -79286-10-21 16:04 J -27237495.01 -27237494.83 -27237494.60 0.0088 0.0055
 Saturn -79285-01-26 05:16 J -27237398.38 -27237398.28 -27237398.17 0.0292 0.0259
 Neptune -79285-10-23 06:28 J -27237127.35 -27237127.23 -27237127.06 0.0088 0.0074
 Jupiter -79281-03-30 00:13 J -27235873.65 -27235873.49 -27235873.33 0.0534 0.0368
 Saturn -79275-05-24 15:20 J -27233627.00 -27233626.86 -27233626.69 0.0264 0.0200
 Saturn -79274-06-04 22:32 J -27233250.78 -27233250.56 -27233250.34 0.0264 0.0116
 Saturn -79273-06-15 08:08 J -27232874.40 -27232874.16 -27232873.91 0.0264 0.0029
 Saturn -79272-06-26 22:04 J -27232497.81 -27232497.58 -27232497.33 0.0265 0.0062
 Saturn -79271-07-08 17:44 J -27232120.95 -27232120.76 -27232120.55 0.0266 0.0153
 Saturn -79270-07-20 20:37 J -27231743.73 -27231743.64 -27231743.52 0.0269 0.0243
 Mars -79267-06-07 09:20 J -27230691.24 -27230691.11 -27230690.97 0.1616 0.1101
 Uranus -79265-12-21 06:13 J -27229763.32 -27229763.24 -27229763.13 0.0131 0.0122
 Jupiter -79264-09-12 19:25 J -27229497.85 -27229497.69 -27229497.53 0.0491 0.0366
 Uranus -79264-12-25 11:01 J -27229394.19 -27229394.04 -27229393.85 0.0131 0.0097
 Uranus -79263-12-29 15:49 J -27229025.04 -27229024.84 -27229024.62 0.0131 0.0072
 Uranus -79261-01-02 20:08 J -27228655.90 -27228655.66 -27228655.42 0.0131 0.0047
 Saturn -79261-11-21 13:25 J -27228331.98 -27228331.94 -27228331.88 0.0296 0.0289
 Uranus -79260-01-05 23:44 J -27228286.75 -27228286.51 -27228286.25 0.0131 0.0023
 Saturn -79260-12-06 19:40 J -27227951.88 -27227951.68 -27227951.47 0.0297 0.0168
 Uranus -79259-01-10 03:06 J -27227917.62 -27227917.37 -27227917.12 0.0131 0.0003
 Saturn -79259-12-21 22:18 J -27227571.81 -27227571.57 -27227571.32 0.0297 0.0037
 Uranus -79258-01-14 06:13 J -27227548.49 -27227548.24 -27227547.99 0.0131 0.0027
 Saturn -79257-01-05 17:59 J -27227191.97 -27227191.75 -27227191.51 0.0296 0.0095
 Uranus -79257-01-18 08:37 J -27227179.36 -27227179.14 -27227178.90 0.0131 0.0052
 Saturn -79256-01-19 04:32 J -27226812.47 -27226812.31 -27226812.14 0.0294 0.0214
 Uranus -79256-01-21 10:47 J -27226810.23 -27226810.05 -27226809.83 0.0131 0.0077

Uranus -79255-01-25 13:11 J -27226441.10 -27226440.95 -27226440.78 0.0131 0.0101
 Uranus -79254-01-29 15:20 J -27226071.93 -27226071.86 -27226071.77 0.0132 0.0125
 Jupiter -79252-09-17 11:01 J -27225110.27 -27225110.04 -27225109.81 0.0492 0.0150
 Saturn -79246-05-20 03:35 J -27223039.45 -27223039.35 -27223039.23 0.0264 0.0233
 Saturn -79245-05-30 10:04 J -27222663.27 -27222663.08 -27222662.88 0.0264 0.0154
 Saturn -79244-06-10 18:28 J -27222286.96 -27222286.73 -27222286.49 0.0264 0.0068
 Saturn -79243-06-22 06:13 J -27221910.48 -27221910.24 -27221909.99 0.0264 0.0021
 Saturn -79242-07-03 22:47 J -27221533.77 -27221533.55 -27221533.33 0.0265 0.0112
 Saturn -79241-07-14 22:04 J -27221156.73 -27221156.58 -27221156.41 0.0267 0.0203
 Jupiter -79240-09-22 01:40 J -27220722.67 -27220722.43 -27220722.19 0.0492 0.0064
 Mars -79235-06-15 01:54 J -27218995.55 -27218995.42 -27218995.28 0.1601 0.1096
 Jupiter -79234-03-15 12:13 J -27218722.11 -27218721.99 -27218721.86 0.0536 0.0442
 Saturn -79231-11-30 08:37 J -27217366.30 -27217366.14 -27217365.98 0.0297 0.0222
 Saturn -79230-12-15 12:42 J -27216986.20 -27216985.97 -27216985.73 0.0297 0.0094
 Saturn -79229-12-29 11:30 J -27216606.26 -27216606.02 -27216605.78 0.0296 0.0038
 Jupiter -79228-09-26 16:32 J -27216335.01 -27216334.81 -27216334.61 0.0493 0.0278
 Saturn -79227-01-13 01:54 J -27216226.62 -27216226.42 -27216226.22 0.0294 0.0163
 Saturn -79226-01-27 06:13 J -27215847.31 -27215847.24 -27215847.14 0.0292 0.0272
 Jupiter -79222-03-20 12:42 J -27214334.18 -27214333.97 -27214333.75 0.0536 0.0175
 Uranus -79221-06-18 02:23 J -27213878.54 -27213878.40 -27213878.23 0.0148 0.0115
 Uranus -79220-06-23 06:56 J -27213508.40 -27213508.21 -27213507.98 0.0148 0.0080
 Uranus -79219-06-28 12:42 J -27213138.20 -27213137.97 -27213137.72 0.0148 0.0044
 Uranus -79218-07-03 18:42 J -27212767.97 -27212767.72 -27212767.46 0.0148 0.0008
 Uranus -79217-07-08 01:25 J -27212397.68 -27212397.44 -27212397.18 0.0148 0.0030
 Saturn -79216-05-25 13:54 J -27212076.08 -27212075.92 -27212075.75 0.0264 0.0190
 Uranus -79216-07-13 08:37 J -27212027.37 -27212027.14 -27212026.91 0.0148 0.0066
 Jupiter -79216-10-01 07:11 J -27211947.21 -27211947.20 -27211947.16 0.0494 0.0491
 Saturn -79215-06-05 20:37 J -27211699.86 -27211699.64 -27211699.42 0.0264 0.0107
 Uranus -79215-07-18 15:35 J -27211657.02 -27211656.85 -27211656.65 0.0148 0.0103
 Saturn -79214-06-17 06:13 J -27211323.49 -27211323.24 -27211323.00 0.0264 0.0019

Uranus -79214-07-23 23:30 J -27211286.61 -27211286.52 -27211286.43 0.0147 0.0138
 Saturn -79213-06-27 19:40 J -27210946.91 -27210946.68 -27210946.44 0.0265 0.0073
 Saturn -79212-07-09 15:06 J -27210570.05 -27210569.87 -27210569.66 0.0266 0.0165
 Saturn -79211-07-21 17:59 J -27210192.82 -27210192.75 -27210192.66 0.0268 0.0253
 Jupiter -79210-03-25 12:28 J -27209946.21 -27209945.98 -27209945.76 0.0535 0.0092
 Neptune -79210-04-05 04:32 J -27209935.41 -27209935.31 -27209935.17 0.0089 0.0078
 Neptune -79209-04-06 13:25 J -27209568.10 -27209567.94 -27209567.73 0.0089 0.0060
 Neptune -79208-04-08 22:32 J -27209200.77 -27209200.56 -27209200.32 0.0089 0.0041
 Neptune -79207-04-11 07:25 J -27208833.42 -27208833.19 -27208832.93 0.0089 0.0023
 Neptune -79206-04-13 16:47 J -27208466.05 -27208465.80 -27208465.55 0.0089 0.0004
 Neptune -79205-04-15 01:11 J -27208098.69 -27208098.45 -27208098.19 0.0089 0.0015
 Neptune -79204-04-17 10:04 J -27207731.30 -27207731.08 -27207730.84 0.0089 0.0033
 Neptune -79203-04-19 19:11 J -27207363.90 -27207363.70 -27207363.49 0.0089 0.0051
 Neptune -79202-04-22 03:49 J -27206996.48 -27206996.34 -27206996.17 0.0089 0.0070
 Saturn -79202-11-23 11:44 J -27206781.08 -27206781.01 -27206780.92 0.0296 0.0280
 Neptune -79201-04-23 12:56 J -27206628.98 -27206628.96 -27206628.92 0.0089 0.0088
 Saturn -79201-12-07 18:13 J -27206400.95 -27206400.74 -27206400.53 0.0297 0.0157
 Saturn -79200-12-22 20:37 J -27206020.88 -27206020.64 -27206020.39 0.0297 0.0025
 Saturn -79198-01-06 16:18 J -27205641.04 -27205640.82 -27205640.59 0.0296 0.0106
 Jupiter -79198-03-30 05:16 J -27205558.46 -27205558.28 -27205558.11 0.0533 0.0343
 Saturn -79197-01-21 02:37 J -27205261.53 -27205261.39 -27205261.22 0.0294 0.0226
 Mars -79188-06-09 10:04 J -27201834.26 -27201834.08 -27201833.90 0.1613 0.0436
 Saturn -79187-05-21 01:11 J -27201488.57 -27201488.45 -27201488.32 0.0264 0.0225
 Saturn -79186-06-01 07:25 J -27201112.38 -27201112.19 -27201111.98 0.0264 0.0145
 Saturn -79185-06-11 15:49 J -27200736.07 -27200735.84 -27200735.60 0.0263 0.0059
 Saturn -79184-06-23 03:35 J -27200359.59 -27200359.35 -27200359.11 0.0264 0.0031
 Saturn -79183-07-04 20:08 J -27199982.88 -27199982.66 -27199982.44 0.0265 0.0122
 Saturn -79182-07-16 19:25 J -27199605.84 -27199605.69 -27199605.54 0.0267 0.0212
 Jupiter -79181-09-12 06:28 J -27199182.38 -27199182.23 -27199182.07 0.0491 0.0367
 Uranus -79181-12-21 20:08 J -27199081.75 -27199081.66 -27199081.54 0.0131 0.0120

Uranus	-79180-12-26 01:25 J	-27198712.61	-27198712.44	-27198712.26	0.0131	0.0095
Uranus	-79179-12-30 05:59 J	-27198343.45	-27198343.25	-27198343.02	0.0131	0.0070
Uranus	-79177-01-03 10:18 J	-27197974.30	-27197974.07	-27197973.82	0.0131	0.0044
Uranus	-79176-01-06 14:08 J	-27197605.16	-27197604.91	-27197604.66	0.0131	0.0019
Uranus	-79175-01-10 17:30 J	-27197236.02	-27197235.77	-27197235.51	0.0131	0.0006
Uranus	-79174-01-14 20:23 J	-27196866.88	-27196866.65	-27196866.39	0.0131	0.0032
Uranus	-79173-01-18 23:01 J	-27196497.76	-27196497.54	-27196497.30	0.0131	0.0057
Uranus	-79172-01-22 01:25 J	-27196128.62	-27196128.44	-27196128.23	0.0131	0.0082
Saturn	-79172-12-01 06:13 J	-27195815.40	-27195815.24	-27195815.05	0.0297	0.0212
Uranus	-79171-01-26 03:20 J	-27195759.49	-27195759.36	-27195759.19	0.0131	0.0107
Saturn	-79171-12-16 10:47 J	-27195435.28	-27195435.05	-27195434.81	0.0297	0.0082
Uranus	-79170-01-30 05:59 J	-27195390.28	-27195390.25	-27195390.21	0.0132	0.0130
Saturn	-79170-12-31 09:35 J	-27195055.34	-27195055.10	-27195054.85	0.0296	0.0051
Jupiter	-79169-09-16 21:06 J	-27194794.85	-27194794.62	-27194794.39	0.0491	0.0156
Saturn	-79168-01-13 23:59 J	-27194675.69	-27194675.50	-27194675.30	0.0295	0.0175
Saturn	-79167-01-28 04:32 J	-27194296.36	-27194296.31	-27194296.24	0.0292	0.0283
Saturn	-79158-05-16 05:59 J	-27190901.28	-27190901.25	-27190901.20	0.0265	0.0260
Saturn	-79157-05-26 11:16 J	-27190525.19	-27190525.03	-27190524.84	0.0264	0.0182
Jupiter	-79157-09-21 10:47 J	-27190407.29	-27190407.05	-27190406.81	0.0492	0.0055
Saturn	-79156-06-06 17:59 J	-27190148.97	-27190148.75	-27190148.51	0.0263	0.0098
Saturn	-79155-06-18 03:35 J	-27189772.60	-27189772.35	-27189772.11	0.0264	0.0008
Saturn	-79154-06-29 17:01 J	-27189396.02	-27189395.79	-27189395.56	0.0265	0.0083
Saturn	-79153-07-10 12:13 J	-27189019.17	-27189018.99	-27189018.80	0.0266	0.0174
Saturn	-79152-07-22 14:52 J	-27188641.92	-27188641.88	-27188641.82	0.0268	0.0262
Jupiter	-79151-03-15 00:28 J	-27188406.60	-27188406.48	-27188406.36	0.0536	0.0450
Mars	-79148-12-15 02:37 J	-27187035.57	-27187035.39	-27187035.21	0.1930	0.0978
Jupiter	-79145-09-26 03:35 J	-27186019.55	-27186019.35	-27186019.14	0.0493	0.0271
Saturn	-79143-11-24 08:37 J	-27185230.23	-27185230.14	-27185230.04	0.0296	0.0271
Saturn	-79142-12-09 14:52 J	-27184850.09	-27184849.88	-27184849.66	0.0297	0.0147
Saturn	-79141-12-23 17:30 J	-27184470.02	-27184469.77	-27184469.52	0.0297	0.0014

Saturn -79139-01-07 13:11 J -27184090.17 -27184089.95 -27184089.72 0.0296 0.0117
 Jupiter -79139-03-19 19:54 J -27184018.88 -27184018.67 -27184018.46 0.0535 0.0193
 Saturn -79138-01-21 23:44 J -27183710.64 -27183710.51 -27183710.36 0.0294 0.0236
 Uranus -79138-06-14 14:23 J -27183566.92 -27183566.90 -27183566.85 0.0148 0.0146
 Uranus -79137-06-18 17:59 J -27183196.90 -27183196.75 -27183196.57 0.0148 0.0112
 Uranus -79136-06-23 22:47 J -27182826.76 -27182826.55 -27182826.32 0.0148 0.0076
 Pluto -79136-08-06 23:01 J -27182782.74 -27182782.54 -27182782.31 0.0066 0.0039
 Uranus -79135-06-29 04:04 J -27182456.57 -27182456.33 -27182456.08 0.0148 0.0040
 Pluto -79135-08-08 13:40 J -27182416.05 -27182415.93 -27182415.79 0.0066 0.0058
 Uranus -79134-07-04 10:18 J -27182086.33 -27182086.07 -27182085.82 0.0148 0.0003
 Uranus -79133-07-08 16:47 J -27181716.05 -27181715.80 -27181715.55 0.0148 0.0034
 Jupiter -79133-09-30 20:37 J -27181631.67 -27181631.64 -27181631.61 0.0494 0.0490
 Uranus -79132-07-13 23:16 J -27181345.74 -27181345.53 -27181345.29 0.0148 0.0072
 Uranus -79131-07-19 06:56 J -27180975.38 -27180975.21 -27180975.04 0.0148 0.0108
 Uranus -79130-07-24 14:08 J -27180604.96 -27180604.91 -27180604.85 0.0147 0.0144
 Saturn -79128-05-21 22:18 J -27179937.69 -27179937.57 -27179937.42 0.0264 0.0217
 Neptune -79128-10-06 02:23 J -27179800.54 -27179800.40 -27179800.22 0.0088 0.0071
 Jupiter -79127-03-24 16:04 J -27179631.05 -27179630.83 -27179630.60 0.0534 0.0066
 Saturn -79127-06-02 04:32 J -27179561.51 -27179561.31 -27179561.09 0.0264 0.0136
 Neptune -79127-10-08 17:01 J -27179432.99 -27179432.79 -27179432.56 0.0088 0.0052
 Saturn -79126-06-13 12:56 J -27179185.20 -27179184.96 -27179184.72 0.0263 0.0049
 Neptune -79126-10-11 07:25 J -27179065.42 -27179065.19 -27179064.93 0.0088 0.0033
 Saturn -79125-06-24 00:42 J -27178808.71 -27178808.47 -27178808.23 0.0264 0.0041
 Neptune -79125-10-12 22:04 J -27178697.83 -27178697.58 -27178697.31 0.0088 0.0014
 Saturn -79124-07-05 17:01 J -27178431.99 -27178431.79 -27178431.56 0.0265 0.0134
 Neptune -79124-10-15 12:28 J -27178330.24 -27178329.98 -27178329.71 0.0088 0.0006
 Saturn -79123-07-17 16:18 J -27178054.94 -27178054.82 -27178054.67 0.0267 0.0222
 Neptune -79123-10-18 02:52 J -27177962.62 -27177962.38 -27177962.11 0.0088 0.0025
 Neptune -79122-10-20 17:16 J -27177595.00 -27177594.78 -27177594.54 0.0088 0.0045
 Neptune -79121-10-22 07:40 J -27177227.35 -27177227.18 -27177226.98 0.0088 0.0064

Neptune -79120-10-24 21:49 J -27176859.66 -27176859.59 -27176859.48 0.0088 0.0083
 Jupiter -79115-03-29 12:28 J -27175243.16 -27175242.98 -27175242.80 0.0534 0.0325
 Saturn -79113-12-02 04:32 J -27174264.49 -27174264.31 -27174264.13 0.0297 0.0201
 Saturn -79112-12-17 08:52 J -27173884.37 -27173884.13 -27173883.89 0.0297 0.0071
 Saturn -79110-01-01 07:40 J -27173504.42 -27173504.18 -27173503.94 0.0296 0.0062
 Saturn -79109-01-15 22:04 J -27173124.76 -27173124.58 -27173124.39 0.0295 0.0186
 Mars -79109-06-11 10:47 J -27172977.24 -27172977.05 -27172976.87 0.1610 0.0228
 Saturn -79099-05-17 03:49 J -27169350.41 -27169350.34 -27169350.26 0.0265 0.0252
 Saturn -79098-05-28 09:06 J -27168974.29 -27168974.12 -27168973.93 0.0264 0.0173
 Jupiter -79098-09-12 16:18 J -27168866.97 -27168866.82 -27168866.67 0.0491 0.0374
 Saturn -79097-06-07 16:04 J -27168598.06 -27168597.83 -27168597.60 0.0263 0.0088
 Uranus -79097-12-22 10:32 J -27168400.15 -27168400.06 -27168399.92 0.0131 0.0118
 Saturn -79096-06-19 01:25 J -27168221.69 -27168221.44 -27168221.20 0.0264 0.0002
 Uranus -79096-12-26 15:49 J -27168031.00 -27168030.84 -27168030.63 0.0131 0.0092
 Saturn -79095-06-30 14:37 J -27167845.11 -27167844.89 -27167844.65 0.0265 0.0094
 Uranus -79095-12-30 21:06 J -27167661.84 -27167661.62 -27167661.40 0.0131 0.0066
 Saturn -79094-07-12 10:04 J -27167468.25 -27167468.08 -27167467.89 0.0266 0.0184
 Uranus -79093-01-04 01:11 J -27167292.68 -27167292.45 -27167292.20 0.0131 0.0041
 Uranus -79092-01-07 05:16 J -27166923.54 -27166923.28 -27166923.03 0.0131 0.0015
 Uranus -79091-01-11 08:23 J -27166554.40 -27166554.15 -27166553.89 0.0131 0.0011
 Uranus -79090-01-15 11:16 J -27166185.27 -27166185.03 -27166184.78 0.0131 0.0036
 Uranus -79089-01-19 13:40 J -27165816.14 -27165815.93 -27165815.69 0.0131 0.0062
 Uranus -79088-01-22 16:04 J -27165447.01 -27165446.83 -27165446.63 0.0131 0.0086
 Uranus -79087-01-26 18:13 J -27165077.86 -27165077.74 -27165077.60 0.0131 0.0111
 Jupiter -79086-09-17 07:54 J -27164479.40 -27164479.17 -27164478.95 0.0491 0.0162
 Saturn -79084-11-25 05:59 J -27163679.36 -27163679.25 -27163679.13 0.0296 0.0262
 Saturn -79083-12-10 12:13 J -27163299.21 -27163298.99 -27163298.77 0.0297 0.0136
 Saturn -79082-12-25 14:37 J -27162919.14 -27162918.89 -27162918.65 0.0297 0.0004
 Saturn -79080-01-08 10:04 J -27162539.30 -27162539.08 -27162538.86 0.0296 0.0128
 Saturn -79079-01-22 20:23 J -27162159.77 -27162159.65 -27162159.51 0.0294 0.0246

Jupiter -79074-09-21 22:47 J -27160091.78 -27160091.55 -27160091.31 0.0493 0.0054
 Saturn -79069-05-22 19:54 J -27158386.81 -27158386.67 -27158386.52 0.0264 0.0209
 Mars -79069-12-19 03:06 J -27158176.53 -27158176.37 -27158176.21 0.1936 0.1232
 Jupiter -79068-03-14 05:30 J -27158091.37 -27158091.27 -27158091.16 0.0536 0.0470
 Saturn -79068-06-03 02:23 J -27158010.61 -27158010.40 -27158010.19 0.0264 0.0126
 Saturn -79067-06-14 10:47 J -27157634.29 -27157634.05 -27157633.81 0.0263 0.0039
 Saturn -79066-06-25 22:32 J -27157257.80 -27157257.56 -27157257.32 0.0264 0.0052
 Saturn -79065-07-06 15:06 J -27156881.07 -27156880.87 -27156880.65 0.0265 0.0143
 Saturn -79064-07-18 14:23 J -27156504.01 -27156503.90 -27156503.77 0.0267 0.0232
 Mars -79062-06-06 17:01 J -27155815.89 -27155815.79 -27155815.69 0.1623 0.1370
 Jupiter -79062-09-26 13:54 J -27155704.12 -27155703.92 -27155703.72 0.0493 0.0268
 Jupiter -79056-03-19 01:40 J -27153703.63 -27153703.43 -27153703.22 0.0536 0.0212
 Uranus -79054-06-15 05:30 J -27152885.31 -27152885.27 -27152885.19 0.0148 0.0144
 Saturn -79054-12-04 03:20 J -27152713.55 -27152713.36 -27152713.17 0.0297 0.0190
 Uranus -79053-06-19 09:20 J -27152515.26 -27152515.11 -27152514.92 0.0148 0.0109
 Saturn -79053-12-18 07:25 J -27152333.43 -27152333.19 -27152332.94 0.0297 0.0059
 Uranus -79052-06-24 13:54 J -27152145.12 -27152144.92 -27152144.69 0.0148 0.0073
 Saturn -79051-01-02 05:59 J -27151953.48 -27151953.25 -27151953.01 0.0297 0.0075
 Uranus -79051-06-29 19:25 J -27151774.93 -27151774.69 -27151774.44 0.0148 0.0036
 Saturn -79050-01-16 20:37 J -27151573.82 -27151573.64 -27151573.46 0.0295 0.0198
 Uranus -79050-07-05 01:25 J -27151404.69 -27151404.44 -27151404.18 0.0148 0.0002
 Jupiter -79050-10-01 05:16 J -27151316.32 -27151316.28 -27151316.22 0.0494 0.0482
 Uranus -79049-07-09 07:54 J -27151034.41 -27151034.17 -27151033.92 0.0148 0.0040
 Pluto -79048-02-12 07:25 J -27150816.41 -27150816.19 -27150815.97 0.0078 0.0040
 Uranus -79048-07-14 14:37 J -27150664.10 -27150663.89 -27150663.66 0.0148 0.0077
 Uranus -79047-07-19 21:49 J -27150293.74 -27150293.59 -27150293.42 0.0148 0.0114
 Neptune -79046-04-04 11:59 J -27150035.04 -27150035.00 -27150034.92 0.0089 0.0086
 Neptune -79045-04-05 20:52 J -27149667.78 -27149667.63 -27149667.46 0.0089 0.0068
 Jupiter -79044-03-24 00:56 J -27149315.69 -27149315.46 -27149315.24 0.0535 0.0052
 Neptune -79044-04-08 05:44 J -27149300.45 -27149300.26 -27149300.04 0.0089 0.0050

Neptune -79043-04-10 14:52 J -27148933.10 -27148932.88 -27148932.63 0.0089 0.0032
 Neptune -79042-04-12 23:59 J -27148565.74 -27148565.50 -27148565.25 0.0089 0.0013
 Neptune -79041-04-14 09:06 J -27148198.37 -27148198.12 -27148197.87 0.0089 0.0005
 Neptune -79040-04-16 17:44 J -27147830.99 -27147830.76 -27147830.50 0.0089 0.0024
 Saturn -79040-05-18 02:23 J -27147799.48 -27147799.40 -27147799.29 0.0265 0.0244
 Neptune -79039-04-19 02:37 J -27147463.59 -27147463.39 -27147463.15 0.0089 0.0042
 Saturn -79039-05-29 08:08 J -27147423.34 -27147423.16 -27147422.96 0.0264 0.0164
 Neptune -79038-04-21 11:44 J -27147096.18 -27147096.01 -27147095.81 0.0089 0.0060
 Saturn -79038-06-09 15:06 J -27147047.10 -27147046.87 -27147046.64 0.0263 0.0078
 Neptune -79037-04-22 20:37 J -27146728.74 -27146728.64 -27146728.51 0.0089 0.0078
 Saturn -79037-06-20 00:28 J -27146670.72 -27146670.48 -27146670.23 0.0264 0.0012
 Saturn -79036-07-01 14:08 J -27146294.14 -27146293.91 -27146293.68 0.0264 0.0104
 Saturn -79035-07-13 09:35 J -27145917.26 -27145917.10 -27145916.93 0.0266 0.0194
 Jupiter -79032-03-28 23:59 J -27144927.68 -27144927.50 -27144927.31 0.0534 0.0316
 Mars -79030-06-14 10:47 J -27144120.21 -27144120.05 -27144119.89 0.1607 0.0880
 Saturn -79025-11-26 05:44 J -27142128.38 -27142128.26 -27142128.12 0.0296 0.0251
 Saturn -79024-12-11 11:44 J -27141748.23 -27141748.01 -27141747.78 0.0297 0.0124
 Saturn -79023-12-26 13:54 J -27141368.16 -27141367.92 -27141367.67 0.0297 0.0010
 Saturn -79021-01-10 09:06 J -27140988.33 -27140988.12 -27140987.90 0.0296 0.0140
 Saturn -79020-01-23 19:11 J -27140608.81 -27140608.70 -27140608.57 0.0294 0.0256
 Jupiter -79015-09-12 01:54 J -27138551.57 -27138551.42 -27138551.26 0.0491 0.0378
 Uranus -79013-12-23 02:23 J -27137718.50 -27137718.40 -27137718.25 0.0131 0.0115
 Uranus -79012-12-27 07:40 J -27137349.35 -27137349.18 -27137348.98 0.0131 0.0089
 Uranus -79011-12-31 12:28 J -27136980.19 -27136979.98 -27136979.74 0.0131 0.0063
 Saturn -79010-05-24 18:28 J -27136835.87 -27136835.73 -27136835.56 0.0264 0.0199
 Uranus -79009-01-04 16:47 J -27136611.03 -27136610.80 -27136610.55 0.0131 0.0037
 Saturn -79009-06-04 01:11 J -27136459.66 -27136459.45 -27136459.22 0.0264 0.0116
 Uranus -79008-01-07 20:37 J -27136241.90 -27136241.64 -27136241.39 0.0131 0.0011
 Saturn -79008-06-15 10:04 J -27136083.32 -27136083.08 -27136082.83 0.0263 0.0028
 Uranus -79007-01-11 23:44 J -27135872.76 -27135872.51 -27135872.26 0.0131 0.0015

Saturn	-79007-06-26 22:04 J	-27135706.81	-27135706.58	-27135706.34	0.0264	0.0063
Uranus	-79006-01-16 02:23 J	-27135503.63	-27135503.40	-27135503.15	0.0131	0.0041
Saturn	-79006-07-08 15:06 J	-27135330.06	-27135329.87	-27135329.66	0.0265	0.0154
Uranus	-79005-01-20 04:47 J	-27135134.51	-27135134.30	-27135134.07	0.0131	0.0066
Saturn	-79005-07-19 14:52 J	-27134952.98	-27134952.88	-27134952.77	0.0267	0.0242
Uranus	-79004-01-23 06:56 J	-27134765.37	-27134765.21	-27134765.01	0.0131	0.0092
Uranus	-79003-01-27 09:06 J	-27134396.22	-27134396.12	-27134395.99	0.0131	0.0117
Jupiter	-79003-09-16 16:18 J	-27134164.04	-27134163.82	-27134163.59	0.0492	0.0167

79TH MILLENNIUM BCE

This is a list of transits of Earth in the 79th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-78995-12-05 04:47 J	-27131162.50	-27131162.30	-27131162.10	0.0297	0.0177		
Saturn	-78994-12-20 08:52 J	-27130782.38	-27130782.13	-27130781.89	0.0297	0.0045		
Saturn	-78992-01-03 06:56 J	-27130402.44	-27130402.21	-27130401.97	0.0297	0.0088		
Saturn	-78991-01-17 21:06 J	-27130022.78	-27130022.62	-27130022.45	0.0295	0.0211		
Jupiter	-78991-09-21 07:11 J	-27129776.44	-27129776.20	-27129775.96	0.0492	0.0046		
Jupiter	-78985-03-13 11:30 J	-27127776.11	-27127776.02	-27127775.93	0.0536	0.0490		
Mars	-78983-06-08 17:30 J	-27126958.93	-27126958.77	-27126958.60	0.1619	0.0699		
Saturn	-78981-05-19 02:52 J	-27126248.48	-27126248.38	-27126248.26	0.0265	0.0235		
Saturn	-78980-05-30 09:06 J	-27125872.32	-27125872.12	-27125871.92	0.0264	0.0153		
Saturn	-78979-06-10 16:04 J	-27125496.07	-27125495.83	-27125495.59	0.0263	0.0067		
Jupiter	-78979-09-25 21:06 J	-27125388.82	-27125388.62	-27125388.41	0.0493	0.0256		

Saturn -78978-06-22 01:40 J -27125119.67 -27125119.43 -27125119.18 0.0264 0.0024
 Saturn -78977-07-02 15:35 J -27124743.06 -27124742.85 -27124742.62 0.0265 0.0116
 Saturn -78976-07-14 11:44 J -27124366.17 -27124366.01 -27124365.86 0.0266 0.0205
 Jupiter -78973-03-18 11:44 J -27123388.21 -27123388.01 -27123387.80 0.0536 0.0224
 Uranus -78970-06-15 22:04 J -27122203.63 -27122203.58 -27122203.48 0.0148 0.0141
 Uranus -78969-06-20 02:08 J -27121833.57 -27121833.41 -27121833.22 0.0148 0.0105
 Uranus -78968-06-25 06:56 J -27121463.43 -27121463.21 -27121462.98 0.0148 0.0068
 Uranus -78967-06-30 12:13 J -27121093.23 -27121092.99 -27121092.74 0.0148 0.0031
 Jupiter -78967-09-30 13:40 J -27121000.99 -27121000.93 -27121000.85 0.0494 0.0471
 Uranus -78966-07-05 18:13 J -27120722.99 -27120722.74 -27120722.48 0.0148 0.0008
 Saturn -78966-11-28 08:52 J -27120577.27 -27120577.13 -27120576.98 0.0296 0.0239
 Uranus -78965-07-10 00:56 J -27120352.70 -27120352.46 -27120352.22 0.0148 0.0045
 Saturn -78965-12-12 14:23 J -27120197.12 -27120196.90 -27120196.66 0.0297 0.0111
 Uranus -78964-07-15 07:40 J -27119982.39 -27119982.18 -27119981.97 0.0148 0.0083
 Neptune -78964-10-05 03:35 J -27119900.45 -27119900.35 -27119900.22 0.0088 0.0080
 Saturn -78964-12-27 16:04 J -27119817.08 -27119816.83 -27119816.59 0.0297 0.0024
 Uranus -78963-07-20 14:23 J -27119612.02 -27119611.90 -27119611.73 0.0148 0.0121
 Neptune -78963-10-07 17:44 J -27119532.92 -27119532.76 -27119532.54 0.0088 0.0062
 Saturn -78962-01-11 10:47 J -27119437.26 -27119437.05 -27119436.84 0.0296 0.0153
 Neptune -78962-10-10 08:37 J -27119165.35 -27119165.14 -27119164.89 0.0088 0.0042
 Saturn -78961-01-25 20:08 J -27119057.74 -27119057.66 -27119057.55 0.0294 0.0268
 Jupiter -78961-03-23 08:23 J -27119000.38 -27119000.15 -27118999.93 0.0534 0.0037
 Neptune -78961-10-11 23:01 J -27118797.78 -27118797.54 -27118797.27 0.0088 0.0023
 Neptune -78960-10-14 13:40 J -27118430.19 -27118429.93 -27118429.66 0.0088 0.0004
 Neptune -78959-10-17 03:49 J -27118062.59 -27118062.34 -27118062.07 0.0088 0.0015
 Neptune -78958-10-19 17:59 J -27117694.97 -27117694.75 -27117694.48 0.0088 0.0035
 Neptune -78957-10-21 08:08 J -27117327.34 -27117327.16 -27117326.92 0.0088 0.0054
 Neptune -78956-10-23 23:01 J -27116959.69 -27116959.54 -27116959.38 0.0088 0.0072
 Saturn -78951-05-25 19:25 J -27115284.84 -27115284.69 -27115284.51 0.0264 0.0189
 Mars -78951-06-16 11:01 J -27115263.09 -27115263.04 -27115262.98 0.1604 0.1533

Saturn -78950-06-06 02:37 J -27114908.61 -27114908.39 -27114908.16 0.0264 0.0104
 Jupiter -78949-03-28 03:49 J -27114612.53 -27114612.34 -27114612.15 0.0533 0.0291
 Saturn -78949-06-16 11:44 J -27114532.25 -27114532.01 -27114531.77 0.0264 0.0016
 Saturn -78948-06-27 23:59 J -27114155.73 -27114155.50 -27114155.26 0.0264 0.0075
 Saturn -78947-07-09 17:44 J -27113778.95 -27113778.76 -27113778.57 0.0265 0.0166
 Saturn -78946-07-21 17:44 J -27113401.83 -27113401.76 -27113401.68 0.0267 0.0253
 Saturn -78937-11-21 03:35 J -27109991.41 -27109991.35 -27109991.29 0.0296 0.0286
 Saturn -78936-12-06 09:49 J -27109611.29 -27109611.09 -27109610.87 0.0297 0.0163
 Saturn -78935-12-21 13:40 J -27109231.17 -27109230.93 -27109230.68 0.0297 0.0030
 Saturn -78933-01-05 11:30 J -27108851.24 -27108851.02 -27108850.79 0.0297 0.0103
 Saturn -78932-01-19 01:25 J -27108471.60 -27108471.44 -27108471.29 0.0295 0.0224
 Jupiter -78932-09-11 09:35 J -27108236.25 -27108236.10 -27108235.96 0.0491 0.0386
 Uranus -78929-12-23 17:44 J -27107036.88 -27107036.76 -27107036.62 0.0131 0.0112
 Uranus -78928-12-27 23:16 J -27106667.72 -27106667.53 -27106667.34 0.0131 0.0085
 Uranus -78926-01-01 03:35 J -27106298.56 -27106298.35 -27106298.11 0.0131 0.0060
 Uranus -78925-01-05 07:40 J -27105929.42 -27105929.18 -27105928.93 0.0131 0.0033
 Uranus -78924-01-08 11:16 J -27105560.28 -27105560.03 -27105559.77 0.0131 0.0007
 Uranus -78923-01-12 14:23 J -27105191.15 -27105190.90 -27105190.65 0.0131 0.0019
 Uranus -78922-01-16 17:01 J -27104822.02 -27104821.79 -27104821.55 0.0131 0.0045
 Saturn -78922-05-21 05:30 J -27104697.38 -27104697.27 -27104697.13 0.0265 0.0224
 Uranus -78921-01-20 19:11 J -27104452.90 -27104452.70 -27104452.47 0.0131 0.0071
 Saturn -78921-05-31 11:44 J -27104321.20 -27104321.01 -27104320.79 0.0264 0.0142
 Uranus -78920-01-23 21:20 J -27104083.76 -27104083.61 -27104083.42 0.0131 0.0097
 Saturn -78920-06-11 19:25 J -27103944.93 -27103944.69 -27103944.45 0.0263 0.0054
 Jupiter -78920-09-15 22:32 J -27103848.78 -27103848.56 -27103848.33 0.0491 0.0179
 Uranus -78919-01-27 23:30 J -27103714.60 -27103714.52 -27103714.40 0.0131 0.0121
 Saturn -78919-06-23 05:44 J -27103568.50 -27103568.26 -27103568.02 0.0264 0.0037
 Saturn -78918-07-04 20:23 J -27103191.87 -27103191.65 -27103191.44 0.0265 0.0128
 Saturn -78917-07-15 16:32 J -27102814.94 -27102814.81 -27102814.66 0.0266 0.0218
 Jupiter -78908-09-20 13:25 J -27099461.18 -27099460.94 -27099460.70 0.0492 0.0032

Saturn	-78907-11-29 17:01 J	-27099025.95	-27099025.79	-27099025.63	0.0296	0.0224
Saturn	-78906-12-14 22:04 J	-27098645.81	-27098645.58	-27098645.34	0.0297	0.0095
Saturn	-78905-12-28 22:47 J	-27098265.79	-27098265.55	-27098265.30	0.0297	0.0040
Mars	-78904-06-10 18:28 J	-27098101.92	-27098101.73	-27098101.55	0.1616	0.0039
Saturn	-78903-01-12 16:47 J	-27097886.00	-27097885.80	-27097885.60	0.0295	0.0168
Saturn	-78902-01-27 01:25 J	-27097506.50	-27097506.44	-27097506.36	0.0293	0.0280
Jupiter	-78902-03-13 18:28 J	-27097460.79	-27097460.73	-27097460.64	0.0536	0.0503
Jupiter	-78896-09-25 02:52 J	-27095073.58	-27095073.38	-27095073.16	0.0493	0.0244
Saturn	-78893-05-15 16:04 J	-27094109.89	-27094109.83	-27094109.77	0.0266	0.0256
Saturn	-78892-05-26 22:47 J	-27093733.72	-27093733.55	-27093733.36	0.0265	0.0177
Saturn	-78891-06-07 06:13 J	-27093357.46	-27093357.24	-27093357.01	0.0264	0.0091
Jupiter	-78890-03-18 15:06 J	-27093073.07	-27093072.87	-27093072.67	0.0535	0.0247
Saturn	-78890-06-18 15:35 J	-27092981.09	-27092980.85	-27092980.60	0.0264	0.0005
Saturn	-78889-06-29 04:32 J	-27092604.53	-27092604.31	-27092604.07	0.0264	0.0089
Pluto	-78889-08-08 00:28 J	-27092564.64	-27092564.48	-27092564.28	0.0066	0.0048
Saturn	-78888-07-10 22:47 J	-27092227.72	-27092227.55	-27092227.36	0.0265	0.0179
Pluto	-78888-08-09 14:52 J	-27092198.04	-27092197.88	-27092197.68	0.0066	0.0048
Saturn	-78887-07-22 23:30 J	-27091850.52	-27091850.52	-27091850.48	0.0267	0.0266
Uranus	-78886-06-16 10:04 J	-27091522.14	-27091522.08	-27091521.97	0.0148	0.0139
Uranus	-78885-06-20 13:54 J	-27091152.08	-27091151.92	-27091151.72	0.0148	0.0103
Uranus	-78884-06-25 18:56 J	-27090781.93	-27090781.71	-27090781.48	0.0148	0.0065
Jupiter	-78884-09-29 17:44 J	-27090685.83	-27090685.76	-27090685.66	0.0494	0.0459
Uranus	-78883-07-01 00:28 J	-27090411.73	-27090411.48	-27090411.23	0.0148	0.0027
Uranus	-78882-07-06 06:28 J	-27090041.49	-27090041.23	-27090040.98	0.0148	0.0011
Neptune	-78881-04-05 03:20 J	-27089767.45	-27089767.36	-27089767.20	0.0089	0.0077
Uranus	-78881-07-10 12:42 J	-27089671.20	-27089670.97	-27089670.72	0.0148	0.0050
Neptune	-78880-04-07 12:28 J	-27089400.14	-27089399.98	-27089399.77	0.0089	0.0059
Uranus	-78880-07-15 19:40 J	-27089300.87	-27089300.68	-27089300.46	0.0148	0.0088
Neptune	-78879-04-09 21:20 J	-27089032.81	-27089032.61	-27089032.37	0.0089	0.0041
Uranus	-78879-07-21 02:52 J	-27088930.49	-27088930.38	-27088930.23	0.0148	0.0126

Jupiter -78878-03-23 09:06 J -27088685.34 -27088685.12 -27088684.89 0.0535 0.0008
 Neptune -78878-04-12 06:28 J -27088665.46 -27088665.23 -27088664.97 0.0089 0.0023
 Saturn -78878-11-23 12:56 J -27088440.04 -27088439.96 -27088439.85 0.0296 0.0272
 Neptune -78877-04-13 15:49 J -27088298.09 -27088297.84 -27088297.59 0.0089 0.0004
 Saturn -78877-12-07 19:25 J -27088059.91 -27088059.69 -27088059.48 0.0297 0.0146
 Neptune -78876-04-16 00:42 J -27087930.71 -27087930.47 -27087930.22 0.0089 0.0014
 Saturn -78876-12-22 22:47 J -27087679.80 -27087679.55 -27087679.31 0.0297 0.0013
 Neptune -78875-04-18 09:35 J -27087563.32 -27087563.10 -27087562.85 0.0089 0.0032
 Saturn -78874-01-06 19:54 J -27087299.89 -27087299.67 -27087299.44 0.0297 0.0120
 Neptune -78874-04-20 18:28 J -27087195.93 -27087195.73 -27087195.51 0.0089 0.0050
 Saturn -78873-01-21 08:37 J -27086920.26 -27086920.14 -27086919.98 0.0295 0.0240
 Neptune -78873-04-22 03:35 J -27086828.50 -27086828.35 -27086828.18 0.0089 0.0068
 Neptune -78872-04-24 12:28 J -27086461.02 -27086460.98 -27086460.91 0.0089 0.0086
 Jupiter -78866-03-28 05:59 J -27084297.45 -27084297.25 -27084297.05 0.0534 0.0264
 Mars -78864-12-13 22:04 J -27083305.72 -27083305.58 -27083305.45 0.1921 0.1462
 Saturn -78863-05-22 10:47 J -27083146.18 -27083146.05 -27083145.89 0.0265 0.0212
 Saturn -78862-06-02 17:30 J -27082769.98 -27082769.77 -27082769.55 0.0264 0.0128
 Saturn -78861-06-13 01:40 J -27082393.67 -27082393.43 -27082393.19 0.0263 0.0040
 Saturn -78860-06-24 12:28 J -27082017.22 -27082016.98 -27082016.74 0.0264 0.0051
 Saturn -78859-07-06 03:35 J -27081640.56 -27081640.35 -27081640.14 0.0265 0.0142
 Saturn -78858-07-18 00:28 J -27081263.59 -27081263.48 -27081263.35 0.0266 0.0231
 Jupiter -78854-04-02 04:04 J -27079909.38 -27079909.33 -27079909.28 0.0533 0.0520
 Jupiter -78849-09-10 13:54 J -27077921.05 -27077920.92 -27077920.78 0.0491 0.0402
 Saturn -78848-12-01 05:01 J -27077474.46 -27077474.29 -27077474.10 0.0296 0.0207
 Saturn -78847-12-16 10:04 J -27077094.32 -27077094.08 -27077093.84 0.0297 0.0076
 Saturn -78846-12-31 09:49 J -27076714.32 -27076714.09 -27076713.84 0.0296 0.0059
 Uranus -78845-12-24 08:52 J -27076355.27 -27076355.13 -27076354.98 0.0131 0.0109
 Saturn -78844-01-14 02:52 J -27076334.56 -27076334.38 -27076334.19 0.0295 0.0185
 Uranus -78844-12-28 14:08 J -27075986.11 -27075985.91 -27075985.71 0.0131 0.0082
 Uranus -78842-01-01 18:13 J -27075616.96 -27075616.74 -27075616.49 0.0131 0.0056

Uranus	-78841-01-05 22:18 J	-27075247.81	-27075247.57	-27075247.32	0.0131	0.0030
Uranus	-78840-01-09 01:40 J	-27074878.68	-27074878.43	-27074878.17	0.0131	0.0004
Uranus	-78839-01-13 04:32 J	-27074509.55	-27074509.31	-27074509.05	0.0131	0.0024
Uranus	-78838-01-17 07:11 J	-27074140.42	-27074140.20	-27074139.95	0.0131	0.0050
Uranus	-78837-01-21 09:35 J	-27073771.30	-27073771.10	-27073770.89	0.0131	0.0075
Jupiter	-78837-09-15 01:25 J	-27073533.66	-27073533.44	-27073533.22	0.0492	0.0196
Uranus	-78836-01-24 11:30 J	-27073402.16	-27073402.02	-27073401.84	0.0131	0.0101
Uranus	-78835-01-28 13:40 J	-27073032.98	-27073032.93	-27073032.84	0.0131	0.0126
Saturn	-78834-05-17 21:20 J	-27072558.70	-27072558.61	-27072558.51	0.0266	0.0244
Saturn	-78833-05-28 04:18 J	-27072182.49	-27072182.32	-27072182.12	0.0265	0.0164
Saturn	-78832-06-08 12:13 J	-27071806.22	-27071805.99	-27071805.75	0.0264	0.0077
Saturn	-78831-06-19 22:04 J	-27071429.82	-27071429.58	-27071429.33	0.0264	0.0014
Saturn	-78830-07-01 11:59 J	-27071053.22	-27071053.00	-27071052.77	0.0265	0.0104
Saturn	-78829-07-12 06:56 J	-27070676.37	-27070676.21	-27070676.03	0.0266	0.0194
Mars	-78825-06-12 19:25 J	-27069244.86	-27069244.69	-27069244.52	0.1613	0.0651
Jupiter	-78825-09-19 15:35 J	-27069146.09	-27069145.85	-27069145.61	0.0492	0.0015
Saturn	-78819-11-25 04:18 J	-27066888.44	-27066888.32	-27066888.19	0.0296	0.0254
Saturn	-78818-12-10 10:04 J	-27066508.30	-27066508.08	-27066507.85	0.0297	0.0127
Saturn	-78817-12-24 12:42 J	-27066128.22	-27066127.97	-27066127.72	0.0297	0.0008
Saturn	-78815-01-08 09:06 J	-27065748.33	-27065748.12	-27065747.90	0.0296	0.0139
Saturn	-78814-01-22 20:52 J	-27065368.74	-27065368.63	-27065368.50	0.0295	0.0257
Jupiter	-78813-09-24 06:13 J	-27064758.45	-27064758.24	-27064758.02	0.0493	0.0227
Jupiter	-78807-03-17 13:40 J	-27062758.12	-27062757.93	-27062757.73	0.0536	0.0283
Saturn	-78804-05-23 18:13 J	-27061594.90	-27061594.74	-27061594.58	0.0265	0.0198
Saturn	-78803-06-04 01:11 J	-27061218.67	-27061218.45	-27061218.23	0.0264	0.0114
Saturn	-78802-06-15 09:49 J	-27060842.33	-27060842.09	-27060841.85	0.0264	0.0025
Uranus	-78802-06-16 22:04 J	-27060840.66	-27060840.58	-27060840.47	0.0148	0.0137
Pluto	-78801-02-14 07:40 J	-27060598.41	-27060598.18	-27060597.93	0.0079	0.0024
Uranus	-78801-06-21 01:54 J	-27060470.60	-27060470.42	-27060470.23	0.0148	0.0100
Saturn	-78801-06-25 21:20 J	-27060465.85	-27060465.61	-27060465.38	0.0264	0.0066

Jupiter -78801-09-28 19:54 J -27060370.78 -27060370.67 -27060370.56 0.0493 0.0436
 Uranus -78800-06-26 06:28 J -27060100.45 -27060100.23 -27060099.99 0.0148 0.0063
 Saturn -78800-07-07 13:11 J -27060089.14 -27060088.95 -27060088.75 0.0265 0.0157
 Uranus -78799-07-01 11:44 J -27059730.25 -27059730.01 -27059729.75 0.0148 0.0024
 Saturn -78799-07-19 11:16 J -27059712.12 -27059712.03 -27059711.93 0.0267 0.0246
 Neptune -78799-10-06 18:13 J -27059632.87 -27059632.74 -27059632.55 0.0088 0.0071
 Uranus -78798-07-06 17:59 J -27059360.01 -27059359.75 -27059359.50 0.0148 0.0015
 Neptune -78798-10-09 08:52 J -27059265.33 -27059265.13 -27059264.90 0.0088 0.0052
 Uranus -78797-07-11 00:13 J -27058989.71 -27058989.49 -27058989.24 0.0148 0.0054
 Neptune -78797-10-10 23:44 J -27058897.75 -27058897.51 -27058897.26 0.0088 0.0033
 Uranus -78796-07-16 07:25 J -27058619.39 -27058619.19 -27058618.99 0.0148 0.0092
 Neptune -78796-10-13 14:23 J -27058530.17 -27058529.90 -27058529.64 0.0088 0.0014
 Jupiter -78795-03-22 12:28 J -27058370.20 -27058369.98 -27058369.75 0.0535 0.0021
 Uranus -78795-07-21 15:06 J -27058248.99 -27058248.87 -27058248.76 0.0148 0.0130
 Neptune -78795-10-16 04:47 J -27058162.56 -27058162.30 -27058162.03 0.0088 0.0005
 Neptune -78794-10-18 19:11 J -27057794.96 -27057794.70 -27057794.45 0.0088 0.0024
 Neptune -78793-10-20 09:06 J -27057427.34 -27057427.12 -27057426.88 0.0088 0.0043
 Neptune -78792-10-22 23:16 J -27057059.70 -27057059.53 -27057059.32 0.0088 0.0061
 Neptune -78791-10-25 13:54 J -27056692.02 -27056691.92 -27056691.80 0.0088 0.0080
 Saturn -78789-12-02 21:49 J -27055922.79 -27055922.59 -27055922.40 0.0296 0.0188
 Saturn -78788-12-18 01:54 J -27055542.66 -27055542.42 -27055542.17 0.0297 0.0056
 Saturn -78786-01-02 01:11 J -27055162.68 -27055162.45 -27055162.21 0.0296 0.0078
 Saturn -78785-01-16 16:47 J -27054782.96 -27054782.80 -27054782.61 0.0295 0.0203
 Mars -78785-12-17 19:54 J -27054446.86 -27054446.67 -27054446.47 0.1928 0.0676
 Jupiter -78783-03-27 10:04 J -27053982.28 -27053982.08 -27053981.87 0.0534 0.0242
 Mars -78778-06-08 00:28 J -27052083.62 -27052083.48 -27052083.33 0.1626 0.0981
 Saturn -78775-05-19 04:32 J -27051007.42 -27051007.31 -27051007.19 0.0266 0.0231
 Saturn -78774-05-30 11:59 J -27050631.19 -27050631.00 -27050630.79 0.0265 0.0149
 Saturn -78773-06-09 20:08 J -27050254.89 -27050254.66 -27050254.42 0.0264 0.0062
 Saturn -78772-06-21 06:42 J -27049878.46 -27049878.22 -27049877.98 0.0264 0.0029

Jupiter -78771-04-01 05:01 J -27049594.36 -27049594.29 -27049594.19 0.0533 0.0491
 Saturn -78771-07-02 21:06 J -27049501.83 -27049501.62 -27049501.40 0.0265 0.0120
 Saturn -78770-07-14 17:01 J -27049124.93 -27049124.79 -27049124.63 0.0266 0.0209
 Jupiter -78766-09-10 13:54 J -27047606.04 -27047605.92 -27047605.80 0.0491 0.0422
 Uranus -78761-12-24 23:30 J -27045673.65 -27045673.52 -27045673.36 0.0131 0.0106
 Saturn -78760-11-26 21:49 J -27045336.72 -27045336.59 -27045336.43 0.0296 0.0236
 Uranus -78760-12-29 04:47 J -27045304.50 -27045304.30 -27045304.09 0.0131 0.0079
 Saturn -78759-12-12 03:35 J -27044956.58 -27044956.35 -27044956.12 0.0297 0.0107
 Uranus -78758-01-02 09:06 J -27044935.35 -27044935.12 -27044934.88 0.0131 0.0053
 Saturn -78758-12-27 05:30 J -27044576.52 -27044576.27 -27044576.03 0.0297 0.0029
 Uranus -78757-01-06 12:56 J -27044566.21 -27044565.96 -27044565.71 0.0131 0.0026
 Uranus -78756-01-09 16:18 J -27044197.07 -27044196.82 -27044196.56 0.0131 0.0002
 Saturn -78756-01-10 00:56 J -27044196.66 -27044196.46 -27044196.25 0.0296 0.0159 *
 Uranus -78755-01-13 19:11 J -27043827.94 -27043827.70 -27043827.44 0.0131 0.0028
 Saturn -78755-01-24 11:44 J -27043817.08 -27043817.01 -27043816.91 0.0294 0.0274
 Uranus -78754-01-17 21:49 J -27043458.82 -27043458.59 -27043458.35 0.0131 0.0054
 Jupiter -78754-09-15 04:18 J -27043218.53 -27043218.32 -27043218.10 0.0491 0.0215
 Uranus -78753-01-21 23:59 J -27043089.68 -27043089.50 -27043089.29 0.0131 0.0080
 Uranus -78752-01-25 02:08 J -27042720.54 -27042720.41 -27042720.24 0.0131 0.0106
 Uranus -78751-01-29 04:18 J -27042351.32 -27042351.32 -27042351.29 0.0131 0.0131
 Saturn -78746-05-14 19:40 J -27040419.71 -27040419.68 -27040419.65 0.0266 0.0264
 Mars -78746-06-15 19:11 J -27040387.80 -27040387.70 -27040387.59 0.1610 0.1308
 Saturn -78745-05-25 02:52 J -27040043.55 -27040043.38 -27040043.20 0.0265 0.0184
 Saturn -78744-06-05 10:04 J -27039667.29 -27039667.08 -27039666.84 0.0264 0.0099
 Saturn -78743-06-16 19:11 J -27039290.94 -27039290.70 -27039290.45 0.0264 0.0009
 Saturn -78742-06-28 07:11 J -27038914.42 -27038914.20 -27038913.96 0.0264 0.0083
 Jupiter -78742-09-19 17:01 J -27038831.03 -27038830.79 -27038830.55 0.0492 0.0008
 Saturn -78741-07-09 00:13 J -27038537.67 -27038537.49 -27038537.30 0.0265 0.0174
 Saturn -78740-07-20 23:16 J -27038160.57 -27038160.53 -27038160.47 0.0267 0.0261
 Saturn -78731-11-20 12:28 J -27034751.03 -27034750.98 -27034750.93 0.0295 0.0288

Jupiter -78730-09-24 06:56 J -27034443.42 -27034443.21 -27034442.98 0.0492 0.0203
 Saturn -78730-12-05 17:59 J -27034370.95 -27034370.75 -27034370.54 0.0296 0.0166
 Saturn -78729-12-19 21:49 J -27033990.84 -27033990.59 -27033990.34 0.0297 0.0033
 Saturn -78727-01-03 20:23 J -27033610.88 -27033610.65 -27033610.42 0.0296 0.0100
 Saturn -78726-01-18 11:01 J -27033231.19 -27033231.04 -27033230.88 0.0295 0.0223
 Jupiter -78724-03-16 17:01 J -27032442.97 -27032442.79 -27032442.60 0.0536 0.0306
 Uranus -78718-06-17 06:56 J -27030159.28 -27030159.21 -27030159.09 0.0148 0.0136
 Jupiter -78718-09-28 19:11 J -27030055.83 -27030055.70 -27030055.57 0.0493 0.0411
 Neptune -78717-04-04 10:18 J -27029867.12 -27029867.07 -27029866.98 0.0089 0.0085
 Uranus -78717-06-21 10:47 J -27029789.22 -27029789.05 -27029788.85 0.0148 0.0099
 Neptune -78716-04-06 19:25 J -27029499.85 -27029499.69 -27029499.53 0.0089 0.0067
 Saturn -78716-05-20 12:56 J -27029456.09 -27029455.96 -27029455.82 0.0266 0.0218
 Uranus -78716-06-26 15:20 J -27029419.08 -27029418.86 -27029418.62 0.0148 0.0060
 Neptune -78715-04-09 03:49 J -27029132.52 -27029132.34 -27029132.11 0.0089 0.0050
 Saturn -78715-05-31 20:23 J -27029079.85 -27029079.65 -27029079.43 0.0265 0.0134
 Uranus -78715-07-01 20:37 J -27029048.89 -27029048.64 -27029048.39 0.0148 0.0022
 Neptune -78714-04-11 12:42 J -27028765.18 -27028764.97 -27028764.72 0.0089 0.0032
 Saturn -78714-06-12 05:01 J -27028703.53 -27028703.29 -27028703.05 0.0264 0.0045
 Uranus -78714-07-07 02:37 J -27028678.64 -27028678.39 -27028678.14 0.0148 0.0018
 Neptune -78713-04-12 22:04 J -27028397.82 -27028397.58 -27028397.33 0.0089 0.0014
 Saturn -78713-06-22 16:04 J -27028327.07 -27028326.83 -27028326.59 0.0264 0.0046
 Uranus -78713-07-11 08:52 J -27028308.36 -27028308.13 -27028307.89 0.0148 0.0057
 Jupiter -78712-03-21 13:40 J -27028055.15 -27028054.93 -27028054.70 0.0535 0.0049
 Neptune -78712-04-15 07:11 J -27028030.45 -27028030.20 -27028029.95 0.0089 0.0005
 Saturn -78712-07-04 06:56 J -27027950.41 -27027950.21 -27027949.99 0.0265 0.0137
 Uranus -78712-07-16 15:49 J -27027938.02 -27027937.84 -27027937.63 0.0148 0.0096
 Neptune -78711-04-17 16:18 J -27027663.06 -27027662.82 -27027662.58 0.0089 0.0022
 Saturn -78711-07-16 03:49 J -27027573.47 -27027573.34 -27027573.21 0.0266 0.0225
 Uranus -78711-07-21 23:30 J -27027567.62 -27027567.52 -27027567.41 0.0148 0.0134
 Neptune -78710-04-20 01:25 J -27027295.66 -27027295.44 -27027295.21 0.0089 0.0040

Neptune -78709-04-21 10:18 J -27026928.25 -27026928.07 -27026927.87 0.0089 0.0058
 Neptune -78708-04-23 19:25 J -27026560.81 -27026560.69 -27026560.55 0.0089 0.0076
 Saturn -78701-11-28 17:59 J -27023784.91 -27023784.75 -27023784.57 0.0296 0.0216
 Jupiter -78700-03-26 05:30 J -27023667.48 -27023667.27 -27023667.06 0.0534 0.0198
 Saturn -78700-12-13 23:16 J -27023404.76 -27023404.53 -27023404.28 0.0297 0.0085
 Mars -78699-06-10 01:11 J -27023226.64 -27023226.45 -27023226.27 0.1623 0.0297
 Saturn -78699-12-29 00:28 J -27023024.72 -27023024.48 -27023024.23 0.0297 0.0051
 Saturn -78697-01-12 18:56 J -27022644.90 -27022644.71 -27022644.51 0.0296 0.0180
 Saturn -78696-01-26 04:47 J -27022265.32 -27022265.30 -27022265.27 0.0294 0.0292
 Jupiter -78688-03-31 00:28 J -27019279.59 -27019279.48 -27019279.35 0.0534 0.0448
 Saturn -78687-05-16 04:32 J -27018868.38 -27018868.31 -27018868.22 0.0266 0.0251
 Saturn -78686-05-27 11:59 J -27018492.18 -27018492.00 -27018491.81 0.0265 0.0170
 Saturn -78685-06-06 19:40 J -27018115.90 -27018115.68 -27018115.44 0.0264 0.0083
 Saturn -78684-06-18 05:01 J -27017739.53 -27017739.29 -27017739.04 0.0264 0.0008
 Saturn -78683-06-29 17:44 J -27017362.98 -27017362.76 -27017362.52 0.0264 0.0100
 Jupiter -78683-09-09 15:49 J -27017290.93 -27017290.84 -27017290.73 0.0491 0.0443
 Saturn -78682-07-11 11:30 J -27016986.18 -27016986.02 -27016985.83 0.0265 0.0191
 Uranus -78678-12-22 07:54 J -27015361.18 -27015361.17 -27015361.11 0.0131 0.0131
 Uranus -78677-12-25 13:54 J -27014992.06 -27014991.92 -27014991.74 0.0131 0.0104
 Uranus -78676-12-29 19:11 J -27014622.90 -27014622.70 -27014622.48 0.0131 0.0076
 Uranus -78674-01-02 23:30 J -27014253.75 -27014253.52 -27014253.28 0.0131 0.0049
 Uranus -78673-01-07 03:35 J -27013884.60 -27013884.35 -27013884.10 0.0131 0.0022
 Uranus -78672-01-10 06:56 J -27013515.46 -27013515.21 -27013514.95 0.0131 0.0006
 Saturn -78672-11-22 09:35 J -27013199.20 -27013199.10 -27013199.00 0.0295 0.0269
 Uranus -78671-01-14 09:49 J -27013146.33 -27013146.09 -27013145.83 0.0131 0.0032
 Jupiter -78671-09-14 04:47 J -27012903.51 -27012903.30 -27012903.09 0.0491 0.0238
 Saturn -78671-12-07 15:06 J -27012819.08 -27012818.87 -27012818.65 0.0296 0.0144
 Uranus -78670-01-18 12:28 J -27012777.19 -27012776.98 -27012776.74 0.0131 0.0059
 Saturn -78670-12-22 18:13 J -27012438.99 -27012438.74 -27012438.50 0.0297 0.0010
 Uranus -78669-01-22 14:52 J -27012408.05 -27012407.88 -27012407.67 0.0131 0.0085

Saturn -78668-01-05 15:49 J -27012059.06 -27012058.84 -27012058.61 0.0296 0.0123
 Uranus -78668-01-25 17:16 J -27012038.90 -27012038.78 -27012038.63 0.0131 0.0111
 Saturn -78667-01-20 05:30 J -27011679.40 -27011679.27 -27011679.13 0.0294 0.0243
 Jupiter -78659-09-18 15:35 J -27008516.09 -27008515.85 -27008515.61 0.0492 0.0035
 Saturn -78657-05-21 21:20 J -27007904.75 -27007904.61 -27007904.45 0.0266 0.0204
 Saturn -78656-06-02 05:01 J -27007528.51 -27007528.29 -27007528.07 0.0265 0.0119
 Saturn -78655-06-13 13:40 J -27007152.17 -27007151.93 -27007151.69 0.0264 0.0029
 Saturn -78654-06-25 00:56 J -27006775.69 -27006775.46 -27006775.22 0.0264 0.0063
 Saturn -78653-07-05 16:32 J -27006399.00 -27006398.81 -27006398.60 0.0265 0.0154
 Saturn -78652-07-17 13:54 J -27006022.01 -27006021.92 -27006021.81 0.0267 0.0242
 Jupiter -78647-09-23 05:59 J -27004128.47 -27004128.25 -27004128.02 0.0492 0.0177
 Pluto -78642-08-09 23:16 J -27002346.53 -27002346.53 -27002346.50 0.0065 0.0065
 Saturn -78642-12-01 14:23 J -27002233.08 -27002232.90 -27002232.71 0.0296 0.0196
 Jupiter -78641-03-15 11:16 J -27002128.20 -27002128.03 -27002127.86 0.0536 0.0353
 Pluto -78641-08-10 13:25 J -27001980.16 -27001979.94 -27001979.69 0.0066 0.0030
 Saturn -78641-12-15 19:40 J -27001852.92 -27001852.68 -27001852.44 0.0297 0.0063
 Saturn -78640-12-30 20:23 J -27001472.89 -27001472.65 -27001472.41 0.0297 0.0073
 Saturn -78638-01-14 13:54 J -27001093.09 -27001092.92 -27001092.73 0.0296 0.0201
 Jupiter -78635-09-27 21:35 J -26999740.74 -26999740.60 -26999740.45 0.0493 0.0389
 Neptune -78635-10-05 19:25 J -26999732.80 -26999732.69 -26999732.56 0.0088 0.0079
 Uranus -78634-06-17 21:20 J -26999477.72 -26999477.61 -26999477.50 0.0148 0.0133
 Neptune -78634-10-08 09:49 J -26999365.26 -26999365.09 -26999364.87 0.0088 0.0061
 Uranus -78633-06-22 00:13 J -26999107.67 -26999107.49 -26999107.28 0.0148 0.0096
 Neptune -78633-10-10 00:42 J -26998997.70 -26998997.47 -26998997.23 0.0088 0.0042
 Uranus -78632-06-27 04:47 J -26998737.52 -26998737.30 -26998737.06 0.0148 0.0057
 Neptune -78632-10-12 15:06 J -26998630.11 -26998629.87 -26998629.60 0.0088 0.0024
 Uranus -78631-07-02 09:49 J -26998367.33 -26998367.09 -26998366.83 0.0148 0.0019
 Neptune -78631-10-15 05:44 J -26998262.52 -26998262.26 -26998261.99 0.0088 0.0005
 Uranus -78630-07-07 15:49 J -26997997.09 -26997996.84 -26997996.59 0.0148 0.0022
 Neptune -78630-10-17 19:40 J -26997894.93 -26997894.68 -26997894.40 0.0088 0.0015

Jupiter -78629-03-20 07:25 J -26997740.41 -26997740.19 -26997739.97 0.0535 0.0098
 Uranus -78629-07-11 22:18 J -26997626.80 -26997626.57 -26997626.34 0.0148 0.0061
 Neptune -78629-10-19 10:04 J -26997527.31 -26997527.08 -26997526.82 0.0088 0.0033
 Saturn -78628-05-17 13:25 J -26997317.03 -26997316.94 -26997316.82 0.0266 0.0238
 Uranus -78628-07-17 05:01 J -26997256.46 -26997256.29 -26997256.09 0.0148 0.0101
 Neptune -78628-10-21 23:59 J -26997159.69 -26997159.50 -26997159.26 0.0088 0.0052
 Saturn -78627-05-28 20:37 J -26996940.82 -26996940.64 -26996940.43 0.0264 0.0156
 Uranus -78627-07-22 12:28 J -26996886.04 -26996885.98 -26996885.88 0.0148 0.0140
 Neptune -78627-10-24 14:23 J -26996792.05 -26996791.90 -26996791.72 0.0088 0.0070
 Saturn -78626-06-09 04:32 J -26996564.54 -26996564.31 -26996564.07 0.0264 0.0067
 Neptune -78626-10-27 04:32 J -26996424.32 -26996424.31 -26996424.27 0.0088 0.0088
 Saturn -78625-06-19 14:08 J -26996188.16 -26996187.91 -26996187.67 0.0264 0.0024
 Saturn -78624-07-01 03:20 J -26995811.57 -26995811.36 -26995811.13 0.0264 0.0116
 Saturn -78623-07-12 22:04 J -26995434.73 -26995434.58 -26995434.42 0.0266 0.0206
 Mars -78620-06-12 02:08 J -26994369.59 -26994369.41 -26994369.23 0.1620 0.0387
 Jupiter -78617-03-25 05:01 J -26993352.51 -26993352.29 -26993352.08 0.0535 0.0163
 Saturn -78613-11-24 06:28 J -26991647.35 -26991647.23 -26991647.09 0.0295 0.0250
 Saturn -78612-12-09 11:59 J -26991267.22 -26991267.00 -26991266.76 0.0296 0.0123
 Saturn -78611-12-24 14:37 J -26990887.13 -26990886.89 -26990886.64 0.0297 0.0013
 Saturn -78609-01-08 11:16 J -26990507.23 -26990507.03 -26990506.81 0.0296 0.0145
 Saturn -78608-01-22 00:13 J -26990127.60 -26990127.49 -26990127.39 0.0294 0.0263
 Jupiter -78605-03-30 03:49 J -26988964.47 -26988964.34 -26988964.20 0.0534 0.0422
 Jupiter -78600-09-08 14:52 J -26986975.94 -26986975.88 -26986975.81 0.0491 0.0469
 Saturn -78598-05-24 05:16 J -26986353.45 -26986353.28 -26986353.12 0.0265 0.0191
 Saturn -78597-06-03 12:28 J -26985977.20 -26985976.98 -26985976.75 0.0264 0.0104
 Saturn -78596-06-14 21:20 J -26985600.86 -26985600.61 -26985600.37 0.0264 0.0014
 Saturn -78595-06-26 08:52 J -26985224.36 -26985224.13 -26985223.90 0.0264 0.0078
 Saturn -78594-07-08 00:56 J -26984847.64 -26984847.46 -26984847.27 0.0265 0.0170
 Uranus -78594-12-22 22:47 J -26984679.60 -26984679.55 -26984679.48 0.0132 0.0128
 Saturn -78593-07-18 22:47 J -26984470.60 -26984470.55 -26984470.47 0.0267 0.0258

Uranus	-78593-12-26 04:32 J	-26984310.46	-26984310.31	-26984310.14	0.0131	0.0101
Uranus	-78592-12-30 09:35 J	-26983941.30	-26983941.10	-26983940.88	0.0131	0.0073
Uranus	-78590-01-03 13:54 J	-26983572.14	-26983571.92	-26983571.66	0.0131	0.0046
Uranus	-78589-01-07 18:13 J	-26983202.99	-26983202.74	-26983202.49	0.0131	0.0018
Uranus	-78588-01-10 21:49 J	-26982833.84	-26982833.59	-26982833.34	0.0131	0.0009
Jupiter	-78588-09-13 04:32 J	-26982588.51	-26982588.31	-26982588.10	0.0491	0.0263
Uranus	-78587-01-15 00:56 J	-26982464.70	-26982464.46	-26982464.21	0.0131	0.0036
Uranus	-78586-01-19 03:35 J	-26982095.56	-26982095.35	-26982095.12	0.0131	0.0063
Uranus	-78585-01-23 05:59 J	-26981726.41	-26981726.25	-26981726.05	0.0131	0.0090
Uranus	-78584-01-26 08:37 J	-26981357.24	-26981357.14	-26981357.01	0.0131	0.0116
Saturn	-78583-12-03 08:37 J	-26980681.33	-26980681.14	-26980680.93	0.0296	0.0177
Saturn	-78582-12-18 13:40 J	-26980301.17	-26980300.93	-26980300.68	0.0297	0.0042
Saturn	-78580-01-01 14:08 J	-26979921.14	-26979920.91	-26979920.67	0.0297	0.0095
Saturn	-78579-01-16 07:11 J	-26979541.36	-26979541.20	-26979541.04	0.0296	0.0221
Jupiter	-78576-09-17 19:25 J	-26978200.92	-26978200.69	-26978200.45	0.0492	0.0054
Mars	-78573-06-06 05:16 J	-26977208.39	-26977208.28	-26977208.17	0.1635	0.1299
Saturn	-78569-05-18 20:52 J	-26975765.74	-26975765.63	-26975765.50	0.0265	0.0226
Saturn	-78568-05-30 04:04 J	-26975389.53	-26975389.33	-26975389.13	0.0264	0.0141
Saturn	-78567-06-10 11:30 J	-26975013.26	-26975013.02	-26975012.78	0.0264	0.0053
Saturn	-78566-06-21 21:20 J	-26974636.85	-26974636.61	-26974636.37	0.0264	0.0039
Saturn	-78565-07-02 10:47 J	-26974260.25	-26974260.05	-26974259.82	0.0264	0.0132
Saturn	-78564-07-14 05:59 J	-26973883.38	-26973883.25	-26973883.11	0.0266	0.0221
Jupiter	-78564-09-22 08:37 J	-26973813.36	-26973813.14	-26973812.91	0.0492	0.0156
Jupiter	-78558-03-15 10:18 J	-26971813.22	-26971813.07	-26971812.91	0.0536	0.0388
Pluto	-78554-02-15 01:40 J	-26970380.67	-26970380.43	-26970380.17	0.0079	0.0016
Saturn	-78554-11-27 00:42 J	-26970095.62	-26970095.47	-26970095.31	0.0296	0.0232
Saturn	-78553-12-11 06:13 J	-26969715.47	-26969715.24	-26969715.00	0.0297	0.0102
Neptune	-78552-04-06 00:56 J	-26969599.56	-26969599.46	-26969599.30	0.0089	0.0076
Jupiter	-78552-09-26 22:32 J	-26969425.72	-26969425.56	-26969425.40	0.0493	0.0365
Saturn	-78552-12-26 08:37 J	-26969335.38	-26969335.14	-26969334.89	0.0297	0.0035

Neptune -78551-04-08 10:18 J -26969232.25 -26969232.07 -26969231.88 0.0089 0.0058
 Saturn -78550-01-10 04:47 J -26968955.49 -26968955.30 -26968955.09 0.0296 0.0166
 Neptune -78550-04-10 18:56 J -26968864.92 -26968864.71 -26968864.47 0.0089 0.0041
 Uranus -78550-06-18 11:16 J -26968796.13 -26968796.03 -26968795.89 0.0147 0.0130
 Saturn -78549-01-24 16:18 J -26968575.87 -26968575.82 -26968575.73 0.0294 0.0282
 Neptune -78549-04-12 04:04 J -26968497.56 -26968497.33 -26968497.08 0.0089 0.0023
 Uranus -78549-06-22 14:37 J -26968426.08 -26968425.89 -26968425.68 0.0148 0.0092
 Neptune -78548-04-14 12:56 J -26968130.20 -26968129.96 -26968129.70 0.0089 0.0005
 Uranus -78548-06-27 18:56 J -26968055.94 -26968055.71 -26968055.47 0.0148 0.0053
 Neptune -78547-04-16 22:04 J -26967762.82 -26967762.58 -26967762.33 0.0089 0.0013
 Uranus -78547-07-02 23:44 J -26967685.76 -26967685.51 -26967685.25 0.0148 0.0014
 Jupiter -78546-03-20 10:47 J -26967425.27 -26967425.05 -26967424.83 0.0536 0.0122
 Neptune -78546-04-19 06:56 J -26967395.43 -26967395.21 -26967394.96 0.0089 0.0031
 Uranus -78546-07-08 05:44 J -26967315.51 -26967315.26 -26967315.01 0.0148 0.0026
 Neptune -78545-04-20 15:49 J -26967028.02 -26967027.84 -26967027.60 0.0089 0.0049
 Uranus -78545-07-12 11:59 J -26966945.23 -26966945.00 -26966944.77 0.0148 0.0066
 Neptune -78544-04-23 01:25 J -26966660.60 -26966660.44 -26966660.26 0.0089 0.0066
 Uranus -78544-07-17 18:42 J -26966574.88 -26966574.72 -26966574.53 0.0148 0.0106
 Neptune -78543-04-25 10:18 J -26966293.13 -26966293.07 -26966292.97 0.0089 0.0084
 Uranus -78543-07-23 02:23 J -26966204.44 -26966204.40 -26966204.34 0.0148 0.0145
 Mars -78541-06-14 03:06 J -26965512.51 -26965512.37 -26965512.23 0.1616 0.1065
 Saturn -78540-05-14 04:04 J -26965178.36 -26965178.33 -26965178.27 0.0267 0.0261
 Saturn -78539-05-25 11:30 J -26964802.19 -26964802.02 -26964801.84 0.0265 0.0178
 Saturn -78538-06-05 18:28 J -26964425.95 -26964425.73 -26964425.49 0.0264 0.0091
 Saturn -78537-06-16 03:06 J -26964049.62 -26964049.37 -26964049.13 0.0264 0.0003
 Saturn -78536-06-27 14:37 J -26963673.12 -26963672.89 -26963672.66 0.0264 0.0093
 Saturn -78535-07-09 06:56 J -26963296.38 -26963296.21 -26963296.03 0.0265 0.0185
 Jupiter -78534-03-25 08:37 J -26963037.36 -26963037.14 -26963036.92 0.0535 0.0136
 Saturn -78525-11-19 17:01 J -26959509.84 -26959509.79 -26959509.71 0.0295 0.0285
 Saturn -78524-12-05 00:13 J -26959129.70 -26959129.49 -26959129.28 0.0297 0.0159

Saturn -78523-12-20 05:01 J -26958749.53 -26958749.29 -26958749.04 0.0297 0.0023
 Jupiter -78522-03-29 23:44 J -26958649.66 -26958649.51 -26958649.34 0.0534 0.0379
 Saturn -78521-01-04 05:16 J -26958369.50 -26958369.28 -26958369.05 0.0297 0.0114
 Saturn -78520-01-17 21:49 J -26957989.73 -26957989.59 -26957989.44 0.0295 0.0239
 Jupiter -78517-09-07 20:37 J -26956660.67 -26956660.64 -26956660.60 0.0491 0.0484
 Saturn -78510-05-21 02:23 J -26954214.53 -26954214.40 -26954214.25 0.0265 0.0214
 Uranus -78510-12-23 13:40 J -26953998.00 -26953997.93 -26953997.84 0.0132 0.0125
 Saturn -78509-05-31 09:06 J -26953838.32 -26953838.12 -26953837.90 0.0264 0.0129
 Uranus -78509-12-26 19:11 J -26953628.85 -26953628.70 -26953628.51 0.0131 0.0098
 Saturn -78508-06-11 16:32 J -26953462.05 -26953461.81 -26953461.56 0.0263 0.0039
 Uranus -78508-12-31 00:42 J -26953259.68 -26953259.47 -26953259.25 0.0131 0.0070
 Saturn -78507-06-23 02:23 J -26953085.63 -26953085.40 -26953085.15 0.0264 0.0054
 Uranus -78506-01-04 05:16 J -26952890.53 -26952890.28 -26952890.04 0.0131 0.0042
 Saturn -78506-07-04 16:04 J -26952709.03 -26952708.83 -26952708.62 0.0264 0.0146
 Uranus -78505-01-08 09:20 J -26952521.36 -26952521.11 -26952520.86 0.0131 0.0014
 Saturn -78505-07-15 11:16 J -26952332.13 -26952332.03 -26952331.91 0.0266 0.0235
 Jupiter -78505-09-12 09:20 J -26952273.30 -26952273.11 -26952272.91 0.0491 0.0278
 Uranus -78504-01-11 12:56 J -26952152.21 -26952151.96 -26952151.71 0.0131 0.0014
 Uranus -78503-01-15 15:49 J -26951783.07 -26951782.84 -26951782.59 0.0131 0.0041
 Uranus -78502-01-19 18:56 J -26951413.92 -26951413.71 -26951413.49 0.0131 0.0068
 Uranus -78501-01-23 21:35 J -26951044.76 -26951044.60 -26951044.42 0.0131 0.0095
 Mars -78501-12-16 14:08 J -26950717.12 -26950716.91 -26950716.70 0.1919 0.0148
 Uranus -78500-01-27 00:13 J -26950675.58 -26950675.49 -26950675.39 0.0131 0.0122
 Saturn -78495-11-28 14:52 J -26948544.05 -26948543.88 -26948543.71 0.0296 0.0215
 Mars -78494-06-09 07:11 J -26948351.37 -26948351.20 -26948351.02 0.1631 0.0593
 Saturn -78494-12-13 20:23 J -26948163.88 -26948163.65 -26948163.41 0.0297 0.0083
 Jupiter -78493-09-16 22:47 J -26947885.79 -26947885.55 -26947885.31 0.0491 0.0072
 Saturn -78493-12-27 22:47 J -26947783.79 -26947783.55 -26947783.31 0.0297 0.0055
 Saturn -78491-01-11 18:42 J -26947403.91 -26947403.72 -26947403.53 0.0296 0.0185
 Saturn -78481-05-15 08:52 J -26943627.20 -26943627.13 -26943627.04 0.0266 0.0250

Jupiter -78481-09-21 10:32 J -26943498.28 -26943498.06 -26943497.82 0.0492 0.0134
 Saturn -78480-05-26 15:35 J -26943251.03 -26943250.85 -26943250.65 0.0265 0.0167
 Saturn -78479-06-06 22:18 J -26942874.80 -26942874.57 -26942874.33 0.0264 0.0078
 Saturn -78478-06-18 06:42 J -26942498.47 -26942498.22 -26942497.98 0.0264 0.0015
 Saturn -78477-06-28 17:59 J -26942121.97 -26942121.75 -26942121.52 0.0264 0.0107
 Saturn -78476-07-10 10:18 J -26941745.22 -26941745.07 -26941744.90 0.0265 0.0199
 Jupiter -78475-03-14 15:35 J -26941497.99 -26941497.85 -26941497.70 0.0536 0.0411
 Neptune -78471-10-04 20:08 J -26939832.67 -26939832.66 -26939832.59 0.0088 0.0088
 Neptune -78470-10-07 11:16 J -26939465.19 -26939465.03 -26939464.86 0.0088 0.0069
 Jupiter -78469-09-26 02:08 J -26939110.58 -26939110.41 -26939110.24 0.0493 0.0345
 Neptune -78469-10-09 01:40 J -26939097.63 -26939097.43 -26939097.20 0.0088 0.0051
 Neptune -78468-10-11 16:18 J -26938730.06 -26938729.82 -26938729.56 0.0088 0.0032
 Neptune -78467-10-14 06:42 J -26938362.47 -26938362.22 -26938361.95 0.0088 0.0014
 Uranus -78466-06-19 05:01 J -26938114.42 -26938114.29 -26938114.17 0.0147 0.0126
 Neptune -78466-10-16 21:20 J -26937994.87 -26937994.61 -26937994.34 0.0088 0.0005
 Saturn -78466-11-22 03:06 J -26937958.46 -26937958.37 -26937958.27 0.0295 0.0271
 Uranus -78465-06-23 07:40 J -26937744.37 -26937744.18 -26937743.96 0.0148 0.0088
 Neptune -78465-10-18 11:30 J -26937627.26 -26937627.02 -26937626.75 0.0088 0.0023
 Saturn -78465-12-06 10:32 J -26937578.28 -26937578.06 -26937577.84 0.0297 0.0143
 Uranus -78464-06-28 11:59 J -26937374.23 -26937374.00 -26937373.75 0.0148 0.0049
 Neptune -78464-10-21 01:54 J -26937259.64 -26937259.42 -26937259.17 0.0088 0.0042
 Saturn -78464-12-21 15:49 J -26937198.09 -26937197.84 -26937197.59 0.0297 0.0005
 Jupiter -78463-03-19 08:52 J -26937110.34 -26937110.13 -26937109.91 0.0535 0.0161
 Uranus -78463-07-03 17:01 J -26937004.04 -26937003.79 -26937003.53 0.0148 0.0009
 Neptune -78463-10-23 16:04 J -26936892.01 -26936891.83 -26936891.62 0.0088 0.0060
 Saturn -78462-01-05 15:49 J -26936818.05 -26936817.84 -26936817.61 0.0297 0.0132
 Uranus -78462-07-08 22:47 J -26936633.79 -26936633.55 -26936633.30 0.0148 0.0032
 Neptune -78462-10-26 06:28 J -26936524.35 -26936524.23 -26936524.10 0.0088 0.0078
 Saturn -78461-01-20 08:08 J -26936438.27 -26936438.16 -26936438.03 0.0295 0.0256
 Uranus -78461-07-13 05:16 J -26936263.50 -26936263.28 -26936263.05 0.0148 0.0072

Uranus	-78460-07-18 11:59 J	-26935893.15	-26935893.00	-26935892.82	0.0148	0.0113
Jupiter	-78451-03-24 05:16 J	-26932722.51	-26932722.28	-26932722.06	0.0535	0.0093
Saturn	-78451-05-22 05:59 J	-26932663.40	-26932663.25	-26932663.09	0.0265	0.0203
Saturn	-78450-06-02 12:13 J	-26932287.20	-26932286.99	-26932286.76	0.0264	0.0117
Saturn	-78449-06-12 19:25 J	-26931910.93	-26931910.69	-26931910.44	0.0263	0.0027
Saturn	-78448-06-24 05:01 J	-26931534.52	-26931534.29	-26931534.05	0.0263	0.0067
Saturn	-78447-07-05 18:42 J	-26931157.91	-26931157.72	-26931157.52	0.0264	0.0158
Saturn	-78446-07-17 13:40 J	-26930781.00	-26930780.93	-26930780.82	0.0266	0.0248
Jupiter	-78439-03-29 02:37 J	-26928334.56	-26928334.39	-26928334.22	0.0535	0.0351
Saturn	-78436-11-30 00:13 J	-26926992.66	-26926992.49	-26926992.30	0.0296	0.0201
Saturn	-78435-12-15 06:28 J	-26926612.47	-26926612.23	-26926611.99	0.0297	0.0065
Saturn	-78434-12-30 08:52 J	-26926232.37	-26926232.13	-26926231.89	0.0297	0.0073
Saturn	-78432-01-13 04:32 J	-26925852.48	-26925852.31	-26925852.13	0.0296	0.0203
Uranus	-78426-12-24 04:47 J	-26923316.38	-26923316.30	-26923316.20	0.0132	0.0122
Uranus	-78425-12-27 10:18 J	-26922947.23	-26922947.07	-26922946.88	0.0131	0.0094
Uranus	-78424-12-31 15:20 J	-26922578.07	-26922577.86	-26922577.62	0.0131	0.0066
Uranus	-78422-01-04 20:08 J	-26922208.90	-26922208.66	-26922208.41	0.0131	0.0038
Saturn	-78422-05-17 11:44 J	-26922076.10	-26922076.01	-26922075.90	0.0266	0.0241
Jupiter	-78422-09-12 14:08 J	-26921958.10	-26921957.91	-26921957.72	0.0491	0.0295
Uranus	-78421-01-09 00:28 J	-26921839.74	-26921839.48	-26921839.23	0.0131	0.0010
Saturn	-78421-05-27 17:59 J	-26921699.94	-26921699.75	-26921699.55	0.0264	0.0156
Uranus	-78420-01-12 03:49 J	-26921470.59	-26921470.34	-26921470.08	0.0131	0.0018
Saturn	-78420-06-08 00:13 J	-26921323.73	-26921323.49	-26921323.26	0.0264	0.0066
Uranus	-78419-01-16 06:56 J	-26921101.43	-26921101.21	-26921100.96	0.0131	0.0046
Saturn	-78419-06-19 08:08 J	-26920947.41	-26920947.16	-26920946.92	0.0264	0.0027
Uranus	-78418-01-20 10:04 J	-26920732.28	-26920732.08	-26920731.86	0.0131	0.0073
Saturn	-78418-06-30 19:11 J	-26920570.91	-26920570.70	-26920570.47	0.0264	0.0120
Uranus	-78417-01-24 12:56 J	-26920363.11	-26920362.96	-26920362.79	0.0131	0.0100
Saturn	-78417-07-11 11:30 J	-26920194.16	-26920194.02	-26920193.87	0.0265	0.0211
Uranus	-78416-01-27 15:06 J	-26919993.91	-26919993.87	-26919993.79	0.0131	0.0128

Mars -78415-06-11 07:54 J -26919494.36 -26919494.17 -26919493.98 0.1627 0.0101
 Jupiter -78410-09-17 04:47 J -26917570.54 -26917570.30 -26917570.07 0.0491 0.0087
 Saturn -78407-11-23 09:06 J -26916407.23 -26916407.12 -26916407.00 0.0295 0.0260
 Saturn -78406-12-08 16:32 J -26916027.03 -26916026.81 -26916026.58 0.0297 0.0129
 Saturn -78405-12-22 22:04 J -26915646.82 -26915646.58 -26915646.33 0.0298 0.0012
 Saturn -78403-01-06 22:18 J -26915266.78 -26915266.57 -26915266.36 0.0297 0.0147
 Saturn -78402-01-21 14:08 J -26914886.99 -26914886.91 -26914886.80 0.0295 0.0271
 Jupiter -78398-09-21 20:23 J -26913182.89 -26913182.65 -26913182.42 0.0492 0.0126
 Pluto -78394-08-12 05:01 J -26911762.54 -26911762.29 -26911762.02 0.0066 0.0009
 Jupiter -78392-03-13 14:37 J -26911183.01 -26911182.89 -26911182.76 0.0536 0.0446
 Saturn -78392-05-23 07:25 J -26911112.36 -26911112.19 -26911112.03 0.0265 0.0193
 Saturn -78391-06-03 13:25 J -26910736.16 -26910735.94 -26910735.72 0.0264 0.0106
 Saturn -78390-06-14 20:08 J -26910359.90 -26910359.66 -26910359.42 0.0263 0.0015
 Saturn -78389-06-25 05:16 J -26909983.50 -26909983.28 -26909983.04 0.0263 0.0079
 Neptune -78388-04-05 07:40 J -26909699.24 -26909699.18 -26909699.08 0.0089 0.0084
 Saturn -78388-07-06 18:42 J -26909606.89 -26909606.72 -26909606.52 0.0264 0.0170
 Neptune -78387-04-07 16:32 J -26909331.95 -26909331.81 -26909331.62 0.0089 0.0067
 Saturn -78387-07-18 13:54 J -26909229.96 -26909229.92 -26909229.85 0.0266 0.0259
 Neptune -78386-04-10 01:40 J -26908964.62 -26908964.43 -26908964.21 0.0089 0.0049
 Jupiter -78386-09-26 10:32 J -26908795.23 -26908795.06 -26908794.88 0.0492 0.0337
 Neptune -78385-04-11 10:18 J -26908597.28 -26908597.07 -26908596.82 0.0089 0.0032
 Neptune -78384-04-13 19:40 J -26908229.92 -26908229.68 -26908229.43 0.0089 0.0014
 Neptune -78383-04-16 04:32 J -26907862.56 -26907862.31 -26907862.05 0.0089 0.0004
 Neptune -78382-04-18 13:40 J -26907495.17 -26907494.93 -26907494.68 0.0089 0.0021
 Uranus -78382-06-19 18:28 J -26907432.85 -26907432.73 -26907432.58 0.0147 0.0123
 Neptune -78381-04-19 22:18 J -26907127.78 -26907127.57 -26907127.33 0.0089 0.0039
 Uranus -78381-06-23 21:49 J -26907062.79 -26907062.59 -26907062.38 0.0148 0.0084
 Jupiter -78380-03-18 12:13 J -26906795.20 -26906794.99 -26906794.77 0.0536 0.0187
 Neptune -78380-04-22 07:11 J -26906760.37 -26906760.20 -26906759.98 0.0089 0.0057
 Uranus -78380-06-29 02:08 J -26906692.65 -26906692.41 -26906692.17 0.0148 0.0044

Neptune -78379-04-24 16:32 J -26906392.93 -26906392.81 -26906392.65 0.0089 0.0074
 Uranus -78379-07-04 07:11 J -26906322.46 -26906322.20 -26906321.95 0.0148 0.0004
 Uranus -78378-07-09 12:56 J -26905952.20 -26905951.96 -26905951.71 0.0148 0.0037
 Uranus -78377-07-13 19:11 J -26905581.90 -26905581.70 -26905581.47 0.0148 0.0078
 Saturn -78377-12-01 04:47 J -26905441.48 -26905441.30 -26905441.09 0.0297 0.0188
 Uranus -78376-07-19 02:23 J -26905211.54 -26905211.40 -26905211.24 0.0148 0.0118
 Saturn -78376-12-16 11:30 J -26905061.27 -26905061.02 -26905060.78 0.0298 0.0050
 Saturn -78375-12-31 14:08 J -26904681.14 -26904680.91 -26904680.68 0.0297 0.0088
 Saturn -78373-01-15 09:49 J -26904301.24 -26904301.09 -26904300.92 0.0296 0.0218
 Jupiter -78368-03-23 12:56 J -26902407.19 -26902406.96 -26902406.74 0.0536 0.0077
 Mars -78368-06-05 09:20 J -26902333.11 -26902333.11 -26902333.11 0.1643 0.1643
 Saturn -78363-05-18 12:42 J -26900525.07 -26900524.97 -26900524.84 0.0265 0.0231
 Saturn -78362-05-29 18:28 J -26900148.93 -26900148.73 -26900148.52 0.0264 0.0145
 Saturn -78361-06-08 23:59 J -26899772.73 -26899772.50 -26899772.25 0.0263 0.0056
 Saturn -78360-06-20 07:40 J -26899396.42 -26899396.18 -26899395.93 0.0263 0.0038
 Saturn -78359-07-01 18:42 J -26899019.93 -26899019.72 -26899019.50 0.0264 0.0131
 Saturn -78358-07-13 10:32 J -26898643.19 -26898643.06 -26898642.93 0.0265 0.0221
 Jupiter -78356-03-28 11:59 J -26898019.17 -26898019.00 -26898018.82 0.0535 0.0337
 Saturn -78348-11-24 10:18 J -26894856.18 -26894856.07 -26894855.92 0.0296 0.0250
 Saturn -78347-12-09 18:13 J -26894475.96 -26894475.74 -26894475.50 0.0297 0.0117
 Saturn -78346-12-25 00:13 J -26894095.73 -26894095.49 -26894095.24 0.0298 0.0024
 Saturn -78344-01-08 00:42 J -26893715.67 -26893715.47 -26893715.26 0.0297 0.0161
 Saturn -78343-01-22 16:47 J -26893335.86 -26893335.80 -26893335.72 0.0296 0.0283
 Uranus -78342-12-24 18:42 J -26892634.82 -26892634.72 -26892634.61 0.0132 0.0119
 Uranus -78341-12-28 00:13 J -26892265.67 -26892265.49 -26892265.30 0.0131 0.0091
 Uranus -78339-01-01 05:30 J -26891896.49 -26891896.27 -26891896.04 0.0131 0.0063
 Jupiter -78339-09-12 00:42 J -26891642.65 -26891642.47 -26891642.27 0.0491 0.0300
 Uranus -78338-01-05 10:04 J -26891527.32 -26891527.08 -26891526.83 0.0131 0.0034
 Uranus -78337-01-09 14:23 J -26891158.15 -26891157.90 -26891157.64 0.0131 0.0006
 Uranus -78336-01-12 17:44 J -26890789.00 -26890788.76 -26890788.50 0.0131 0.0023

Mars -78336-06-13 08:52 J -26890637.29 -26890637.13 -26890636.97 0.1624 0.0795
 Uranus -78335-01-16 21:20 J -26890419.84 -26890419.61 -26890419.38 0.0131 0.0050
 Uranus -78334-01-21 00:13 J -26890050.69 -26890050.49 -26890050.28 0.0131 0.0078
 Uranus -78333-01-25 03:06 J -26889681.51 -26889681.37 -26889681.21 0.0131 0.0105
 Saturn -78333-05-24 06:56 J -26889561.38 -26889561.21 -26889561.04 0.0264 0.0184
 Saturn -78332-06-04 12:28 J -26889185.20 -26889184.98 -26889184.75 0.0263 0.0096
 Saturn -78331-06-15 19:11 J -26888808.95 -26888808.70 -26888808.46 0.0263 0.0006
 Saturn -78330-06-27 04:04 J -26888432.55 -26888432.33 -26888432.09 0.0263 0.0089
 Saturn -78329-07-07 17:16 J -26888055.94 -26888055.78 -26888055.59 0.0264 0.0181
 Jupiter -78327-09-16 14:52 J -26887255.11 -26887254.88 -26887254.64 0.0491 0.0091
 Saturn -78318-12-03 06:42 J -26883890.42 -26883890.22 -26883890.02 0.0297 0.0175
 Saturn -78317-12-17 13:11 J -26883510.19 -26883509.95 -26883509.70 0.0298 0.0037
 Saturn -78315-01-01 16:04 J -26883130.06 -26883129.83 -26883129.60 0.0298 0.0102
 Jupiter -78315-09-21 05:01 J -26882867.52 -26882867.29 -26882867.05 0.0492 0.0118
 Saturn -78314-01-16 11:44 J -26882750.15 -26882750.01 -26882749.85 0.0296 0.0232
 Jupiter -78309-03-12 22:32 J -26880867.67 -26880867.56 -26880867.45 0.0536 0.0460
 Pluto -78306-02-17 14:08 J -26879795.93 -26879795.91 -26879795.87 0.0078 0.0078
 Neptune -78306-10-06 12:42 J -26879565.07 -26879564.97 -26879564.81 0.0088 0.0078
 Neptune -78305-10-08 03:20 J -26879197.53 -26879197.36 -26879197.14 0.0088 0.0060
 Saturn -78304-05-19 12:13 J -26878974.12 -26878973.99 -26878973.86 0.0265 0.0222
 Neptune -78304-10-10 18:13 J -26878829.98 -26878829.74 -26878829.50 0.0088 0.0041
 Saturn -78303-05-30 17:30 J -26878597.98 -26878597.77 -26878597.56 0.0264 0.0136
 Jupiter -78303-09-25 18:28 J -26878479.91 -26878479.73 -26878479.55 0.0492 0.0325
 Neptune -78303-10-13 08:37 J -26878462.39 -26878462.14 -26878461.88 0.0088 0.0023
 Saturn -78302-06-10 22:47 J -26878221.78 -26878221.55 -26878221.30 0.0263 0.0045
 Neptune -78302-10-15 23:01 J -26878094.80 -26878094.54 -26878094.27 0.0088 0.0005
 Saturn -78301-06-21 06:13 J -26877845.48 -26877845.24 -26877845.00 0.0263 0.0048
 Neptune -78301-10-17 13:25 J -26877727.19 -26877726.94 -26877726.66 0.0088 0.0015
 Saturn -78300-07-02 16:32 J -26877469.00 -26877468.81 -26877468.59 0.0264 0.0142
 Neptune -78300-10-20 03:49 J -26877359.58 -26877359.34 -26877359.08 0.0088 0.0032

Saturn -78299-07-14 08:08 J -26877092.26 -26877092.16 -26877092.03 0.0265 0.0232
 Neptune -78299-10-22 17:44 J -26876991.95 -26876991.76 -26876991.52 0.0088 0.0051
 Uranus -78298-06-20 06:56 J -26876751.34 -26876751.21 -26876751.05 0.0147 0.0121
 Neptune -78298-10-25 08:08 J -26876624.31 -26876624.16 -26876623.97 0.0088 0.0068
 Jupiter -78297-03-17 23:16 J -26876479.73 -26876479.53 -26876479.31 0.0536 0.0197
 Uranus -78297-06-24 10:32 J -26876381.27 -26876381.06 -26876380.85 0.0148 0.0081
 Neptune -78297-10-26 22:04 J -26876256.61 -26876256.58 -26876256.49 0.0088 0.0087
 Uranus -78296-06-29 14:52 J -26876011.12 -26876010.88 -26876010.63 0.0148 0.0041
 Uranus -78295-07-04 20:08 J -26875640.91 -26875640.66 -26875640.41 0.0148 0.0001
 Uranus -78294-07-10 01:54 J -26875270.66 -26875270.42 -26875270.17 0.0148 0.0042
 Uranus -78293-07-14 08:23 J -26874900.35 -26874900.15 -26874899.93 0.0148 0.0083
 Uranus -78292-07-19 15:20 J -26874529.98 -26874529.86 -26874529.70 0.0148 0.0124
 Mars -78289-06-07 11:01 J -26873476.20 -26873476.04 -26873475.89 0.1639 0.0924
 Saturn -78289-11-25 08:37 J -26873305.27 -26873305.14 -26873304.98 0.0296 0.0240
 Saturn -78288-12-10 16:47 J -26872925.03 -26872924.80 -26872924.57 0.0297 0.0106
 Saturn -78287-12-25 22:47 J -26872544.80 -26872544.55 -26872544.31 0.0298 0.0036
 Saturn -78285-01-09 23:16 J -26872164.72 -26872164.53 -26872164.32 0.0297 0.0173
 Jupiter -78285-03-22 18:28 J -26872091.96 -26872091.73 -26872091.50 0.0535 0.0057
 Saturn -78284-01-23 15:35 J -26871784.86 -26871784.85 -26871784.81 0.0296 0.0294
 Saturn -78275-05-14 23:30 J -26868386.58 -26868386.52 -26868386.47 0.0266 0.0259
 Saturn -78274-05-26 05:16 J -26868010.45 -26868010.28 -26868010.09 0.0264 0.0175
 Jupiter -78273-03-27 14:52 J -26867704.06 -26867703.88 -26867703.69 0.0534 0.0309
 Saturn -78273-06-05 10:32 J -26867634.28 -26867634.06 -26867633.83 0.0263 0.0086
 Saturn -78272-06-16 17:01 J -26867258.03 -26867257.79 -26867257.54 0.0263 0.0007
 Saturn -78271-06-28 02:08 J -26866881.64 -26866881.41 -26866881.18 0.0263 0.0099
 Saturn -78270-07-09 14:52 J -26866505.03 -26866504.88 -26866504.69 0.0264 0.0191
 Saturn -78260-11-18 21:06 J -26862719.65 -26862719.62 -26862719.58 0.0295 0.0292
 Saturn -78259-12-04 04:47 J -26862339.51 -26862339.30 -26862339.09 0.0297 0.0164
 Saturn -78258-12-19 11:59 J -26861959.25 -26861959.00 -26861958.76 0.0298 0.0025
 Uranus -78258-12-25 08:08 J -26861953.26 -26861953.16 -26861953.03 0.0132 0.0117

Mars	-78257-06-15 10:04 J	-26861780.15	-26861780.08	-26861780.00	0.1620	0.1481
Uranus	-78257-12-28 13:40 J	-26861584.10	-26861583.93	-26861583.72	0.0131	0.0089
Saturn	-78256-01-02 14:52 J	-26861579.10	-26861578.88	-26861578.65	0.0298	0.0115
Jupiter	-78256-09-11 11:16 J	-26861327.21	-26861327.03	-26861326.84	0.0491	0.0303
Uranus	-78255-01-01 18:56 J	-26861214.93	-26861214.71	-26861214.47	0.0131	0.0060
Saturn	-78255-01-17 10:47 J	-26861199.18	-26861199.05	-26861198.91	0.0297	0.0244
Uranus	-78254-01-05 23:44 J	-26860845.75	-26860845.51	-26860845.26	0.0131	0.0031
Uranus	-78253-01-10 04:04 J	-26860476.58	-26860476.33	-26860476.07	0.0131	0.0002
Uranus	-78252-01-13 07:40 J	-26860107.43	-26860107.18	-26860106.93	0.0131	0.0026
Uranus	-78251-01-17 10:47 J	-26859738.27	-26859738.05	-26859737.80	0.0131	0.0055
Uranus	-78250-01-21 13:40 J	-26859369.10	-26859368.93	-26859368.71	0.0131	0.0083
Uranus	-78249-01-25 16:32 J	-26858999.93	-26858999.81	-26858999.66	0.0131	0.0110
Saturn	-78245-05-20 10:32 J	-26857423.19	-26857423.06	-26857422.91	0.0265	0.0214
Saturn	-78244-05-31 15:49 J	-26857047.05	-26857046.84	-26857046.63	0.0263	0.0126
Jupiter	-78244-09-16 00:28 J	-26856939.72	-26856939.48	-26856939.24	0.0491	0.0098
Saturn	-78243-06-11 21:06 J	-26856670.86	-26856670.62	-26856670.38	0.0263	0.0035
Saturn	-78242-06-23 03:49 J	-26856294.57	-26856294.34	-26856294.09	0.0263	0.0059
Saturn	-78241-07-03 14:08 J	-26855918.10	-26855917.91	-26855917.70	0.0263	0.0152
Saturn	-78240-07-15 05:59 J	-26855541.35	-26855541.25	-26855541.15	0.0265	0.0241
Jupiter	-78232-09-20 15:35 J	-26852552.08	-26852551.85	-26852551.61	0.0492	0.0113
Saturn	-78230-11-27 06:13 J	-26851754.38	-26851754.24	-26851754.07	0.0296	0.0230
Saturn	-78229-12-11 14:23 J	-26851374.13	-26851373.90	-26851373.66	0.0297	0.0094
Saturn	-78228-12-26 20:23 J	-26850993.89	-26850993.65	-26850993.41	0.0298	0.0047
Saturn	-78226-01-10 21:06 J	-26850613.81	-26850613.62	-26850613.43	0.0297	0.0184
Jupiter	-78226-03-13 06:28 J	-26850552.33	-26850552.23	-26850552.12	0.0536	0.0473
Neptune	-78223-04-06 23:01 J	-26849431.64	-26849431.54	-26849431.37	0.0089	0.0075
Neptune	-78222-04-09 08:23 J	-26849064.33	-26849064.15	-26849063.95	0.0089	0.0057
Neptune	-78221-04-10 17:16 J	-26848696.99	-26848696.78	-26848696.54	0.0089	0.0040
Neptune	-78220-04-13 02:08 J	-26848329.64	-26848329.41	-26848329.15	0.0089	0.0023
Jupiter	-78220-09-25 06:56 J	-26848164.38	-26848164.21	-26848164.02	0.0493	0.0326

Neptune -78219-04-15 11:30 J -26847962.27 -26847962.02 -26847961.77 0.0089 0.0005
 Neptune -78218-04-17 20:23 J -26847594.89 -26847594.65 -26847594.40 0.0089 0.0012
 Neptune -78217-04-19 05:01 J -26847227.51 -26847227.29 -26847227.03 0.0089 0.0030
 Mars -78217-12-15 09:35 J -26846987.30 -26846987.10 -26846986.90 0.1910 0.0355
 Neptune -78216-04-21 14:08 J -26846860.10 -26846859.91 -26846859.68 0.0089 0.0047
 Saturn -78216-05-15 21:06 J -26846835.70 -26846835.62 -26846835.54 0.0266 0.0250
 Neptune -78215-04-23 23:01 J -26846492.68 -26846492.54 -26846492.34 0.0089 0.0065
 Saturn -78215-05-27 02:52 J -26846459.56 -26846459.38 -26846459.18 0.0264 0.0166
 Jupiter -78214-03-18 04:04 J -26846164.53 -26846164.33 -26846164.12 0.0535 0.0217
 Neptune -78214-04-26 08:23 J -26846125.22 -26846125.15 -26846125.03 0.0089 0.0082
 Saturn -78214-06-07 08:08 J -26846083.39 -26846083.16 -26846082.93 0.0263 0.0076
 Uranus -78214-06-20 16:04 J -26846069.97 -26846069.83 -26846069.68 0.0147 0.0119
 Saturn -78213-06-17 14:37 J -26845707.13 -26845706.89 -26845706.65 0.0263 0.0017
 Uranus -78213-06-24 18:56 J -26845699.91 -26845699.71 -26845699.48 0.0148 0.0080
 Saturn -78212-06-28 23:30 J -26845330.74 -26845330.52 -26845330.29 0.0263 0.0110
 Uranus -78212-06-29 23:30 J -26845329.76 -26845329.52 -26845329.27 0.0148 0.0039
 Uranus -78211-07-05 04:32 J -26844959.56 -26844959.31 -26844959.05 0.0148 0.0003
 Saturn -78211-07-10 12:42 J -26844954.13 -26844953.97 -26844953.81 0.0264 0.0200
 Mars -78210-06-10 12:56 J -26844619.14 -26844618.96 -26844618.77 0.1635 0.0214
 Uranus -78210-07-10 10:18 J -26844589.30 -26844589.07 -26844588.82 0.0148 0.0045
 Uranus -78209-07-14 16:47 J -26844219.00 -26844218.80 -26844218.59 0.0148 0.0086
 Uranus -78208-07-19 23:16 J -26843848.63 -26843848.53 -26843848.38 0.0148 0.0128
 Jupiter -78202-03-23 00:56 J -26841776.68 -26841776.46 -26841776.23 0.0535 0.0039
 Saturn -78201-11-19 18:13 J -26841168.79 -26841168.74 -26841168.66 0.0295 0.0283
 Saturn -78200-12-05 01:54 J -26840788.63 -26840788.42 -26840788.20 0.0297 0.0153
 Saturn -78199-12-20 09:06 J -26840408.37 -26840408.12 -26840407.87 0.0298 0.0013
 Saturn -78197-01-04 12:13 J -26840028.21 -26840027.99 -26840027.77 0.0298 0.0127
 Saturn -78196-01-18 08:08 J -26839648.27 -26839648.16 -26839648.03 0.0297 0.0255
 Jupiter -78190-03-28 00:28 J -26837388.66 -26837388.48 -26837388.29 0.0535 0.0298
 Saturn -78186-05-22 09:06 J -26835872.27 -26835872.12 -26835871.97 0.0265 0.0205

Saturn -78185-06-01 14:08 J -26835496.13 -26835495.91 -26835495.69 0.0263 0.0117
 Saturn -78184-06-12 19:25 J -26835119.94 -26835119.69 -26835119.45 0.0263 0.0025
 Saturn -78183-06-24 02:23 J -26834743.64 -26834743.40 -26834743.17 0.0263 0.0069
 Saturn -78182-07-05 12:28 J -26834367.16 -26834366.98 -26834366.78 0.0263 0.0162
 Saturn -78181-07-16 03:49 J -26833990.40 -26833990.34 -26833990.25 0.0264 0.0251
 Uranus -78174-12-25 20:23 J -26831271.75 -26831271.65 -26831271.50 0.0132 0.0115
 Jupiter -78173-09-10 22:18 J -26831011.75 -26831011.57 -26831011.38 0.0491 0.0307
 Uranus -78173-12-29 02:23 J -26830902.58 -26830902.40 -26830902.19 0.0131 0.0085
 Uranus -78171-01-02 07:54 J -26830533.39 -26830533.17 -26830532.93 0.0131 0.0056
 Saturn -78171-11-28 03:06 J -26830203.53 -26830203.37 -26830203.19 0.0296 0.0220
 Uranus -78170-01-06 12:42 J -26830164.21 -26830163.97 -26830163.71 0.0131 0.0027
 Saturn -78170-12-13 11:01 J -26829823.27 -26829823.04 -26829822.79 0.0297 0.0084
 Uranus -78169-01-10 17:16 J -26829795.04 -26829794.78 -26829794.53 0.0131 0.0002
 Saturn -78169-12-27 16:47 J -26829443.03 -26829442.80 -26829442.55 0.0298 0.0059
 Uranus -78168-01-13 20:37 J -26829425.87 -26829425.64 -26829425.38 0.0131 0.0031
 Saturn -78167-01-11 17:16 J -26829062.96 -26829062.78 -26829062.59 0.0297 0.0195
 Uranus -78167-01-18 00:13 J -26829056.71 -26829056.49 -26829056.26 0.0131 0.0059
 Uranus -78166-01-22 02:52 J -26828687.54 -26828687.38 -26828687.17 0.0131 0.0088
 Uranus -78165-01-26 05:59 J -26828318.36 -26828318.25 -26828318.13 0.0131 0.0115
 Jupiter -78161-09-15 11:44 J -26826624.24 -26826624.01 -26826623.77 0.0492 0.0099
 Saturn -78157-05-16 18:56 J -26825284.81 -26825284.71 -26825284.62 0.0266 0.0242
 Saturn -78156-05-28 00:42 J -26824908.66 -26824908.47 -26824908.27 0.0264 0.0156
 Saturn -78155-06-08 06:13 J -26824532.48 -26824532.24 -26824532.01 0.0263 0.0066
 Saturn -78154-06-19 12:28 J -26824156.22 -26824155.98 -26824155.73 0.0263 0.0028
 Saturn -78153-06-29 21:35 J -26823779.82 -26823779.60 -26823779.38 0.0263 0.0120
 Saturn -78152-07-11 10:32 J -26823403.20 -26823403.06 -26823402.90 0.0264 0.0210
 Jupiter -78149-09-20 02:23 J -26822236.63 -26822236.40 -26822236.16 0.0492 0.0112
 Pluto -78147-08-12 15:49 J -26821544.92 -26821544.84 -26821544.70 0.0065 0.0060
 Pluto -78146-08-14 06:13 J -26821178.43 -26821178.24 -26821177.99 0.0066 0.0036
 Jupiter -78143-03-12 12:28 J -26820237.07 -26820236.98 -26820236.89 0.0536 0.0490

Neptune -78142-10-05 16:32 J -26819664.87 -26819664.81 -26819664.73 0.0088 0.0085
 Saturn -78142-11-21 17:01 J -26819617.88 -26819617.79 -26819617.69 0.0295 0.0272
 Neptune -78141-10-07 06:56 J -26819297.38 -26819297.21 -26819297.03 0.0088 0.0067
 Saturn -78141-12-06 00:28 J -26819237.69 -26819237.48 -26819237.26 0.0297 0.0142
 Neptune -78140-10-09 20:52 J -26818929.82 -26818929.63 -26818929.38 0.0088 0.0050
 Saturn -78140-12-21 07:40 J -26818857.43 -26818857.18 -26818856.93 0.0298 0.0001
 Neptune -78139-10-12 11:16 J -26818562.26 -26818562.03 -26818561.76 0.0088 0.0032
 Saturn -78138-01-05 10:47 J -26818477.26 -26818477.05 -26818476.83 0.0298 0.0140
 Neptune -78138-10-15 02:08 J -26818194.66 -26818194.41 -26818194.14 0.0088 0.0013
 Mars -78138-12-20 04:32 J -26818128.39 -26818128.31 -26818128.22 0.1917 0.1726
 Saturn -78137-01-20 06:42 J -26818097.31 -26818097.22 -26818097.10 0.0297 0.0267
 Jupiter -78137-09-24 17:16 J -26817848.96 -26817848.78 -26817848.60 0.0492 0.0320
 Neptune -78137-10-16 16:47 J -26817827.07 -26817826.80 -26817826.54 0.0088 0.0005
 Neptune -78136-10-19 06:42 J -26817459.46 -26817459.22 -26817458.95 0.0088 0.0024
 Neptune -78135-10-21 21:06 J -26817091.84 -26817091.62 -26817091.37 0.0088 0.0042
 Neptune -78134-10-24 11:16 J -26816724.20 -26816724.03 -26816723.81 0.0088 0.0060
 Neptune -78133-10-26 01:25 J -26816356.54 -26816356.44 -26816356.28 0.0088 0.0077
 Jupiter -78131-03-17 11:59 J -26815849.20 -26815849.00 -26815848.79 0.0536 0.0231
 Mars -78131-06-12 14:08 J -26815762.08 -26815761.91 -26815761.73 0.1631 0.0500
 Uranus -78130-06-21 02:08 J -26815388.55 -26815388.41 -26815388.26 0.0147 0.0117
 Uranus -78129-06-25 05:01 J -26815018.49 -26815018.29 -26815018.06 0.0147 0.0078
 Uranus -78128-06-30 09:20 J -26814648.34 -26814648.11 -26814647.85 0.0148 0.0037
 Saturn -78127-05-23 07:40 J -26814321.33 -26814321.18 -26814321.01 0.0265 0.0196
 Uranus -78127-07-05 14:37 J -26814278.14 -26814277.89 -26814277.64 0.0148 0.0006
 Saturn -78126-06-03 12:42 J -26813945.18 -26813944.97 -26813944.74 0.0263 0.0107
 Uranus -78126-07-10 20:08 J -26813907.89 -26813907.66 -26813907.41 0.0148 0.0048
 Saturn -78125-06-13 18:13 J -26813568.98 -26813568.74 -26813568.50 0.0263 0.0014
 Uranus -78125-07-15 02:23 J -26813537.59 -26813537.40 -26813537.19 0.0148 0.0090
 Saturn -78124-06-25 01:25 J -26813192.67 -26813192.44 -26813192.21 0.0263 0.0080
 Uranus -78124-07-20 09:06 J -26813167.21 -26813167.12 -26813166.99 0.0148 0.0132

Saturn -78123-07-06 11:44 J -26812816.19 -26812816.01 -26812815.82 0.0263 0.0172
 Saturn -78122-07-18 03:06 J -26812439.40 -26812439.37 -26812439.31 0.0264 0.0261
 Jupiter -78119-03-22 12:42 J -26811461.20 -26811460.97 -26811460.74 0.0535 0.0031
 Saturn -78112-11-29 02:23 J -26808652.58 -26808652.40 -26808652.22 0.0296 0.0208
 Saturn -78111-12-14 10:04 J -26808272.32 -26808272.08 -26808271.84 0.0297 0.0071
 Saturn -78110-12-29 15:20 J -26807892.10 -26807891.86 -26807891.62 0.0298 0.0071
 Saturn -78108-01-12 15:06 J -26807512.03 -26807511.87 -26807511.68 0.0297 0.0207
 Jupiter -78107-03-27 09:06 J -26807073.30 -26807073.12 -26807072.92 0.0534 0.0287
 Saturn -78098-05-18 16:47 J -26803733.90 -26803733.80 -26803733.67 0.0266 0.0233
 Saturn -78097-05-28 23:01 J -26803357.73 -26803357.54 -26803357.33 0.0264 0.0146
 Saturn -78096-06-09 04:47 J -26802981.53 -26802981.30 -26802981.06 0.0263 0.0055
 Saturn -78095-06-20 11:30 J -26802605.26 -26802605.02 -26802604.78 0.0263 0.0039
 Saturn -78094-07-01 20:37 J -26802228.85 -26802228.64 -26802228.42 0.0263 0.0131
 Saturn -78093-07-12 10:18 J -26801852.20 -26801852.07 -26801851.93 0.0264 0.0221
 Jupiter -78090-09-11 07:11 J -26800696.39 -26800696.20 -26800696.02 0.0491 0.0310
 Uranus -78090-12-26 08:52 J -26800590.24 -26800590.13 -26800589.97 0.0132 0.0113
 Uranus -78089-12-29 15:20 J -26800221.06 -26800220.86 -26800220.66 0.0131 0.0083
 Uranus -78087-01-02 20:52 J -26799851.86 -26799851.63 -26799851.39 0.0131 0.0053
 Uranus -78086-01-07 01:40 J -26799482.67 -26799482.43 -26799482.17 0.0131 0.0024
 Uranus -78085-01-11 06:28 J -26799113.49 -26799113.23 -26799112.98 0.0131 0.0006
 Uranus -78084-01-14 09:49 J -26798744.32 -26798744.09 -26798743.83 0.0131 0.0035
 Mars -78084-06-06 14:08 J -26798601.02 -26798600.91 -26798600.79 0.1648 0.1288
 Uranus -78083-01-18 13:25 J -26798375.14 -26798374.94 -26798374.70 0.0131 0.0064
 Saturn -78083-11-22 17:01 J -26798066.89 -26798066.79 -26798066.66 0.0295 0.0261
 Uranus -78082-01-22 16:32 J -26798005.98 -26798005.81 -26798005.62 0.0131 0.0092
 Saturn -78082-12-08 00:42 J -26797686.69 -26797686.47 -26797686.24 0.0297 0.0129
 Uranus -78081-01-26 19:11 J -26797636.78 -26797636.70 -26797636.59 0.0131 0.0120
 Saturn -78081-12-22 07:25 J -26797306.43 -26797306.19 -26797305.94 0.0298 0.0015
 Saturn -78079-01-06 10:18 J -26796926.28 -26796926.07 -26796925.86 0.0298 0.0153
 Saturn -78078-01-21 05:59 J -26796546.32 -26796546.25 -26796546.15 0.0297 0.0279

Jupiter -78078-09-15 21:35 J -26796308.83 -26796308.60 -26796308.36 0.0491 0.0103
 Saturn -78068-05-24 07:25 J -26792770.36 -26792770.19 -26792770.01 0.0265 0.0185
 Saturn -78067-06-04 12:42 J -26792394.19 -26792393.97 -26792393.74 0.0263 0.0095
 Saturn -78066-06-15 18:28 J -26792017.97 -26792017.73 -26792017.49 0.0263 0.0003
 Jupiter -78066-09-20 10:47 J -26791921.28 -26791921.05 -26791920.81 0.0492 0.0104
 Saturn -78065-06-26 01:40 J -26791641.65 -26791641.43 -26791641.19 0.0263 0.0092
 Saturn -78064-07-07 12:28 J -26791265.15 -26791264.98 -26791264.79 0.0263 0.0183
 Jupiter -78060-03-11 22:04 J -26789921.65 -26789921.58 -26789921.49 0.0536 0.0500
 Pluto -78059-02-17 16:47 J -26789579.04 -26789578.80 -26789578.55 0.0079 0.0018
 Neptune -78059-04-06 06:42 J -26789531.29 -26789531.22 -26789531.11 0.0089 0.0082
 Neptune -78058-04-08 16:04 J -26789163.99 -26789163.83 -26789163.65 0.0089 0.0065
 Neptune -78057-04-10 00:56 J -26788796.66 -26788796.46 -26788796.24 0.0089 0.0048
 Neptune -78056-04-12 09:49 J -26788429.31 -26788429.09 -26788428.84 0.0089 0.0031
 Neptune -78055-04-14 18:56 J -26788061.95 -26788061.71 -26788061.45 0.0089 0.0014
 Neptune -78054-04-17 04:04 J -26787694.58 -26787694.33 -26787694.08 0.0089 0.0004
 Jupiter -78054-09-25 02:08 J -26787533.59 -26787533.41 -26787533.22 0.0492 0.0312
 Neptune -78053-04-18 12:42 J -26787327.20 -26787326.97 -26787326.71 0.0089 0.0022
 Saturn -78053-11-30 04:18 J -26787101.50 -26787101.32 -26787101.13 0.0296 0.0195
 Neptune -78052-04-20 21:49 J -26786959.81 -26786959.59 -26786959.35 0.0089 0.0038
 Mars -78052-06-14 15:06 J -26786904.99 -26786904.87 -26786904.74 0.1628 0.1203
 Saturn -78052-12-15 11:44 J -26786721.25 -26786721.01 -26786720.77 0.0297 0.0056
 Neptune -78051-04-23 06:56 J -26786592.40 -26786592.21 -26786592.01 0.0089 0.0055
 Saturn -78051-12-30 16:47 J -26786341.03 -26786340.80 -26786340.56 0.0298 0.0086
 Neptune -78050-04-25 16:04 J -26786224.97 -26786224.83 -26786224.68 0.0089 0.0073
 Saturn -78049-01-14 16:04 J -26785960.98 -26785960.83 -26785960.65 0.0297 0.0220
 Jupiter -78048-03-16 21:06 J -26785533.82 -26785533.62 -26785533.41 0.0535 0.0239
 Uranus -78046-06-21 14:08 J -26784707.06 -26784706.91 -26784706.75 0.0147 0.0115
 Uranus -78045-06-25 17:01 J -26784337.00 -26784336.79 -26784336.56 0.0147 0.0074
 Uranus -78044-06-30 21:06 J -26783966.86 -26783966.62 -26783966.36 0.0148 0.0033
 Uranus -78043-07-06 01:54 J -26783596.67 -26783596.42 -26783596.17 0.0148 0.0010

Uranus	-78042-07-11 07:11 J	-26783226.43	-26783226.20	-26783225.95	0.0148	0.0052
Uranus	-78041-07-15 12:56 J	-26782856.13	-26782855.96	-26782855.75	0.0148	0.0095
Uranus	-78040-07-20 19:54 J	-26782485.76	-26782485.67	-26782485.57	0.0148	0.0136
Saturn	-78039-05-19 16:32 J	-26782182.93	-26782182.81	-26782182.67	0.0266	0.0222
Saturn	-78038-05-30 23:16 J	-26781806.74	-26781806.53	-26781806.32	0.0264	0.0134
Saturn	-78037-06-10 05:01 J	-26781430.52	-26781430.29	-26781430.04	0.0263	0.0042
Jupiter	-78036-03-21 18:13 J	-26781145.97	-26781145.74	-26781145.51	0.0535	0.0014
Saturn	-78036-06-21 12:13 J	-26781054.23	-26781053.99	-26781053.75	0.0263	0.0051
Saturn	-78035-07-02 21:35 J	-26780677.80	-26780677.60	-26780677.39	0.0263	0.0143
Saturn	-78034-07-14 11:30 J	-26780301.12	-26780301.02	-26780300.89	0.0264	0.0233
Jupiter	-78024-03-26 12:56 J	-26776758.16	-26776757.96	-26776757.76	0.0534	0.0263
Saturn	-78024-11-23 21:20 J	-26776515.73	-26776515.61	-26776515.46	0.0295	0.0248
Saturn	-78023-12-09 04:47 J	-26776135.52	-26776135.30	-26776135.06	0.0297	0.0114
Saturn	-78022-12-24 11:16 J	-26775755.27	-26775755.03	-26775754.78	0.0298	0.0029
Saturn	-78020-01-07 13:25 J	-26775375.14	-26775374.94	-26775374.73	0.0298	0.0168
Saturn	-78019-01-22 08:37 J	-26774995.17	-26774995.14	-26774995.09	0.0297	0.0292
Jupiter	-78012-03-31 10:18 J	-26772370.12	-26772370.07	-26772370.01	0.0534	0.0516
Saturn	-78010-05-15 01:40 J	-26771595.48	-26771595.43	-26771595.37	0.0267	0.0259
Saturn	-78009-05-25 08:37 J	-26771219.31	-26771219.14	-26771218.95	0.0265	0.0174
Saturn	-78008-06-05 14:23 J	-26770843.12	-26770842.90	-26770842.66	0.0263	0.0083
Saturn	-78007-06-16 20:37 J	-26770466.88	-26770466.64	-26770466.40	0.0263	0.0010
Jupiter	-78007-09-10 14:52 J	-26770381.06	-26770380.88	-26770380.70	0.0491	0.0319
Saturn	-78006-06-28 04:18 J	-26770090.54	-26770090.32	-26770090.09	0.0263	0.0104
Uranus	-78006-12-26 21:06 J	-26769908.75	-26769908.62	-26769908.47	0.0132	0.0110
Mars	-78005-06-08 16:04 J	-26769744.00	-26769743.83	-26769743.65	0.1644	0.0549
Saturn	-78005-07-08 15:35 J	-26769714.00	-26769713.85	-26769713.68	0.0263	0.0196
Uranus	-78005-12-30 02:52 J	-26769539.56	-26769539.38	-26769539.16	0.0132	0.0081
Uranus	-78003-01-03 09:06 J	-26769170.35	-26769170.12	-26769169.88	0.0131	0.0050
Uranus	-78002-01-07 14:23 J	-26768801.15	-26768800.90	-26768800.65	0.0131	0.0020
Uranus	-78001-01-11 18:56 J	-26768431.97	-26768431.71	-26768431.46	0.0131	0.0009

78TH MILLENNIUM BCE

This is a list of transits of Earth in the 78th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-78000-01-14 22:32 J		-26768062.79	-26768062.56	-26768062.30	0.0131	0.0039	
Uranus	-77999-01-19 02:08 J		-26767693.61	-26767693.41	-26767693.18	0.0131	0.0069	
Uranus	-77998-01-23 05:01 J		-26767324.44	-26767324.29	-26767324.10	0.0131	0.0098	
Uranus	-77997-01-27 07:54 J		-26766955.22	-26766955.17	-26766955.08	0.0131	0.0126	
Jupiter	-77995-09-15 04:47 J		-26765993.54	-26765993.30	-26765993.07	0.0491	0.0114	
Saturn	-77994-12-02 10:04 J		-26765550.27	-26765550.08	-26765549.87	0.0296	0.0180	
Saturn	-77993-12-16 17:16 J		-26765170.02	-26765169.78	-26765169.53	0.0297	0.0040	
Saturn	-77992-12-31 21:35 J		-26764789.82	-26764789.60	-26764789.36	0.0298	0.0102	
Saturn	-77990-01-15 20:23 J		-26764409.78	-26764409.65	-26764409.49	0.0297	0.0234	
Jupiter	-77983-09-19 16:32 J		-26761606.04	-26761605.81	-26761605.57	0.0492	0.0093	
Saturn	-77980-05-20 17:59 J		-26760631.88	-26760631.75	-26760631.59	0.0266	0.0211	
Saturn	-77979-06-01 00:42 J		-26760255.67	-26760255.47	-26760255.24	0.0265	0.0122	
Saturn	-77978-06-12 07:11 J		-26759879.44	-26759879.20	-26759878.96	0.0263	0.0029	
Jupiter	-77977-03-11 03:35 J		-26759606.40	-26759606.35	-26759606.28	0.0535	0.0515	
Saturn	-77977-06-22 14:37 J		-26759503.13	-26759502.89	-26759502.65	0.0263	0.0065	
Neptune	-77977-10-06 10:18 J		-26759397.18	-26759397.07	-26759396.90	0.0088	0.0075	
Saturn	-77976-07-04 00:56 J		-26759126.66	-26759126.46	-26759126.27	0.0263	0.0156	
Neptune	-77976-10-09 00:56 J		-26759029.65	-26759029.46	-26759029.24	0.0088	0.0057	
Saturn	-77975-07-15 15:06 J		-26758749.94	-26758749.87	-26758749.76	0.0264	0.0245	

Neptune -77975-10-11 15:35 J -26758662.08 -26758661.85 -26758661.61 0.0088 0.0039
 Neptune -77974-10-14 05:44 J -26758294.50 -26758294.26 -26758293.99 0.0088 0.0021
 Neptune -77973-10-15 20:23 J -26757926.92 -26757926.65 -26757926.39 0.0088 0.0003
 Neptune -77972-10-18 10:47 J -26757559.31 -26757559.05 -26757558.79 0.0088 0.0015
 Jupiter -77971-09-24 06:56 J -26757218.40 -26757218.21 -26757218.02 0.0492 0.0302
 Neptune -77971-10-21 01:11 J -26757191.69 -26757191.45 -26757191.20 0.0088 0.0033
 Neptune -77970-10-23 15:20 J -26756824.06 -26756823.86 -26756823.63 0.0088 0.0050
 Neptune -77969-10-25 05:16 J -26756456.42 -26756456.28 -26756456.08 0.0088 0.0069
 Neptune -77968-10-27 19:54 J -26756088.72 -26756088.67 -26756088.59 0.0088 0.0086
 Jupiter -77965-03-15 22:18 J -26755218.77 -26755218.57 -26755218.38 0.0535 0.0268
 Saturn -77965-11-25 05:44 J -26754964.41 -26754964.26 -26754964.10 0.0295 0.0232
 Saturn -77964-12-10 12:56 J -26754584.19 -26754583.96 -26754583.72 0.0297 0.0096
 Saturn -77963-12-25 18:56 J -26754203.95 -26754203.71 -26754203.46 0.0298 0.0047
 Uranus -77962-06-22 05:16 J -26754025.43 -26754025.28 -26754025.11 0.0147 0.0111
 Saturn -77961-01-09 20:37 J -26753823.83 -26753823.64 -26753823.45 0.0298 0.0184
 Uranus -77961-06-26 08:08 J -26753655.37 -26753655.16 -26753654.93 0.0147 0.0070
 Uranus -77960-07-01 11:59 J -26753285.24 -26753285.00 -26753284.75 0.0148 0.0029
 Uranus -77959-07-06 16:32 J -26752915.06 -26752914.81 -26752914.55 0.0148 0.0014
 Uranus -77958-07-11 21:49 J -26752544.82 -26752544.59 -26752544.35 0.0148 0.0057
 Uranus -77957-07-16 03:20 J -26752174.53 -26752174.36 -26752174.16 0.0148 0.0100
 Uranus -77956-07-21 10:04 J -26751804.14 -26751804.08 -26751804.01 0.0148 0.0142
 Jupiter -77953-03-20 19:54 J -26750830.90 -26750830.67 -26750830.44 0.0535 0.0014
 Saturn -77951-05-16 04:47 J -26750044.37 -26750044.30 -26750044.20 0.0267 0.0248
 Saturn -77950-05-27 12:13 J -26749668.18 -26749667.99 -26749667.80 0.0265 0.0161
 Saturn -77949-06-06 18:28 J -26749291.96 -26749291.73 -26749291.50 0.0263 0.0069
 Saturn -77948-06-18 00:56 J -26748915.70 -26748915.46 -26748915.22 0.0263 0.0024
 Saturn -77947-06-29 09:06 J -26748539.33 -26748539.12 -26748538.89 0.0263 0.0118
 Saturn -77946-07-10 21:06 J -26748162.76 -26748162.62 -26748162.46 0.0263 0.0209
 Jupiter -77941-03-25 18:56 J -26746442.91 -26746442.71 -26746442.51 0.0535 0.0245
 Saturn -77936-11-18 15:06 J -26744378.90 -26744378.87 -26744378.82 0.0294 0.0290

Saturn -77935-12-03 21:20 J -26743998.81 -26743998.61 -26743998.39 0.0296 0.0162
 Saturn -77934-12-19 04:18 J -26743618.57 -26743618.32 -26743618.07 0.0297 0.0021
 Mars -77933-12-14 06:56 J -26743257.39 -26743257.21 -26743257.02 0.1899 0.0807
 Saturn -77932-01-02 08:08 J -26743238.39 -26743238.16 -26743237.94 0.0298 0.0120
 Saturn -77931-01-17 05:44 J -26742858.37 -26742858.26 -26742858.11 0.0297 0.0251
 Jupiter -77929-03-30 16:47 J -26742054.88 -26742054.80 -26742054.73 0.0534 0.0500
 Mars -77926-06-11 18:13 J -26740886.92 -26740886.74 -26740886.55 0.1640 0.0174
 Jupiter -77924-09-09 17:16 J -26740065.95 -26740065.78 -26740065.60 0.0491 0.0335
 Uranus -77922-12-27 09:49 J -26739227.22 -26739227.09 -26739226.92 0.0132 0.0108
 Saturn -77921-05-21 21:35 J -26739080.75 -26739080.60 -26739080.43 0.0266 0.0198
 Uranus -77921-12-30 16:18 J -26738858.01 -26738857.82 -26738857.60 0.0132 0.0078
 Saturn -77920-06-02 04:32 J -26738704.52 -26738704.31 -26738704.08 0.0265 0.0108
 Uranus -77919-01-03 22:18 J -26738488.80 -26738488.57 -26738488.32 0.0131 0.0047
 Saturn -77919-06-13 11:30 J -26738328.27 -26738328.02 -26738327.78 0.0264 0.0014
 Uranus -77918-01-08 03:35 J -26738119.60 -26738119.35 -26738119.09 0.0131 0.0017
 Saturn -77918-06-24 19:25 J -26737951.92 -26737951.69 -26737951.46 0.0263 0.0079
 Uranus -77917-01-12 08:08 J -26737750.41 -26737750.16 -26737749.90 0.0131 0.0013
 Saturn -77917-07-05 05:59 J -26737575.42 -26737575.25 -26737575.05 0.0263 0.0172
 Uranus -77916-01-15 11:44 J -26737381.24 -26737381.01 -26737380.75 0.0131 0.0044
 Saturn -77916-07-16 21:35 J -26737198.64 -26737198.60 -26737198.55 0.0264 0.0259
 Uranus -77915-01-19 15:49 J -26737012.05 -26737011.84 -26737011.63 0.0131 0.0073
 Uranus -77914-01-23 18:42 J -26736642.88 -26736642.72 -26736642.56 0.0131 0.0102
 Uranus -77913-01-27 21:06 J -26736273.63 -26736273.62 -26736273.57 0.0131 0.0130
 Jupiter -77912-09-14 06:56 J -26735678.44 -26735678.21 -26735677.98 0.0492 0.0129
 Saturn -77906-11-27 18:42 J -26733412.88 -26733412.72 -26733412.54 0.0295 0.0214
 Saturn -77905-12-12 01:40 J -26733032.67 -26733032.43 -26733032.19 0.0297 0.0077
 Saturn -77904-12-27 07:11 J -26732652.44 -26732652.20 -26732651.96 0.0298 0.0066
 Saturn -77902-01-11 08:08 J -26732272.33 -26732272.16 -26732271.98 0.0298 0.0203
 Jupiter -77900-09-18 21:20 J -26731290.85 -26731290.61 -26731290.37 0.0492 0.0078
 Pluto -77899-08-14 10:47 J -26730961.26 -26730961.05 -26730960.82 0.0065 0.0036

Pluto -77898-08-16 00:28 J -26730594.56 -26730594.48 -26730594.34 0.0066 0.0060
 Neptune -77894-04-07 23:44 J -26729263.63 -26729263.51 -26729263.34 0.0089 0.0073
 Neptune -77893-04-09 09:06 J -26728896.30 -26728896.12 -26728895.91 0.0089 0.0056
 Neptune -77892-04-11 18:13 J -26728528.94 -26728528.74 -26728528.49 0.0089 0.0039
 Saturn -77892-05-17 10:18 J -26728493.17 -26728493.07 -26728492.95 0.0267 0.0235
 Neptune -77891-04-14 03:20 J -26728161.59 -26728161.36 -26728161.10 0.0089 0.0022
 Saturn -77891-05-28 17:44 J -26728116.95 -26728116.76 -26728116.55 0.0265 0.0147
 Neptune -77890-04-16 12:42 J -26727794.22 -26727793.97 -26727793.71 0.0089 0.0005
 Saturn -77890-06-09 00:13 J -26727740.72 -26727740.49 -26727740.25 0.0263 0.0055
 Neptune -77889-04-17 21:35 J -26727426.84 -26727426.60 -26727426.34 0.0089 0.0013
 Saturn -77889-06-19 07:11 J -26727364.44 -26727364.20 -26727363.95 0.0263 0.0040
 Neptune -77888-04-20 06:28 J -26727059.45 -26727059.23 -26727058.98 0.0089 0.0030
 Saturn -77888-06-30 16:04 J -26726988.03 -26726987.83 -26726987.61 0.0263 0.0133
 Jupiter -77888-09-23 10:18 J -26726903.26 -26726903.07 -26726902.87 0.0492 0.0284
 Neptune -77887-04-22 15:20 J -26726692.05 -26726691.86 -26726691.62 0.0089 0.0047
 Saturn -77887-07-12 05:01 J -26726611.42 -26726611.29 -26726611.16 0.0264 0.0223
 Neptune -77886-04-25 00:28 J -26726324.63 -26726324.48 -26726324.29 0.0089 0.0064
 Neptune -77885-04-26 10:04 J -26725957.19 -26725957.08 -26725956.98 0.0089 0.0081
 Jupiter -77882-03-16 01:25 J -26724903.63 -26724903.44 -26724903.25 0.0536 0.0293
 Uranus -77878-06-22 20:23 J -26723343.82 -26723343.65 -26723343.48 0.0147 0.0107
 Uranus -77877-06-26 22:47 J -26722973.76 -26722973.55 -26722973.31 0.0147 0.0067
 Saturn -77877-11-20 06:13 J -26722827.31 -26722827.24 -26722827.13 0.0294 0.0272
 Uranus -77876-07-02 02:37 J -26722603.63 -26722603.39 -26722603.13 0.0147 0.0024
 Jupiter -77876-09-28 00:42 J -26722515.49 -26722515.47 -26722515.44 0.0493 0.0489
 Saturn -77876-12-05 12:42 J -26722447.18 -26722446.97 -26722446.75 0.0296 0.0142
 Uranus -77875-07-07 06:56 J -26722233.46 -26722233.21 -26722232.96 0.0148 0.0020
 Saturn -77875-12-20 19:11 J -26722066.94 -26722066.70 -26722066.45 0.0297 0.0005
 Uranus -77874-07-12 11:59 J -26721863.22 -26721863.00 -26721862.76 0.0148 0.0063
 Saturn -77873-01-04 22:18 J -26721686.78 -26721686.57 -26721686.35 0.0298 0.0140
 Uranus -77873-07-16 17:30 J -26721492.93 -26721492.77 -26721492.58 0.0148 0.0106

Saturn -77872-01-18 19:25 J -26721306.78 -26721306.69 -26721306.58 0.0297 0.0269
 Jupiter -77870-03-21 00:56 J -26720515.68 -26720515.46 -26720515.23 0.0535 0.0032
 Saturn -77862-05-24 03:35 J -26717529.52 -26717529.35 -26717529.17 0.0266 0.0184
 Saturn -77861-06-03 10:47 J -26717153.27 -26717153.05 -26717152.82 0.0265 0.0093
 Saturn -77860-06-14 17:59 J -26716776.99 -26716776.75 -26716776.51 0.0264 0.0002
 Saturn -77859-06-26 02:08 J -26716400.63 -26716400.41 -26716400.17 0.0263 0.0096
 Jupiter -77858-03-25 21:35 J -26716127.80 -26716127.60 -26716127.39 0.0534 0.0220
 Saturn -77858-07-07 13:40 J -26716024.10 -26716023.93 -26716023.75 0.0264 0.0187
 Mars -77854-12-19 00:13 J -26714398.65 -26714398.49 -26714398.33 0.1907 0.1208
 Mars -77847-06-13 20:08 J -26712029.81 -26712029.66 -26712029.50 0.1636 0.0900
 Saturn -77847-11-29 11:44 J -26711861.19 -26711861.01 -26711860.81 0.0296 0.0195
 Jupiter -77846-03-30 13:54 J -26711740.03 -26711739.92 -26711739.81 0.0534 0.0461
 Saturn -77846-12-14 18:42 J -26711480.97 -26711480.72 -26711480.48 0.0297 0.0056
 Saturn -77845-12-28 23:30 J -26711100.75 -26711100.52 -26711100.28 0.0298 0.0088
 Saturn -77843-01-12 23:44 J -26710720.66 -26710720.51 -26710720.34 0.0298 0.0224
 Jupiter -77841-09-08 21:20 J -26709750.77 -26709750.61 -26709750.44 0.0491 0.0351
 Uranus -77838-12-27 22:04 J -26708545.72 -26708545.58 -26708545.42 0.0132 0.0105
 Uranus -77837-12-31 04:18 J -26708176.52 -26708176.32 -26708176.09 0.0132 0.0075
 Uranus -77835-01-04 10:18 J -26707807.30 -26707807.07 -26707806.82 0.0131 0.0044
 Uranus -77834-01-08 15:35 J -26707438.10 -26707437.85 -26707437.59 0.0131 0.0013
 Uranus -77833-01-12 20:08 J -26707068.91 -26707068.66 -26707068.41 0.0131 0.0017
 Saturn -77833-05-18 17:44 J -26706941.88 -26706941.76 -26706941.62 0.0267 0.0222
 Uranus -77832-01-15 23:59 J -26706699.73 -26706699.50 -26706699.26 0.0131 0.0047
 Saturn -77832-05-30 01:25 J -26706565.64 -26706565.44 -26706565.23 0.0265 0.0132
 Uranus -77831-01-20 03:20 J -26706330.55 -26706330.36 -26706330.14 0.0131 0.0078
 Saturn -77831-06-10 08:08 J -26706189.40 -26706189.16 -26706188.92 0.0264 0.0039
 Uranus -77830-01-24 06:28 J -26705961.36 -26705961.23 -26705961.07 0.0131 0.0106
 Saturn -77830-06-21 15:20 J -26705813.09 -26705812.86 -26705812.62 0.0263 0.0056
 Saturn -77829-07-02 00:56 J -26705436.65 -26705436.46 -26705436.25 0.0263 0.0149
 Jupiter -77829-09-13 09:35 J -26705363.32 -26705363.10 -26705362.86 0.0491 0.0148

Saturn -77828-07-13 14:23 J -26705059.99 -26705059.90 -26705059.78 0.0264 0.0239
 Saturn -77818-11-23 01:54 J -26701275.54 -26701275.42 -26701275.28 0.0294 0.0252
 Jupiter -77817-09-17 22:47 J -26700975.79 -26700975.55 -26700975.31 0.0491 0.0057
 Saturn -77817-12-07 08:08 J -26700895.38 -26700895.16 -26700894.93 0.0296 0.0119
 Saturn -77816-12-22 14:08 J -26700515.15 -26700514.91 -26700514.66 0.0297 0.0023
 Saturn -77814-01-06 16:32 J -26700135.01 -26700134.81 -26700134.60 0.0297 0.0162
 Saturn -77813-01-21 12:28 J -26699755.02 -26699754.98 -26699754.91 0.0296 0.0289
 Neptune -77813-10-05 15:35 J -26699496.92 -26699496.85 -26699496.72 0.0088 0.0082
 Neptune -77812-10-08 06:28 J -26699129.40 -26699129.23 -26699129.03 0.0088 0.0064
 Pluto -77811-02-19 12:56 J -26698995.21 -26698994.96 -26698994.71 0.0079 0.0018
 Neptune -77811-10-10 20:37 J -26698761.84 -26698761.64 -26698761.39 0.0088 0.0047
 Neptune -77810-10-13 11:01 J -26698394.28 -26698394.04 -26698393.77 0.0088 0.0029
 Neptune -77809-10-15 01:25 J -26698026.69 -26698026.44 -26698026.17 0.0088 0.0011
 Neptune -77808-10-17 15:49 J -26697659.10 -26697658.84 -26697658.57 0.0088 0.0007
 Neptune -77807-10-20 06:13 J -26697291.49 -26697291.24 -26697290.98 0.0088 0.0025
 Neptune -77806-10-22 20:08 J -26696923.87 -26696923.66 -26696923.41 0.0088 0.0042
 Jupiter -77805-09-22 09:20 J -26696588.31 -26696588.11 -26696587.90 0.0492 0.0259
 Neptune -77805-10-24 10:32 J -26696556.24 -26696556.06 -26696555.85 0.0088 0.0060
 Saturn -77804-05-14 02:08 J -26696354.46 -26696354.41 -26696354.33 0.0268 0.0259
 Neptune -77804-10-27 00:28 J -26696188.58 -26696188.48 -26696188.32 0.0088 0.0078
 Saturn -77803-05-25 11:01 J -26695978.21 -26695978.04 -26695977.85 0.0266 0.0170
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 Saturn -77801-06-16 01:54 J -26695225.66 -26695225.42 -26695225.18 0.0264 0.0018
 Mars -77800-06-07 18:56 J -26694868.87 -26694868.71 -26694868.56 0.1653 0.0926
 Saturn -77800-06-27 10:32 J -26694849.28 -26694849.06 -26694848.84 0.0263 0.0112
 Jupiter -77799-03-15 03:20 J -26694588.54 -26694588.36 -26694588.17 0.0535 0.0319
 Saturn -77799-07-08 22:32 J -26694472.71 -26694472.56 -26694472.40 0.0264 0.0203
 Uranus -77795-06-18 06:56 J -26693032.22 -26693032.21 -26693032.16 0.0147 0.0146
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 Uranus -77793-06-27 11:59 J -26692292.22 -26692292.00 -26692291.77 0.0147 0.0063

Jupiter -77793-09-26 23:44 J -26692200.59 -26692200.51 -26692200.43 0.0493 0.0465
 Uranus -77792-07-02 15:35 J -26691922.10 -26691921.85 -26691921.60 0.0147 0.0020
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 Saturn -77787-12-16 13:54 J -26689929.16 -26689928.92 -26689928.67 0.0297 0.0033
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 Saturn -77784-01-14 17:59 J -26689168.88 -26689168.75 -26689168.60 0.0298 0.0245
 Jupiter -77775-03-24 16:18 J -26685813.03 -26685812.82 -26685812.60 0.0535 0.0175
 Saturn -77774-05-21 02:52 J -26685390.52 -26685390.38 -26685390.22 0.0266 0.0208
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 Saturn -77771-06-23 00:42 J -26684261.70 -26684261.47 -26684261.23 0.0263 0.0072
 Saturn -77770-07-04 11:01 J -26683885.23 -26683885.04 -26683884.85 0.0263 0.0165
 Saturn -77769-07-15 01:11 J -26683508.51 -26683508.45 -26683508.39 0.0264 0.0255
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 Jupiter -77763-03-29 13:54 J -26681425.05 -26681424.92 -26681424.79 0.0534 0.0430
 Saturn -77759-11-24 23:16 J -26679723.68 -26679723.53 -26679723.37 0.0295 0.0232
 Jupiter -77758-09-08 22:18 J -26679435.72 -26679435.57 -26679435.41 0.0491 0.0373
 Saturn -77758-12-10 05:16 J -26679343.51 -26679343.28 -26679343.04 0.0297 0.0097
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 Uranus -77751-01-04 22:18 J -26677125.80 -26677125.57 -26677125.32 0.0131 0.0041
 Uranus -77750-01-09 03:20 J -26676756.61 -26676756.36 -26676756.11 0.0131 0.0010
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Uranus -77747-01-20 14:52 J -26675649.06 -26675648.88 -26675648.66 0.0131 0.0082
 Uranus -77746-01-24 17:59 J -26675279.87 -26675279.75 -26675279.60 0.0131 0.0111
 Jupiter -77746-09-13 07:54 J -26675048.39 -26675048.17 -26675047.94 0.0491 0.0175
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 Saturn -77744-05-26 19:54 J -26674426.86 -26674426.67 -26674426.47 0.0266 0.0155
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 Saturn -77742-06-18 10:32 J -26673674.30 -26673674.06 -26673673.82 0.0264 0.0034
 Saturn -77741-06-28 19:25 J -26673297.90 -26673297.69 -26673297.48 0.0264 0.0129
 Saturn -77740-07-10 07:40 J -26672921.30 -26672921.18 -26672921.03 0.0264 0.0220
 Jupiter -77734-09-17 21:20 J -26670660.84 -26670660.61 -26670660.37 0.0492 0.0033
 Neptune -77730-04-07 09:35 J -26669363.20 -26669363.10 -26669362.98 0.0089 0.0079
 Saturn -77730-11-18 22:18 J -26669137.63 -26669137.57 -26669137.50 0.0293 0.0283
 Neptune -77729-04-08 18:13 J -26668995.89 -26668995.74 -26668995.54 0.0089 0.0063
 Saturn -77729-12-03 04:04 J -26668757.53 -26668757.33 -26668757.11 0.0296 0.0153
 Neptune -77728-04-11 03:20 J -26668628.56 -26668628.36 -26668628.13 0.0089 0.0046
 Saturn -77728-12-18 11:01 J -26668377.28 -26668377.04 -26668376.79 0.0298 0.0012
 Neptune -77727-04-13 12:42 J -26668261.19 -26668260.97 -26668260.72 0.0089 0.0029
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 Neptune -77726-04-15 21:49 J -26667893.83 -26667893.59 -26667893.33 0.0089 0.0012
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 Neptune -77725-04-17 07:11 J -26667526.45 -26667526.20 -26667525.95 0.0089 0.0005
 Neptune -77724-04-19 15:49 J -26667159.07 -26667158.84 -26667158.58 0.0089 0.0022
 Neptune -77723-04-22 00:42 J -26666791.67 -26666791.47 -26666791.22 0.0089 0.0039
 Neptune -77722-04-24 10:04 J -26666424.27 -26666424.08 -26666423.88 0.0089 0.0055
 Jupiter -77722-09-22 11:59 J -26666273.21 -26666273.00 -26666272.79 0.0492 0.0238
 Neptune -77721-04-25 18:56 J -26666056.83 -26666056.71 -26666056.54 0.0089 0.0072
 Mars -77721-06-09 21:20 J -26666011.80 -26666011.61 -26666011.43 0.1649 0.0169
 Neptune -77720-04-28 04:18 J -26665689.32 -26665689.32 -26665689.30 0.0089 0.0089
 Jupiter -77716-03-13 20:23 J -26664273.81 -26664273.65 -26664273.48 0.0535 0.0367
 Saturn -77715-05-22 11:59 J -26663839.16 -26663839.00 -26663838.83 0.0266 0.0193

Saturn	-77714-06-02 19:11 J	-26663462.91	-26663462.70	-26663462.47	0.0264	0.0102
Saturn	-77713-06-13 02:08 J	-26663086.65	-26663086.41	-26663086.16	0.0263	0.0007
Saturn	-77712-06-24 09:49 J	-26662710.31	-26662710.09	-26662709.85	0.0263	0.0089
Uranus	-77711-06-18 17:01 J	-26662350.82	-26662350.79	-26662350.73	0.0147	0.0144
Saturn	-77711-07-05 20:37 J	-26662333.82	-26662333.64	-26662333.46	0.0263	0.0182
Uranus	-77710-06-23 18:42 J	-26661980.88	-26661980.72	-26661980.52	0.0147	0.0103
Jupiter	-77710-09-27 00:56 J	-26661885.55	-26661885.46	-26661885.35	0.0492	0.0443
Uranus	-77709-06-27 21:35 J	-26661610.82	-26661610.60	-26661610.37	0.0147	0.0060
Uranus	-77708-07-03 01:11 J	-26661240.70	-26661240.45	-26661240.20	0.0147	0.0017
Uranus	-77707-07-08 05:30 J	-26660870.52	-26660870.27	-26660870.02	0.0148	0.0027
Uranus	-77706-07-13 10:18 J	-26660500.29	-26660500.07	-26660499.84	0.0148	0.0071
Uranus	-77705-07-17 15:49 J	-26660129.99	-26660129.84	-26660129.67	0.0148	0.0115
Jupiter	-77704-03-18 18:28 J	-26659885.95	-26659885.73	-26659885.50	0.0536	0.0111
Saturn	-77700-11-26 20:23 J	-26658171.82	-26658171.65	-26658171.47	0.0295	0.0211
Saturn	-77699-12-12 02:37 J	-26657791.63	-26657791.39	-26657791.14	0.0297	0.0074
Saturn	-77698-12-27 08:08 J	-26657411.40	-26657411.16	-26657410.92	0.0298	0.0070
Saturn	-77696-01-10 09:20 J	-26657031.27	-26657031.11	-26657030.92	0.0297	0.0209
Jupiter	-77692-03-23 18:28 J	-26655497.94	-26655497.73	-26655497.51	0.0535	0.0150
Saturn	-77686-05-17 20:37 J	-26653251.75	-26653251.64	-26653251.51	0.0268	0.0232
Saturn	-77685-05-28 04:47 J	-26652875.50	-26652875.30	-26652875.09	0.0266	0.0141
Saturn	-77684-06-08 11:44 J	-26652499.25	-26652499.01	-26652498.77	0.0264	0.0046
Saturn	-77683-06-19 18:56 J	-26652122.95	-26652122.71	-26652122.47	0.0264	0.0050
Saturn	-77682-07-01 03:49 J	-26651746.53	-26651746.34	-26651746.12	0.0263	0.0146
Saturn	-77681-07-11 17:01 J	-26651369.90	-26651369.79	-26651369.68	0.0264	0.0235
Jupiter	-77680-03-28 15:49 J	-26651109.98	-26651109.84	-26651109.68	0.0534	0.0402
Jupiter	-77675-09-07 21:20 J	-26649120.74	-26649120.61	-26649120.46	0.0491	0.0399
Saturn	-77671-11-20 16:47 J	-26647585.89	-26647585.80	-26647585.68	0.0294	0.0266
Saturn	-77670-12-05 23:30 J	-26647205.75	-26647205.52	-26647205.30	0.0296	0.0133
Uranus	-77670-12-28 20:23 J	-26647182.80	-26647182.65	-26647182.48	0.0132	0.0101
Saturn	-77669-12-20 06:28 J	-26646825.48	-26646825.23	-26646824.98	0.0298	0.0012

Uranus -77668-01-01 02:37 J -26646813.59 -26646813.39 -26646813.16 0.0132 0.0070
 Saturn -77667-01-04 10:32 J -26646445.26 -26646445.06 -26646444.84 0.0298 0.0156
 Uranus -77667-01-05 08:37 J -26646444.38 -26646444.14 -26646443.89 0.0131 0.0038
 Uranus -77666-01-09 13:40 J -26646075.19 -26646074.93 -26646074.68 0.0131 0.0007
 Saturn -77666-01-19 08:52 J -26646065.19 -26646065.13 -26646065.06 0.0297 0.0286
 Uranus -77665-01-13 17:44 J -26645706.00 -26645705.76 -26645705.50 0.0131 0.0025
 Uranus -77664-01-16 22:04 J -26645336.81 -26645336.58 -26645336.35 0.0131 0.0055
 Uranus -77663-01-21 01:40 J -26644967.63 -26644967.43 -26644967.24 0.0131 0.0085
 Jupiter -77663-09-12 11:44 J -26644733.23 -26644733.01 -26644732.79 0.0491 0.0193
 Uranus -77662-01-25 04:18 J -26644598.43 -26644598.32 -26644598.19 0.0131 0.0114
 Saturn -77657-05-12 11:59 J -26642664.00 -26642664.00 -26642663.99 0.0268 0.0268
 Saturn -77656-05-23 20:37 J -26642287.80 -26642287.64 -26642287.45 0.0266 0.0180
 Saturn -77655-06-04 03:49 J -26641911.56 -26641911.34 -26641911.10 0.0264 0.0086
 Saturn -77654-06-15 10:47 J -26641535.30 -26641535.05 -26641534.81 0.0263 0.0010
 Saturn -77653-06-25 18:13 J -26641158.95 -26641158.74 -26641158.51 0.0263 0.0105
 Saturn -77652-07-07 05:01 J -26640782.44 -26640782.29 -26640782.12 0.0263 0.0197
 Pluto -77651-08-16 02:08 J -26640377.65 -26640377.41 -26640377.15 0.0065 0.0021
 Jupiter -77651-09-17 00:28 J -26640345.72 -26640345.48 -26640345.24 0.0491 0.0012
 Neptune -77649-10-04 21:35 J -26639596.62 -26639596.60 -26639596.55 0.0088 0.0088
 Mars -77649-12-13 08:08 J -26639527.32 -26639527.16 -26639527.00 0.1889 0.1186
 Neptune -77648-10-07 11:59 J -26639229.14 -26639229.00 -26639228.82 0.0088 0.0071
 Neptune -77647-10-10 02:52 J -26638861.59 -26638861.38 -26638861.17 0.0088 0.0053
 Neptune -77646-10-12 17:01 J -26638494.02 -26638493.79 -26638493.53 0.0088 0.0036
 Neptune -77645-10-14 07:25 J -26638126.44 -26638126.19 -26638125.92 0.0088 0.0018
 Neptune -77644-10-16 22:04 J -26637758.84 -26637758.58 -26637758.31 0.0088 0.0002
 Neptune -77643-10-19 12:28 J -26637391.24 -26637390.98 -26637390.72 0.0088 0.0017
 Mars -77642-06-12 23:30 J -26637154.69 -26637154.52 -26637154.34 0.1645 0.0567
 Neptune -77642-10-22 02:23 J -26637023.63 -26637023.40 -26637023.14 0.0088 0.0034
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 Saturn -77641-11-28 16:18 J -26636620.01 -26636619.82 -26636619.63 0.0295 0.0191

Neptune -77640-10-26 06:42 J -26636288.35 -26636288.22 -26636288.03 0.0088 0.0070
 Saturn -77640-12-13 23:01 J -26636239.79 -26636239.54 -26636239.30 0.0297 0.0051
 Jupiter -77639-09-21 13:25 J -26635958.16 -26635957.94 -26635957.73 0.0492 0.0216
 Neptune -77639-10-28 20:52 J -26635920.66 -26635920.63 -26635920.54 0.0088 0.0087
 Saturn -77639-12-29 04:04 J -26635859.55 -26635859.33 -26635859.09 0.0298 0.0094
 Saturn -77637-01-13 05:01 J -26635479.43 -26635479.29 -26635479.12 0.0297 0.0230
 Jupiter -77633-03-12 22:18 J -26633958.72 -26633958.57 -26633958.41 0.0536 0.0394
 Saturn -77627-05-19 04:47 J -26631700.42 -26631700.30 -26631700.15 0.0267 0.0219
 Uranus -77627-06-19 00:28 J -26631669.50 -26631669.48 -26631669.41 0.0147 0.0144
 Jupiter -77627-09-26 00:28 J -26631570.60 -26631570.48 -26631570.35 0.0492 0.0416
 Saturn -77626-05-30 12:42 J -26631324.18 -26631323.97 -26631323.76 0.0265 0.0126
 Uranus -77626-06-24 02:08 J -26631299.57 -26631299.41 -26631299.21 0.0147 0.0102
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 Uranus -77625-06-28 04:47 J -26630929.52 -26630929.30 -26630929.06 0.0147 0.0059
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 Uranus -77622-07-13 17:01 J -26629818.99 -26629818.79 -26629818.55 0.0148 0.0074
 Saturn -77622-07-14 00:28 J -26629818.55 -26629818.48 -26629818.40 0.0264 0.0250 *
 Jupiter -77621-03-17 21:35 J -26629570.82 -26629570.60 -26629570.38 0.0535 0.0138
 Uranus -77621-07-17 22:18 J -26629448.70 -26629448.57 -26629448.40 0.0148 0.0118
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 Saturn -77597-05-25 04:04 J -26620736.51 -26620736.33 -26620736.14 0.0266 0.0167

Saturn -77596-06-05 10:47 J -26620360.28 -26620360.05 -26620359.81 0.0264 0.0072
 Mars -77595-06-06 19:40 J -26619993.79 -26619993.68 -26619993.58 0.1663 0.1340
 Saturn -77595-06-16 17:16 J -26619984.02 -26619983.78 -26619983.53 0.0263 0.0024
 Saturn -77594-06-28 00:56 J -26619607.67 -26619607.46 -26619607.24 0.0263 0.0119
 Saturn -77593-07-08 11:44 J -26619231.15 -26619231.01 -26619230.86 0.0263 0.0212
 Jupiter -77592-09-07 02:23 J -26618805.52 -26618805.40 -26618805.26 0.0491 0.0413
 Uranus -77587-12-24 23:16 J -26616870.54 -26616870.53 -26616870.47 0.0132 0.0131
 Uranus -77586-12-29 06:56 J -26616501.37 -26616501.21 -26616501.04 0.0132 0.0099
 Uranus -77584-01-01 13:11 J -26616132.16 -26616131.95 -26616131.72 0.0132 0.0068
 Uranus -77583-01-05 19:11 J -26615762.95 -26615762.70 -26615762.45 0.0131 0.0036
 Uranus -77582-01-09 23:59 J -26615393.75 -26615393.50 -26615393.24 0.0131 0.0004
 Saturn -77582-12-01 07:25 J -26615068.38 -26615068.19 -26615067.98 0.0296 0.0174
 Uranus -77581-01-14 04:32 J -26615024.56 -26615024.31 -26615024.06 0.0131 0.0027
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 Uranus -77580-01-17 08:23 J -26614655.37 -26614655.15 -26614654.91 0.0131 0.0058
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 Mars -77570-12-17 23:59 J -26610668.69 -26610668.50 -26610668.31 0.1897 0.0783
 Saturn -77568-05-20 11:30 J -26610149.16 -26610149.02 -26610148.86 0.0267 0.0207
 Jupiter -77568-09-16 01:54 J -26610030.66 -26610030.42 -26610030.18 0.0491 0.0011
 Saturn -77567-05-31 18:28 J -26609772.94 -26609772.73 -26609772.51 0.0265 0.0113
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 Saturn -77566-06-12 00:42 J -26609396.71 -26609396.47 -26609396.23 0.0264 0.0017
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 Saturn -77564-07-03 16:18 J -26608644.00 -26608643.82 -26608643.63 0.0263 0.0174

Pluto -77563-02-21 01:54 J -26608411.64 -26608411.42 -26608411.17 0.0079 0.0029
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Jupiter -77485-09-15 10:18 J -26579715.30 -26579715.07 -26579714.82 0.0492 0.0022
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 Saturn -77332-05-25 14:37 J -26523945.08 -26523944.89 -26523944.71 0.0265 0.0167

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 Jupiter -77331-09-10 15:49 J -26523472.05 -26523471.84 -26523471.63 0.0491 0.0235
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 Uranus -77327-01-22 18:28 J -26522241.90 -26522241.73 -26522241.56 0.0131 0.0099
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 Neptune -77317-10-12 22:04 J -26518325.81 -26518325.58 -26518325.31 0.0088 0.0032
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Saturn -77228-12-08 18:56 J -26485761.94 -26485761.71 -26485761.47 0.0297 0.0095
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 Saturn -77211-06-30 00:28 J -26479714.67 -26479714.48 -26479714.26 0.0262 0.0144
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 Jupiter -77206-03-15 23:44 J -26477994.71 -26477994.51 -26477994.31 0.0535 0.0236
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 Jupiter -77177-09-04 23:16 J -26467228.63 -26467228.53 -26467228.43 0.0492 0.0441
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 Saturn -77168-12-25 02:08 J -26463830.65 -26463830.41 -26463830.17 0.0299 0.0068
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 Saturn -77153-06-19 18:28 J -26458539.96 -26458539.73 -26458539.49 0.0262 0.0060
 Jupiter -77153-09-14 02:37 J -26458453.62 -26458453.39 -26458453.15 0.0492 0.0036
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 Jupiter -77099-03-25 00:56 J -26438903.66 -26438903.46 -26438903.26 0.0535 0.0253
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 Jupiter -77094-09-05 08:23 J -26436913.24 -26436913.15 -26436913.05 0.0492 0.0447
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 Jupiter -77082-09-09 21:49 J -26432525.79 -26432525.59 -26432525.38 0.0492 0.0245
 Saturn -77082-11-19 19:25 J -26432454.77 -26432454.69 -26432454.59 0.0293 0.0273
 Uranus -77082-12-31 12:56 J -26432413.13 -26432412.96 -26432412.76 0.0132 0.0091
 Saturn -77081-12-04 00:42 J -26432074.69 -26432074.47 -26432074.25 0.0296 0.0137
 Mars -77081-12-11 17:59 J -26432066.81 -26432066.75 -26432066.69 0.1867 0.1772
 Uranus -77080-01-03 19:40 J -26432043.90 -26432043.68 -26432043.44 0.0132 0.0057
 Saturn -77080-12-19 08:52 J -26431694.38 -26431694.13 -26431693.88 0.0298 0.0011
 Uranus -77079-01-08 01:54 J -26431674.66 -26431674.42 -26431674.16 0.0132 0.0024
 Saturn -77078-01-03 16:04 J -26431314.03 -26431313.83 -26431313.62 0.0299 0.0160
 Uranus -77078-01-12 07:40 J -26431305.43 -26431305.18 -26431304.92 0.0131 0.0011
 Uranus -77077-01-16 12:42 J -26430936.21 -26430935.97 -26430935.72 0.0131 0.0044
 Saturn -77077-01-18 19:11 J -26430933.72 -26430933.70 -26430933.66 0.0299 0.0296
 Uranus -77076-01-19 17:01 J -26430566.98 -26430566.79 -26430566.57 0.0131 0.0077
 Uranus -77075-01-23 21:35 J -26430197.74 -26430197.60 -26430197.46 0.0131 0.0109
 Mars -77074-06-15 09:49 J -26429690.19 -26429690.09 -26429689.98 0.1655 0.1371
 Neptune -77073-04-06 18:42 J -26429393.78 -26429393.72 -26429393.65 0.0089 0.0085

Neptune -77072-04-09 03:49 J -26429026.49 -26429026.34 -26429026.18 0.0089 0.0069
 Neptune -77071-04-11 12:13 J -26428659.16 -26428658.99 -26428658.76 0.0089 0.0054
 Neptune -77070-04-13 21:20 J -26428291.81 -26428291.61 -26428291.36 0.0089 0.0038
 Jupiter -77070-09-14 08:23 J -26428138.39 -26428138.15 -26428137.92 0.0492 0.0045
 Neptune -77069-04-15 06:28 J -26427924.46 -26427924.23 -26427923.97 0.0089 0.0022
 Neptune -77068-04-17 15:49 J -26427557.09 -26427556.84 -26427556.59 0.0089 0.0005
 Saturn -77068-05-14 07:25 J -26427530.25 -26427530.19 -26427530.12 0.0270 0.0259
 Pluto -77067-02-23 21:49 J -26427244.82 -26427244.59 -26427244.33 0.0079 0.0022
 Neptune -77067-04-20 00:42 J -26427189.71 -26427189.47 -26427189.21 0.0089 0.0011
 Saturn -77067-05-25 17:44 J -26427153.94 -26427153.76 -26427153.56 0.0267 0.0164
 Neptune -77066-04-22 09:35 J -26426822.33 -26426822.10 -26426821.85 0.0089 0.0027
 Saturn -77066-06-06 00:56 J -26426777.69 -26426777.46 -26426777.22 0.0265 0.0066
 Neptune -77065-04-23 18:28 J -26426454.93 -26426454.73 -26426454.49 0.0089 0.0043
 Saturn -77065-06-16 06:42 J -26426401.45 -26426401.22 -26426400.97 0.0263 0.0033
 Neptune -77064-04-26 03:49 J -26426087.51 -26426087.34 -26426087.14 0.0089 0.0059
 Saturn -77064-06-27 12:42 J -26426025.18 -26426024.97 -26426024.75 0.0262 0.0129
 Neptune -77063-04-28 12:42 J -26425720.08 -26425719.97 -26425719.81 0.0089 0.0076
 Saturn -77063-07-08 20:23 J -26425648.78 -26425648.65 -26425648.51 0.0262 0.0220
 Jupiter -77058-09-18 22:18 J -26423750.79 -26423750.57 -26423750.34 0.0492 0.0160
 Jupiter -77052-03-09 11:01 J -26421752.08 -26421752.04 -26421751.99 0.0534 0.0522
 Saturn -77052-11-27 19:40 J -26421488.86 -26421488.68 -26421488.49 0.0295 0.0194
 Saturn -77051-12-13 02:37 J -26421108.63 -26421108.39 -26421108.14 0.0297 0.0049
 Saturn -77050-12-28 10:32 J -26420728.28 -26420728.06 -26420727.82 0.0299 0.0102
 Saturn -77048-01-11 16:04 J -26420347.96 -26420347.83 -26420347.68 0.0299 0.0245
 Jupiter -77046-09-23 12:56 J -26419363.12 -26419362.96 -26419362.80 0.0492 0.0366
 Jupiter -77040-03-14 09:06 J -26417364.31 -26417364.12 -26417363.92 0.0535 0.0273
 Uranus -77039-06-21 18:42 J -26416899.80 -26416899.72 -26416899.61 0.0146 0.0135
 Saturn -77038-05-21 04:04 J -26416566.48 -26416566.33 -26416566.18 0.0268 0.0206
 Uranus -77038-06-26 19:54 J -26416529.85 -26416529.67 -26416529.46 0.0147 0.0091
 Saturn -77037-05-31 12:13 J -26416190.20 -26416189.99 -26416189.77 0.0265 0.0109

Uranus -77037-06-30 22:18 J -26416159.80 -26416159.57 -26416159.32 0.0147 0.0045
 Saturn -77036-06-11 18:13 J -26415813.98 -26415813.74 -26415813.49 0.0263 0.0012
 Uranus -77036-07-06 01:11 J -26415789.70 -26415789.45 -26415789.19 0.0147 0.0003
 Saturn -77035-06-22 23:30 J -26415437.74 -26415437.52 -26415437.28 0.0262 0.0087
 Uranus -77035-07-11 04:47 J -26415419.52 -26415419.30 -26415419.05 0.0147 0.0050
 Saturn -77034-07-04 05:59 J -26415061.42 -26415061.25 -26415061.07 0.0262 0.0182
 Uranus -77034-07-16 09:06 J -26415049.29 -26415049.12 -26415048.91 0.0147 0.0097
 Uranus -77033-07-20 14:08 J -26414678.95 -26414678.91 -26414678.83 0.0147 0.0144
 Jupiter -77028-03-19 08:52 J -26412976.35 -26412976.13 -26412975.90 0.0535 0.0017
 Mars -77027-06-09 02:52 J -26412529.55 -26412529.38 -26412529.20 0.1675 0.0629
 Saturn -77023-11-21 05:16 J -26410903.40 -26410903.28 -26410903.16 0.0293 0.0256
 Saturn -77022-12-06 10:04 J -26410523.30 -26410523.08 -26410522.85 0.0296 0.0119
 Saturn -77021-12-20 17:44 J -26410143.01 -26410142.76 -26410142.51 0.0298 0.0030
 Saturn -77019-01-05 00:28 J -26409762.67 -26409762.48 -26409762.28 0.0299 0.0178
 Jupiter -77016-03-24 08:23 J -26408588.35 -26408588.15 -26408587.94 0.0534 0.0242
 Jupiter -77011-09-04 11:16 J -26406598.10 -26406598.03 -26406597.95 0.0492 0.0463
 Saturn -77009-05-15 10:18 J -26405979.15 -26405979.07 -26405978.96 0.0270 0.0247
 Saturn -77008-05-26 21:06 J -26405602.81 -26405602.62 -26405602.42 0.0267 0.0150
 Saturn -77007-06-07 04:32 J -26405226.54 -26405226.31 -26405226.07 0.0265 0.0051
 Saturn -77006-06-18 10:47 J -26404850.29 -26404850.05 -26404849.81 0.0263 0.0048
 Saturn -77005-06-28 17:01 J -26404473.98 -26404473.79 -26404473.58 0.0263 0.0144
 Jupiter -77004-03-29 05:16 J -26404200.36 -26404200.28 -26404200.18 0.0534 0.0488
 Saturn -77004-07-10 01:25 J -26404097.54 -26404097.44 -26404097.33 0.0262 0.0235
 Mars -77002-12-16 08:23 J -26403208.35 -26403208.15 -26403207.94 0.1876 0.0108

77TH MILLENNIUM BCE

This is a list of transits of Earth in the 77th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-76999-09-08 23:59 J	-26402210.69	-26402210.50	-26402210.29	0.0492	0.0262		
Uranus	-76999-12-27 12:28 J	-26402101.05	-26402100.98	-26402100.88	0.0132	0.0124		
Uranus	-76998-12-31 19:54 J	-26401731.84	-26401731.67	-26401731.47	0.0132	0.0090		
Uranus	-76996-01-04 03:06 J	-26401362.60	-26401362.37	-26401362.13	0.0132	0.0056		
Uranus	-76995-01-08 09:35 J	-26400993.35	-26400993.10	-26400992.85	0.0132	0.0022		
Uranus	-76994-01-12 15:20 J	-26400624.11	-26400623.86	-26400623.60	0.0131	0.0012		
Uranus	-76993-01-16 20:23 J	-26400254.88	-26400254.65	-26400254.40	0.0131	0.0046		
Saturn	-76993-11-29 06:56 J	-26399937.41	-26399937.21	-26399937.01	0.0295	0.0176		
Uranus	-76992-01-20 00:56 J	-26399885.65	-26399885.46	-26399885.24	0.0131	0.0079		
Saturn	-76992-12-14 13:54 J	-26399557.17	-26399556.92	-26399556.67	0.0297	0.0030		
Uranus	-76991-01-24 05:16 J	-26399516.40	-26399516.28	-26399516.14	0.0131	0.0112		
Neptune	-76991-10-07 09:49 J	-26399260.19	-26399260.09	-26399259.92	0.0088	0.0077		
Saturn	-76991-12-29 21:35 J	-26399176.83	-26399176.60	-26399176.38	0.0299	0.0121		
Neptune	-76990-10-10 00:28 J	-26398892.65	-26398892.48	-26398892.26	0.0088	0.0060		
Saturn	-76989-01-14 02:08 J	-26398796.52	-26398796.41	-26398796.29	0.0299	0.0263		
Neptune	-76989-10-11 15:20 J	-26398525.09	-26398524.86	-26398524.62	0.0088	0.0043		
Neptune	-76988-10-14 05:30 J	-26398157.51	-26398157.27	-26398157.00	0.0088	0.0027		
Jupiter	-76987-09-13 14:23 J	-26397823.13	-26397822.90	-26397822.66	0.0492	0.0058		
Neptune	-76987-10-16 20:23 J	-26397789.91	-26397789.65	-26397789.38	0.0088	0.0010		
Neptune	-76986-10-19 10:47 J	-26397422.31	-26397422.05	-26397421.78	0.0088	0.0008		
Neptune	-76985-10-21 01:25 J	-26397054.70	-26397054.44	-26397054.19	0.0088	0.0024		
Neptune	-76984-10-23 15:35 J	-26396687.08	-26396686.85	-26396686.61	0.0088	0.0041		
Neptune	-76983-10-26 05:44 J	-26396319.44	-26396319.26	-26396319.04	0.0088	0.0058		
Neptune	-76982-10-28 20:08 J	-26395951.79	-26395951.66	-26395951.50	0.0088	0.0074		
Saturn	-76979-05-22 08:52 J	-26395015.28	-26395015.13	-26395014.95	0.0268	0.0193		

Saturn	-76978-06-02 17:30 J	-26394639.00	-26394638.77	-26394638.54	0.0265	0.0094
Saturn	-76977-06-12 23:44 J	-26394262.75	-26394262.51	-26394262.27	0.0263	0.0005
Saturn	-76976-06-24 05:44 J	-26393886.48	-26393886.26	-26393886.04	0.0262	0.0103
Saturn	-76975-07-05 12:28 J	-26393510.13	-26393509.98	-26393509.81	0.0262	0.0197
Jupiter	-76975-09-18 03:06 J	-26393435.59	-26393435.37	-26393435.14	0.0492	0.0146
Saturn	-76964-11-22 19:54 J	-26389351.81	-26389351.67	-26389351.52	0.0293	0.0237
Jupiter	-76963-09-22 16:47 J	-26389047.97	-26389047.80	-26389047.63	0.0492	0.0349
Saturn	-76963-12-08 00:56 J	-26388971.69	-26388971.46	-26388971.22	0.0296	0.0098
Saturn	-76962-12-23 08:23 J	-26388591.40	-26388591.15	-26388590.91	0.0298	0.0052
Saturn	-76960-01-06 14:23 J	-26388211.07	-26388210.90	-26388210.71	0.0299	0.0199
Jupiter	-76957-03-13 14:52 J	-26387049.07	-26387048.88	-26387048.68	0.0535	0.0287
Uranus	-76955-06-22 01:11 J	-26386218.52	-26386218.45	-26386218.34	0.0146	0.0136
Uranus	-76954-06-27 02:08 J	-26385848.59	-26385848.41	-26385848.20	0.0147	0.0091
Uranus	-76953-07-01 04:18 J	-26385478.55	-26385478.32	-26385478.07	0.0147	0.0044
Uranus	-76952-07-06 07:11 J	-26385108.45	-26385108.20	-26385107.94	0.0147	0.0004
Uranus	-76951-07-11 10:32 J	-26384738.29	-26384738.06	-26384737.81	0.0147	0.0051
Saturn	-76950-05-17 16:04 J	-26384427.95	-26384427.83	-26384427.71	0.0270	0.0233
Uranus	-76950-07-16 14:52 J	-26384368.06	-26384367.88	-26384367.68	0.0147	0.0098
Saturn	-76949-05-28 02:23 J	-26384051.59	-26384051.40	-26384051.18	0.0267	0.0136
Uranus	-76949-07-20 19:40 J	-26383997.70	-26383997.68	-26383997.63	0.0147	0.0146
Saturn	-76948-06-08 10:18 J	-26383675.31	-26383675.07	-26383674.83	0.0265	0.0036
Mars	-76948-06-11 06:56 J	-26383672.40	-26383672.21	-26383672.03	0.1670	0.0179
Saturn	-76947-06-19 16:47 J	-26383299.03	-26383298.80	-26383298.56	0.0263	0.0064
Saturn	-76946-06-30 23:30 J	-26382922.71	-26382922.52	-26382922.32	0.0263	0.0160
Jupiter	-76945-03-18 12:56 J	-26382661.19	-26382660.96	-26382660.73	0.0534	0.0036
Saturn	-76945-07-11 08:23 J	-26382546.21	-26382546.15	-26382546.07	0.0263	0.0251
Saturn	-76935-11-16 20:23 J	-26378765.68	-26378765.65	-26378765.61	0.0291	0.0289
Saturn	-76934-12-01 23:16 J	-26378385.74	-26378385.53	-26378385.32	0.0295	0.0156
Jupiter	-76933-03-23 06:13 J	-26378273.45	-26378273.24	-26378273.03	0.0534	0.0205
Saturn	-76933-12-16 05:59 J	-26378005.50	-26378005.25	-26378005.00	0.0297	0.0009

Saturn -76932-12-31 13:11 J -26377625.16 -26377624.95 -26377624.73 0.0299 0.0143
 Saturn -76930-01-15 17:16 J -26377244.85 -26377244.78 -26377244.70 0.0299 0.0283
 Jupiter -76928-09-03 15:49 J -26376282.89 -26376282.84 -26376282.78 0.0492 0.0478
 Jupiter -76921-03-28 02:23 J -26373885.52 -26373885.40 -26373885.28 0.0534 0.0450
 Saturn -76920-05-23 16:04 J -26373464.01 -26373463.83 -26373463.65 0.0267 0.0178
 Saturn -76919-06-04 00:28 J -26373087.71 -26373087.48 -26373087.25 0.0265 0.0079
 Saturn -76918-06-15 06:56 J -26372711.45 -26372711.21 -26372710.96 0.0263 0.0022
 Saturn -76917-06-25 13:25 J -26372335.15 -26372334.94 -26372334.72 0.0263 0.0119
 Saturn -76916-07-06 21:06 J -26371958.76 -26371958.62 -26371958.48 0.0262 0.0213
 Jupiter -76916-09-08 04:18 J -26371895.51 -26371895.32 -26371895.12 0.0492 0.0277
 Uranus -76915-12-27 19:54 J -26371419.74 -26371419.67 -26371419.56 0.0132 0.0124
 Uranus -76913-01-01 03:35 J -26371050.52 -26371050.35 -26371050.14 0.0132 0.0090
 Uranus -76912-01-04 10:47 J -26370681.27 -26370681.05 -26370680.80 0.0132 0.0055
 Uranus -76911-01-08 17:44 J -26370312.02 -26370311.76 -26370311.51 0.0132 0.0020
 Uranus -76910-01-12 23:30 J -26369942.77 -26369942.52 -26369942.26 0.0132 0.0014
 Uranus -76909-01-17 04:32 J -26369573.54 -26369573.31 -26369573.06 0.0131 0.0048
 Uranus -76908-01-20 09:20 J -26369204.30 -26369204.11 -26369203.90 0.0131 0.0082
 Neptune -76908-04-08 17:16 J -26369125.91 -26369125.78 -26369125.63 0.0089 0.0074
 Uranus -76907-01-24 13:40 J -26368835.05 -26368834.93 -26368834.80 0.0131 0.0115
 Neptune -76907-04-11 01:54 J -26368758.58 -26368758.42 -26368758.20 0.0089 0.0059
 Pluto -76907-08-20 11:59 J -26368627.25 -26368627.00 -26368626.73 0.0065 0.0015
 Neptune -76906-04-13 11:01 J -26368391.24 -26368391.04 -26368390.80 0.0089 0.0043
 Neptune -76905-04-14 20:23 J -26368023.88 -26368023.65 -26368023.40 0.0089 0.0027
 Saturn -76905-11-24 14:08 J -26367800.07 -26367799.91 -26367799.73 0.0293 0.0217
 Neptune -76904-04-17 05:30 J -26367656.52 -26367656.27 -26367656.02 0.0089 0.0011
 Jupiter -76904-09-12 16:47 J -26367508.04 -26367507.80 -26367507.56 0.0492 0.0077
 Saturn -76904-12-09 19:25 J -26367419.93 -26367419.69 -26367419.45 0.0296 0.0075
 Neptune -76903-04-19 14:23 J -26367289.15 -26367288.90 -26367288.65 0.0089 0.0005
 Saturn -76903-12-25 02:23 J -26367039.64 -26367039.40 -26367039.16 0.0298 0.0075
 Neptune -76902-04-21 23:01 J -26366921.77 -26366921.54 -26366921.28 0.0089 0.0021

Saturn -76901-01-09 07:54 J -26366659.33 -26366659.17 -26366659.00 0.0298 0.0221
 Neptune -76901-04-23 08:08 J -26366554.37 -26366554.16 -26366553.92 0.0089 0.0037
 Neptune -76900-04-25 17:01 J -26366186.97 -26366186.79 -26366186.57 0.0089 0.0053
 Neptune -76899-04-28 02:23 J -26365819.55 -26365819.40 -26365819.23 0.0089 0.0069
 Neptune -76898-04-30 11:16 J -26365452.09 -26365452.03 -26365451.93 0.0089 0.0084
 Jupiter -76892-09-17 02:08 J -26363120.64 -26363120.41 -26363120.17 0.0492 0.0122
 Saturn -76891-05-18 23:16 J -26362876.65 -26362876.53 -26362876.38 0.0269 0.0220
 Saturn -76890-05-30 10:04 J -26362500.30 -26362500.08 -26362499.87 0.0267 0.0120
 Saturn -76889-06-09 17:44 J -26362124.00 -26362123.76 -26362123.52 0.0265 0.0019
 Saturn -76888-06-21 00:13 J -26361747.72 -26361747.49 -26361747.25 0.0263 0.0080
 Saturn -76887-07-02 07:25 J -26361371.37 -26361371.19 -26361371.01 0.0263 0.0176
 Jupiter -76880-09-21 15:35 J -26358733.03 -26358732.85 -26358732.67 0.0492 0.0325
 Saturn -76876-11-18 15:06 J -26357213.95 -26357213.87 -26357213.77 0.0292 0.0271
 Saturn -76875-12-03 18:42 J -26356833.94 -26356833.72 -26356833.50 0.0295 0.0134
 Jupiter -76874-03-13 10:32 J -26356734.23 -26356734.06 -26356733.88 0.0534 0.0328
 Saturn -76874-12-19 01:25 J -26356453.68 -26356453.44 -26356453.19 0.0297 0.0017
 Saturn -76872-01-02 08:23 J -26356073.35 -26356073.15 -26356072.94 0.0299 0.0166
 Uranus -76871-06-22 10:47 J -26355537.13 -26355537.05 -26355536.93 0.0146 0.0134
 Uranus -76870-06-27 11:44 J -26355167.20 -26355167.01 -26355166.80 0.0147 0.0089
 Mars -76869-06-13 11:16 J -26354815.18 -26354815.03 -26354814.88 0.1665 0.0986
 Uranus -76869-07-01 13:54 J -26354797.16 -26354796.92 -26354796.68 0.0147 0.0042
 Uranus -76868-07-06 16:18 J -26354427.07 -26354426.82 -26354426.57 0.0147 0.0006
 Uranus -76867-07-11 19:40 J -26354056.91 -26354056.68 -26354056.44 0.0147 0.0054
 Uranus -76866-07-16 23:44 J -26353686.69 -26353686.51 -26353686.32 0.0147 0.0102
 Jupiter -76862-03-18 07:25 J -26352346.42 -26352346.19 -26352345.96 0.0534 0.0080
 Saturn -76862-05-14 12:28 J -26352289.03 -26352288.98 -26352288.91 0.0270 0.0260
 Saturn -76861-05-25 00:42 J -26351912.66 -26351912.47 -26351912.28 0.0267 0.0163
 Saturn -76860-06-05 08:52 J -26351536.36 -26351536.13 -26351535.89 0.0265 0.0063
 Saturn -76859-06-16 15:49 J -26351160.08 -26351159.84 -26351159.60 0.0263 0.0038
 Saturn -76858-06-27 22:18 J -26350783.77 -26350783.57 -26350783.36 0.0263 0.0135

Saturn -76857-07-08 06:28 J -26350407.35 -26350407.23 -26350407.11 0.0262 0.0229
 Jupiter -76850-03-23 05:16 J -26347958.50 -26347958.28 -26347958.07 0.0535 0.0173
 Saturn -76846-11-27 11:30 J -26346248.19 -26346248.02 -26346247.82 0.0294 0.0196
 Saturn -76845-12-11 17:01 J -26345868.04 -26345867.79 -26345867.54 0.0296 0.0051
 Saturn -76844-12-26 23:44 J -26345487.73 -26345487.51 -26345487.27 0.0298 0.0100
 Saturn -76842-01-11 05:01 J -26345107.43 -26345107.29 -26345107.15 0.0298 0.0244
 Jupiter -76838-03-28 05:16 J -26343570.42 -26343570.28 -26343570.15 0.0534 0.0427
 Jupiter -76833-09-07 02:23 J -26341580.59 -26341580.40 -26341580.22 0.0492 0.0304
 Saturn -76832-05-20 08:08 J -26341325.30 -26341325.16 -26341325.00 0.0269 0.0205
 Saturn -76831-05-31 18:13 J -26340948.95 -26340948.74 -26340948.51 0.0267 0.0105
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 Uranus -76699-07-12 17:16 J -26292694.00 -26292693.78 -26292693.54 0.0147 0.0061
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Saturn -76698-12-10 05:30 J -26292178.51 -26292178.27 -26292178.03 0.0296 0.0071
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 Jupiter -76352-03-18 23:44 J -26166067.74 -26166067.51 -26166067.28 0.0535 0.0029
 Saturn -76346-11-18 17:01 J -26163631.84 -26163631.79 -26163631.70 0.0291 0.0278
 Saturn -76345-12-02 20:08 J -26163251.88 -26163251.66 -26163251.44 0.0294 0.0138
 Saturn -76344-12-18 03:20 J -26162871.60 -26162871.36 -26162871.11 0.0297 0.0017
 Saturn -76342-01-02 12:28 J -26162491.17 -26162490.98 -26162490.77 0.0299 0.0172
 Jupiter -76340-03-23 22:04 J -26161679.78 -26161679.58 -26161679.39 0.0534 0.0282
 Jupiter -76335-09-04 17:16 J -26159688.92 -26159688.78 -26159688.61 0.0493 0.0370
 Neptune -76334-10-07 14:37 J -26159291.01 -26159290.89 -26159290.76 0.0089 0.0078

Mars -76333-06-06 18:42 J -26159047.83 -26159047.72 -26159047.62 0.1706 0.1390
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 Jupiter -76328-03-28 19:40 J -26157291.70 -26157291.68 -26157291.64 0.0534 0.0528
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 Pluto -76323-02-27 18:28 J -26155494.96 -26155494.73 -26155494.47 0.0079 0.0022
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Saturn -76312-01-10 07:40 J -26151525.30 -26151525.18 -26151525.05 0.0300 0.0258
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 Saturn -76286-12-04 16:18 J -26141701.04 -26141700.82 -26141700.59 0.0295 0.0126
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 Neptune -76245-04-21 16:18 J -26126952.07 -26126951.82 -26126951.57 0.0089 0.0014
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 Saturn -76242-06-03 11:01 J -26125814.26 -26125814.04 -26125813.81 0.0266 0.0084
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 Uranus -76240-01-07 02:08 J -26125230.65 -26125230.41 -26125230.16 0.0132 0.0042
 Saturn -76240-06-24 21:49 J -26125061.80 -26125061.59 -26125061.37 0.0262 0.0121
 Jupiter -76240-09-08 18:42 J -26124985.95 -26124985.72 -26124985.50 0.0493 0.0167
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 Saturn -76213-05-28 17:30 J -26115226.97 -26115226.77 -26115226.55 0.0268 0.0129
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 Saturn -76210-07-01 12:28 J -26114098.16 -26114097.98 -26114097.80 0.0262 0.0177
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 Uranus -76199-06-25 07:11 J -26110086.31 -26110086.20 -26110086.05 0.0146 0.0126
 Jupiter -76198-03-13 15:20 J -26109825.07 -26109824.86 -26109824.66 0.0533 0.0247
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Saturn -76096-05-20 05:30 J -26072501.42 -26072501.27 -26072501.12 0.0271 0.0208
 Mars -76096-06-14 11:59 J -26072476.13 -26072476.00 -26072475.88 0.1689 0.1255
 Saturn -76095-05-31 18:13 J -26072124.96 -26072124.74 -26072124.52 0.0268 0.0102
 Saturn -76094-06-12 02:52 J -26071748.62 -26071748.38 -26071748.14 0.0265 0.0005
 Saturn -76093-06-22 09:06 J -26071372.34 -26071372.12 -26071371.90 0.0263 0.0108
 Saturn -76092-07-03 14:23 J -26070996.04 -26070995.90 -26070995.74 0.0262 0.0206
 Jupiter -76091-03-22 20:52 J -26070733.83 -26070733.63 -26070733.42 0.0533 0.0244
 Neptune -76087-04-08 23:30 J -26069255.62 -26069255.52 -26069255.41 0.0089 0.0080
 Neptune -76086-04-11 08:08 J -26068888.31 -26068888.16 -26068887.97 0.0089 0.0066
 Jupiter -76086-09-03 17:16 J -26068742.91 -26068742.78 -26068742.62 0.0494 0.0392
 Neptune -76085-04-12 17:16 J -26068520.97 -26068520.78 -26068520.56 0.0089 0.0051
 Neptune -76084-04-15 02:23 J -26068153.62 -26068153.40 -26068153.16 0.0089 0.0036
 Neptune -76083-04-17 11:30 J -26067786.26 -26067786.02 -26067785.77 0.0089 0.0021
 Neptune -76082-04-19 20:37 J -26067418.89 -26067418.64 -26067418.39 0.0089 0.0006
 Neptune -76081-04-21 05:30 J -26067051.52 -26067051.27 -26067051.02 0.0089 0.0009
 Saturn -76081-11-16 20:08 J -26066841.71 -26066841.66 -26066841.58 0.0290 0.0279
 Neptune -76080-04-23 14:08 J -26066684.14 -26066683.91 -26066683.65 0.0089 0.0024
 Saturn -76080-12-01 19:54 J -26066461.89 -26066461.67 -26066461.45 0.0293 0.0140
 Jupiter -76079-03-27 14:52 J -26066345.97 -26066345.88 -26066345.78 0.0533 0.0482
 Neptune -76079-04-25 23:16 J -26066316.73 -26066316.53 -26066316.28 0.0089 0.0039
 Saturn -76079-12-17 01:25 J -26066081.69 -26066081.44 -26066081.19 0.0297 0.0015
 Neptune -76078-04-28 08:52 J -26065949.33 -26065949.13 -26065948.93 0.0089 0.0053
 Saturn -76077-01-01 09:20 J -26065701.30 -26065701.11 -26065700.90 0.0299 0.0172
 Neptune -76077-04-29 17:44 J -26065581.91 -26065581.76 -26065581.59 0.0089 0.0068
 Neptune -76076-05-02 02:37 J -26065214.45 -26065214.39 -26065214.27 0.0089 0.0083
 Pluto -76075-02-28 18:28 J -26064911.86 -26064911.73 -26064911.53 0.0079 0.0060
 Uranus -76075-12-31 05:44 J -26064606.39 -26064606.26 -26064606.12 0.0132 0.0113
 Jupiter -76074-09-08 07:40 J -26064355.40 -26064355.18 -26064354.96 0.0493 0.0187
 Uranus -76073-01-04 13:11 J -26064237.15 -26064236.95 -26064236.72 0.0132 0.0075
 Uranus -76072-01-07 20:52 J -26063867.88 -26063867.63 -26063867.39 0.0132 0.0037

Uranus -76071-01-12 03:20 J -26063498.61 -26063498.36 -26063498.10 0.0132 0.0001
 Mars -76071-12-17 19:25 J -26063158.85 -26063158.69 -26063158.53 0.1851 0.1130
 Uranus -76070-01-16 09:20 J -26063129.35 -26063129.11 -26063128.86 0.0131 0.0038
 Uranus -76069-01-20 14:37 J -26062760.08 -26062759.89 -26062759.66 0.0131 0.0075
 Uranus -76068-01-23 19:40 J -26062390.80 -26062390.68 -26062390.53 0.0131 0.0111
 Saturn -76067-05-15 13:11 J -26061914.03 -26061913.95 -26061913.86 0.0272 0.0254
 Saturn -76066-05-27 04:04 J -26061537.52 -26061537.33 -26061537.12 0.0269 0.0149
 Saturn -76065-06-06 14:08 J -26061161.14 -26061160.91 -26061160.67 0.0266 0.0043
 Saturn -76064-06-17 21:06 J -26060784.85 -26060784.62 -26060784.38 0.0264 0.0063
 Saturn -76063-06-29 02:37 J -26060408.57 -26060408.39 -26060408.19 0.0262 0.0163
 Saturn -76062-07-10 08:08 J -26060032.19 -26060032.16 -26060032.11 0.0262 0.0258
 Jupiter -76062-09-12 20:37 J -26059967.87 -26059967.64 -26059967.40 0.0493 0.0019
 Saturn -76051-11-25 09:20 J -26055876.29 -26055876.11 -26055875.94 0.0291 0.0205
 Jupiter -76050-09-17 09:35 J -26055580.31 -26055580.10 -26055579.88 0.0493 0.0218
 Saturn -76050-12-10 11:44 J -26055496.25 -26055496.01 -26055495.76 0.0295 0.0057
 Mars -76049-06-07 17:01 J -26055315.93 -26055315.79 -26055315.65 0.1713 0.1112
 Saturn -76049-12-24 18:42 J -26055115.95 -26055115.72 -26055115.48 0.0297 0.0100
 Saturn -76047-01-09 02:37 J -26054735.50 -26054735.39 -26054735.24 0.0299 0.0252
 Jupiter -76044-03-07 04:18 J -26053582.35 -26053582.32 -26053582.28 0.0533 0.0526
 Jupiter -76038-09-21 19:11 J -26051192.82 -26051192.70 -26051192.56 0.0493 0.0415
 Saturn -76037-05-21 09:20 J -26050950.26 -26050950.11 -26050949.93 0.0271 0.0195
 Saturn -76036-06-01 22:18 J -26050573.79 -26050573.57 -26050573.34 0.0268 0.0087
 Saturn -76035-06-13 06:56 J -26050197.45 -26050197.21 -26050196.97 0.0265 0.0020
 Saturn -76034-06-24 13:25 J -26049821.15 -26049820.94 -26049820.72 0.0264 0.0123
 Saturn -76033-07-04 19:25 J -26049444.82 -26049444.69 -26049444.56 0.0262 0.0221
 Jupiter -76032-03-12 03:35 J -26049194.55 -26049194.35 -26049194.16 0.0533 0.0278
 Uranus -76031-06-26 02:37 J -26048723.50 -26048723.39 -26048723.23 0.0146 0.0123
 Uranus -76030-07-01 03:49 J -26048353.55 -26048353.34 -26048353.12 0.0147 0.0072
 Uranus -76029-07-05 05:30 J -26047983.51 -26047983.27 -26047983.02 0.0147 0.0021
 Uranus -76028-07-10 08:08 J -26047613.40 -26047613.16 -26047612.91 0.0147 0.0031

Uranus -76027-07-15 11:16 J -26047243.22 -26047243.03 -26047242.81 0.0147 0.0084
 Uranus -76026-07-20 15:20 J -26046872.94 -26046872.86 -26046872.75 0.0147 0.0136
 Saturn -76022-11-19 09:35 J -26045290.20 -26045290.10 -26045289.98 0.0290 0.0261
 Saturn -76021-12-03 09:20 J -26044910.33 -26044910.11 -26044909.88 0.0294 0.0120
 Jupiter -76020-03-16 21:35 J -26044806.83 -26044806.60 -26044806.37 0.0533 0.0039
 Saturn -76020-12-18 14:52 J -26044530.12 -26044529.88 -26044529.63 0.0297 0.0036
 Saturn -76018-01-02 22:47 J -26044149.73 -26044149.55 -26044149.35 0.0299 0.0193
 Jupiter -76008-03-21 18:28 J -26040418.94 -26040418.73 -26040418.52 0.0534 0.0208
 Saturn -76008-05-16 19:25 J -26040362.79 -26040362.69 -26040362.57 0.0272 0.0241
 Saturn -76007-05-28 10:18 J -26039986.27 -26039986.07 -26039985.85 0.0269 0.0134
 Saturn -76006-06-08 20:37 J -26039609.88 -26039609.64 -26039609.40 0.0266 0.0026
 Neptune -76006-10-06 07:40 J -26039490.20 -26039490.18 -26039490.10 0.0089 0.0087
 Saturn -76005-06-19 03:49 J -26039233.57 -26039233.34 -26039233.11 0.0264 0.0079
 Neptune -76005-10-07 21:49 J -26039122.71 -26039122.59 -26039122.40 0.0089 0.0072
 Saturn -76004-06-30 09:20 J -26038857.28 -26038857.11 -26038856.92 0.0262 0.0179
 Neptune -76004-10-10 12:56 J -26038755.16 -26038754.96 -26038754.75 0.0088 0.0056
 Jupiter -76003-09-02 23:01 J -26038427.67 -26038427.54 -26038427.40 0.0493 0.0404
 Neptune -76003-10-13 03:06 J -26038387.59 -26038387.37 -26038387.12 0.0088 0.0041
 Neptune -76002-10-15 17:44 J -26038020.00 -26038019.76 -26038019.49 0.0088 0.0025
 Neptune -76001-10-17 08:23 J -26037652.41 -26037652.15 -26037651.88 0.0088 0.0010

76TH MILLENNIUM BCE

This is a list of transits of Earth in the 76th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								

TIME

Neptune -76000-10-19 23:01 J -26037284.80 -26037284.54 -26037284.28 0.0088 0.0006

Neptune -75999-10-22 13:11 J -26036917.19 -26036916.95 -26036916.68 0.0088 0.0022

Neptune -75998-10-25 03:49 J -26036549.57 -26036549.34 -26036549.09 0.0088 0.0037

Neptune -75997-10-26 17:44 J -26036181.95 -26036181.76 -26036181.53 0.0088 0.0052

Jupiter -75996-03-26 16:32 J -26036030.92 -26036030.81 -26036030.69 0.0534 0.0457

Neptune -75996-10-29 07:54 J -26035814.31 -26035814.17 -26035813.97 0.0088 0.0068

Neptune -75995-10-31 22:18 J -26035446.64 -26035446.57 -26035446.45 0.0088 0.0083

Saturn -75992-11-27 01:40 J -26034324.61 -26034324.43 -26034324.23 0.0292 0.0185

Jupiter -75991-09-07 11:16 J -26034040.24 -26034040.03 -26034039.81 0.0493 0.0204

Saturn -75991-12-12 04:47 J -26033944.55 -26033944.30 -26033944.05 0.0295 0.0034

Uranus -75991-12-31 14:23 J -26033925.02 -26033924.90 -26033924.74 0.0132 0.0111

Saturn -75990-12-27 11:44 J -26033564.23 -26033564.01 -26033563.78 0.0298 0.0123

Uranus -75989-01-04 22:18 J -26033555.77 -26033555.57 -26033555.35 0.0132 0.0073

Uranus -75988-01-08 05:30 J -26033186.51 -26033186.27 -26033186.02 0.0132 0.0035

Saturn -75988-01-10 19:11 J -26033183.78 -26033183.70 -26033183.59 0.0299 0.0274

Uranus -75987-01-12 12:13 J -26032817.25 -26032816.99 -26032816.73 0.0132 0.0003

Uranus -75986-01-16 17:59 J -26032447.98 -26032447.75 -26032447.49 0.0131 0.0041

Uranus -75985-01-20 23:16 J -26032078.72 -26032078.53 -26032078.31 0.0131 0.0078

Uranus -75984-01-24 04:04 J -26031709.43 -26031709.33 -26031709.18 0.0131 0.0115

Jupiter -75979-09-11 19:54 J -26029652.91 -26029652.67 -26029652.43 0.0493 0.0009

Saturn -75978-05-23 16:47 J -26029398.97 -26029398.80 -26029398.62 0.0271 0.0180

Saturn -75977-06-03 05:16 J -26029022.51 -26029022.28 -26029022.04 0.0268 0.0071

Saturn -75976-06-14 13:54 J -26028646.16 -26028645.92 -26028645.68 0.0265 0.0037

Saturn -75975-06-25 20:37 J -26028269.85 -26028269.64 -26028269.44 0.0264 0.0140

Saturn -75974-07-07 02:23 J -26027893.48 -26027893.40 -26027893.28 0.0262 0.0238

Mars -75970-06-10 23:30 J -26026458.70 -26026458.52 -26026458.33 0.1707 0.0201

Jupiter -75967-09-16 08:37 J -26025265.35 -26025265.14 -26025264.92 0.0493 0.0193

Saturn -75963-11-21 03:35 J -26023738.48 -26023738.35 -26023738.20 0.0290 0.0242

Saturn -75962-12-06 04:04 J -26023358.57 -26023358.33 -26023358.09 0.0294 0.0098

Saturn -75961-12-20 09:49 J -26022978.33 -26022978.09 -26022977.84 0.0297 0.0059
 Saturn -75959-01-04 17:44 J -26022597.92 -26022597.76 -26022597.58 0.0299 0.0216
 Jupiter -75955-09-20 22:47 J -26020877.68 -26020877.55 -26020877.40 0.0493 0.0397
 Jupiter -75949-03-10 22:04 J -26018879.75 -26018879.58 -26018879.39 0.0533 0.0321
 Saturn -75949-05-18 04:04 J -26018811.45 -26018811.33 -26018811.19 0.0272 0.0226
 Saturn -75948-05-29 18:56 J -26018434.93 -26018434.71 -26018434.50 0.0268 0.0118
 Saturn -75947-06-10 04:47 J -26018058.54 -26018058.30 -26018058.06 0.0266 0.0010
 Uranus -75947-06-26 09:20 J -26018042.24 -26018042.11 -26018041.97 0.0146 0.0122
 Saturn -75946-06-21 11:59 J -26017682.22 -26017682.00 -26017681.77 0.0264 0.0096
 Uranus -75946-07-01 10:18 J -26017672.29 -26017672.07 -26017671.85 0.0147 0.0071
 Saturn -75945-07-01 17:59 J -26017305.91 -26017305.75 -26017305.59 0.0262 0.0196
 Uranus -75945-07-05 11:59 J -26017302.24 -26017302.00 -26017301.74 0.0147 0.0020
 Uranus -75944-07-10 14:23 J -26016932.13 -26016931.90 -26016931.64 0.0147 0.0033
 Uranus -75943-07-15 17:59 J -26016561.95 -26016561.75 -26016561.54 0.0147 0.0086
 Uranus -75942-07-20 21:35 J -26016191.66 -26016191.60 -26016191.49 0.0147 0.0139
 Jupiter -75937-03-15 20:08 J -26014491.88 -26014491.66 -26014491.43 0.0534 0.0072
 Saturn -75933-11-28 22:04 J -26012772.79 -26012772.58 -26012772.37 0.0292 0.0162
 Saturn -75932-12-14 01:25 J -26012392.69 -26012392.44 -26012392.19 0.0295 0.0011
 Saturn -75931-12-29 08:08 J -26012012.37 -26012012.16 -26012011.94 0.0298 0.0148
 Saturn -75929-01-13 15:20 J -26011631.88 -26011631.86 -26011631.83 0.0299 0.0297
 Jupiter -75925-03-20 20:52 J -26010103.84 -26010103.63 -26010103.42 0.0534 0.0184
 Neptune -75923-04-08 12:13 J -26009355.06 -26009354.99 -26009354.90 0.0089 0.0084
 Neptune -75922-04-10 21:06 J -26008987.75 -26008987.62 -26008987.45 0.0089 0.0070
 Neptune -75921-04-12 06:28 J -26008620.42 -26008620.23 -26008620.03 0.0089 0.0055
 Neptune -75920-04-14 15:20 J -26008253.07 -26008252.86 -26008252.62 0.0089 0.0041
 Saturn -75920-05-13 08:52 J -26008224.15 -26008224.13 -26008224.11 0.0274 0.0272
 Jupiter -75920-09-01 21:20 J -26008112.72 -26008112.61 -26008112.49 0.0493 0.0431
 Neptune -75919-04-17 00:28 J -26007885.71 -26007885.48 -26007885.23 0.0089 0.0026
 Saturn -75919-05-25 01:54 J -26007847.60 -26007847.42 -26007847.22 0.0270 0.0165
 Neptune -75918-04-19 09:35 J -26007518.34 -26007518.10 -26007517.85 0.0089 0.0011

Saturn -75918-06-05 14:08 J -26007471.15 -26007470.91 -26007470.67 0.0267 0.0055
 Neptune -75917-04-20 18:42 J -26007150.97 -26007150.72 -26007150.47 0.0089 0.0003
 Saturn -75917-06-15 22:47 J -26007094.79 -26007094.55 -26007094.32 0.0265 0.0054
 Neptune -75916-04-23 03:49 J -26006783.59 -26006783.34 -26006783.09 0.0089 0.0018
 Saturn -75916-06-27 05:16 J -26006718.47 -26006718.28 -26006718.08 0.0263 0.0157
 Neptune -75915-04-25 12:28 J -26006416.20 -26006415.98 -26006415.74 0.0089 0.0033
 Saturn -75915-07-08 11:30 J -26006342.07 -26006342.02 -26006341.95 0.0262 0.0254
 Neptune -75914-04-27 21:20 J -26006048.80 -26006048.61 -26006048.38 0.0089 0.0048
 Pluto -75914-08-27 02:37 J -26005927.61 -26005927.39 -26005927.13 0.0065 0.0028
 Jupiter -75913-03-25 19:11 J -26005715.83 -26005715.70 -26005715.57 0.0534 0.0432
 Neptune -75913-04-29 06:42 J -26005681.39 -26005681.22 -26005681.03 0.0089 0.0062
 Neptune -75912-05-01 15:35 J -26005313.95 -26005313.85 -26005313.70 0.0089 0.0077
 Jupiter -75908-09-06 09:06 J -26003725.32 -26003725.12 -26003724.91 0.0493 0.0233
 Uranus -75907-12-31 23:59 J -26003243.63 -26003243.50 -26003243.35 0.0132 0.0110
 Uranus -75905-01-05 07:54 J -26002874.38 -26002874.17 -26002873.95 0.0132 0.0071
 Uranus -75904-01-08 15:06 J -26002505.11 -26002504.87 -26002504.62 0.0132 0.0033
 Saturn -75904-11-22 23:16 J -26002186.68 -26002186.53 -26002186.37 0.0290 0.0223
 Uranus -75903-01-12 21:49 J -26002135.84 -26002135.59 -26002135.33 0.0132 0.0005
 Saturn -75903-12-08 00:28 J -26001806.72 -26001806.48 -26001806.24 0.0294 0.0076
 Uranus -75902-01-17 03:35 J -26001766.58 -26001766.35 -26001766.10 0.0131 0.0043
 Saturn -75902-12-23 06:28 J -26001426.46 -26001426.23 -26001425.98 0.0297 0.0083
 Uranus -75901-01-21 08:52 J -26001397.32 -26001397.13 -26001396.91 0.0131 0.0081
 Saturn -75900-01-06 14:23 J -26001046.04 -26001045.90 -26001045.74 0.0299 0.0239
 Uranus -75900-01-24 13:40 J -26001028.02 -26001027.93 -26001027.80 0.0131 0.0117
 Jupiter -75896-09-10 22:47 J -25999337.79 -25999337.55 -25999337.31 0.0493 0.0028
 Mars -75891-06-13 05:59 J -25997601.42 -25997601.25 -25997601.08 0.1701 0.0708
 Saturn -75890-05-20 14:37 J -25997260.03 -25997259.89 -25997259.73 0.0271 0.0211
 Saturn -75889-05-31 04:47 J -25996883.52 -25996883.30 -25996883.07 0.0268 0.0102
 Saturn -75888-06-11 14:37 J -25996507.13 -25996506.89 -25996506.65 0.0266 0.0008
 Saturn -75887-06-22 21:20 J -25996130.82 -25996130.61 -25996130.38 0.0264 0.0113

Saturn -75886-07-04 03:20 J -25995754.49 -25995754.36 -25995754.20 0.0262 0.0213
 Jupiter -75884-09-15 11:16 J -25994950.25 -25994950.03 -25994949.80 0.0493 0.0175
 Saturn -75875-11-16 23:01 J -25991600.59 -25991600.54 -25991600.47 0.0289 0.0279
 Saturn -75874-12-01 20:23 J -25991220.87 -25991220.65 -25991220.43 0.0293 0.0140
 Saturn -75873-12-16 00:13 J -25990840.74 -25990840.49 -25990840.24 0.0296 0.0015
 Jupiter -75872-09-19 23:44 J -25990562.66 -25990562.51 -25990562.35 0.0493 0.0374
 Saturn -75872-12-31 07:11 J -25990460.39 -25990460.20 -25990459.99 0.0298 0.0173
 Jupiter -75866-03-10 22:32 J -25988564.73 -25988564.56 -25988564.38 0.0533 0.0349
 Mars -75866-12-13 23:01 J -25988286.72 -25988286.54 -25988286.36 0.1831 0.0807
 Uranus -75863-06-26 14:37 J -25987361.00 -25987360.89 -25987360.73 0.0146 0.0123
 Uranus -75862-07-01 15:35 J -25986991.05 -25986990.85 -25986990.61 0.0147 0.0072
 Saturn -75861-05-14 19:54 J -25986672.73 -25986672.67 -25986672.58 0.0273 0.0258
 Uranus -75861-07-05 17:30 J -25986621.02 -25986620.77 -25986620.52 0.0147 0.0019
 Saturn -75860-05-26 12:28 J -25986296.17 -25986295.98 -25986295.77 0.0270 0.0149
 Uranus -75860-07-10 19:54 J -25986250.91 -25986250.67 -25986250.42 0.0147 0.0034
 Saturn -75859-06-06 23:59 J -25985919.74 -25985919.50 -25985919.26 0.0267 0.0038
 Uranus -75859-07-15 22:47 J -25985880.73 -25985880.55 -25985880.33 0.0147 0.0088
 Saturn -75858-06-18 08:08 J -25985543.39 -25985543.16 -25985542.93 0.0265 0.0070
 Uranus -75858-07-21 02:52 J -25985510.44 -25985510.38 -25985510.29 0.0147 0.0140
 Saturn -75857-06-28 14:23 J -25985167.07 -25985166.90 -25985166.71 0.0263 0.0174
 Jupiter -75854-03-15 21:49 J -25984176.81 -25984176.59 -25984176.36 0.0533 0.0099
 Saturn -75845-11-24 19:40 J -25980634.85 -25980634.68 -25980634.50 0.0291 0.0203
 Saturn -75844-12-09 21:35 J -25980254.84 -25980254.60 -25980254.35 0.0294 0.0053
 Saturn -75843-12-25 04:18 J -25979874.55 -25979874.32 -25979874.09 0.0297 0.0106
 Jupiter -75842-03-20 15:49 J -25979789.06 -25979788.84 -25979788.62 0.0533 0.0142
 Saturn -75841-01-09 11:59 J -25979494.11 -25979494.00 -25979493.88 0.0299 0.0262
 Neptune -75841-10-07 06:28 J -25979222.35 -25979222.23 -25979222.08 0.0089 0.0076
 Neptune -75840-10-09 20:52 J -25978854.81 -25978854.63 -25978854.43 0.0089 0.0061
 Neptune -75839-10-12 11:16 J -25978487.24 -25978487.03 -25978486.79 0.0089 0.0046
 Neptune -75838-10-15 01:25 J -25978119.67 -25978119.44 -25978119.17 0.0088 0.0031

Jupiter -75837-08-31 23:30 J -25977797.60 -25977797.52 -25977797.41 0.0494 0.0452
 Neptune -75837-10-16 16:04 J -25977752.08 -25977751.83 -25977751.56 0.0088 0.0015
 Neptune -75836-10-19 06:42 J -25977384.48 -25977384.22 -25977383.95 0.0088 0.0001
 Neptune -75835-10-21 21:06 J -25977016.87 -25977016.62 -25977016.35 0.0088 0.0016
 Neptune -75834-10-24 11:30 J -25976649.26 -25976649.02 -25976648.77 0.0088 0.0031
 Neptune -75833-10-26 01:25 J -25976281.64 -25976281.44 -25976281.19 0.0088 0.0047
 Neptune -75832-10-28 15:49 J -25975914.00 -25975913.84 -25975913.62 0.0088 0.0062
 Saturn -75831-05-22 01:25 J -25975708.60 -25975708.44 -25975708.27 0.0271 0.0195
 Neptune -75831-10-31 05:59 J -25975546.35 -25975546.25 -25975546.09 0.0088 0.0077
 Jupiter -75830-03-25 11:44 J -25975401.16 -25975401.01 -25975400.85 0.0533 0.0385
 Saturn -75830-06-02 14:52 J -25975332.11 -25975331.88 -25975331.65 0.0268 0.0086
 Saturn -75829-06-13 00:13 J -25974955.73 -25974955.49 -25974955.25 0.0265 0.0024
 Saturn -75828-06-24 06:56 J -25974579.42 -25974579.21 -25974578.99 0.0263 0.0129
 Saturn -75827-07-05 12:56 J -25974203.07 -25974202.96 -25974202.83 0.0262 0.0228
 Pluto -75826-03-03 22:18 J -25973961.68 -25973961.57 -25973961.43 0.0079 0.0068
 Jupiter -75825-09-05 12:13 J -25973410.19 -25973409.99 -25973409.78 0.0493 0.0250
 Uranus -75822-01-01 08:23 J -25972562.28 -25972562.15 -25972561.99 0.0132 0.0109
 Uranus -75821-01-05 16:47 J -25972193.02 -25972192.80 -25972192.58 0.0132 0.0069
 Uranus -75820-01-08 23:59 J -25971823.74 -25971823.50 -25971823.24 0.0132 0.0031
 Uranus -75819-01-13 06:42 J -25971454.47 -25971454.22 -25971453.96 0.0132 0.0008
 Uranus -75818-01-17 12:28 J -25971085.20 -25971084.98 -25971084.72 0.0131 0.0047
 Uranus -75817-01-21 17:59 J -25970715.94 -25970715.75 -25970715.55 0.0131 0.0084
 Uranus -75816-01-24 23:01 J -25970346.64 -25970346.54 -25970346.44 0.0131 0.0121
 Saturn -75816-11-18 19:25 J -25970048.80 -25970048.69 -25970048.59 0.0289 0.0261
 Saturn -75815-12-03 17:30 J -25969669.00 -25969668.77 -25969668.54 0.0293 0.0118
 Saturn -75814-12-18 21:49 J -25969288.83 -25969288.59 -25969288.34 0.0296 0.0039
 Jupiter -75813-09-10 00:13 J -25969022.73 -25969022.49 -25969022.25 0.0493 0.0049
 Saturn -75812-01-02 05:01 J -25968908.46 -25968908.29 -25968908.09 0.0298 0.0197
 Mars -75812-06-15 12:28 J -25968744.03 -25968743.98 -25968743.92 0.1696 0.1611
 Saturn -75802-05-17 06:56 J -25965121.31 -25965121.21 -25965121.10 0.0272 0.0243

Saturn -75801-05-27 22:32 J -25964744.76 -25964744.56 -25964744.34 0.0269 0.0134
 Jupiter -75801-09-14 09:49 J -25964635.31 -25964635.09 -25964634.86 0.0493 0.0147
 Saturn -75800-06-08 09:20 J -25964368.35 -25964368.11 -25964367.87 0.0267 0.0023
 Saturn -75799-06-19 17:01 J -25963992.02 -25963991.79 -25963991.56 0.0264 0.0086
 Saturn -75798-06-30 23:16 J -25963615.70 -25963615.53 -25963615.36 0.0263 0.0188
 Jupiter -75789-09-18 22:32 J -25960247.73 -25960247.56 -25960247.39 0.0493 0.0347
 Mars -75787-12-17 07:11 J -25959428.38 -25959428.20 -25959428.03 0.1840 0.0917
 Saturn -75786-11-27 14:23 J -25959083.09 -25959082.90 -25959082.70 0.0291 0.0184
 Saturn -75785-12-11 17:16 J -25958703.03 -25958702.78 -25958702.53 0.0295 0.0031
 Saturn -75784-12-27 00:28 J -25958322.70 -25958322.48 -25958322.26 0.0298 0.0129
 Jupiter -75783-03-09 18:13 J -25958249.89 -25958249.74 -25958249.58 0.0533 0.0387
 Saturn -75782-01-11 08:23 J -25957942.22 -25957942.15 -25957942.07 0.0299 0.0284
 Uranus -75779-06-26 23:01 J -25956679.66 -25956679.54 -25956679.38 0.0146 0.0121
 Uranus -75778-07-01 23:44 J -25956309.71 -25956309.51 -25956309.27 0.0147 0.0070
 Uranus -75777-07-06 01:40 J -25955939.68 -25955939.43 -25955939.18 0.0147 0.0017
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 Uranus -75775-07-16 06:42 J -25955199.40 -25955199.22 -25955199.00 0.0147 0.0090
 Uranus -75774-07-21 10:32 J -25954829.10 -25954829.06 -25954828.98 0.0148 0.0144
 Saturn -75772-05-23 11:44 J -25954157.18 -25954157.01 -25954156.83 0.0270 0.0180
 Jupiter -75771-03-14 15:20 J -25953862.07 -25953861.86 -25953861.63 0.0533 0.0143
 Saturn -75771-06-04 00:13 J -25953780.72 -25953780.49 -25953780.26 0.0267 0.0070
 Saturn -75770-06-15 08:52 J -25953404.37 -25953404.13 -25953403.89 0.0265 0.0039
 Saturn -75769-06-25 15:20 J -25953028.06 -25953027.86 -25953027.65 0.0263 0.0144
 Saturn -75768-07-06 20:52 J -25952651.70 -25952651.63 -25952651.52 0.0262 0.0243
 Mars -75765-06-08 15:35 J -25951584.01 -25951583.85 -25951583.69 0.1720 0.0830
 Jupiter -75759-03-19 12:28 J -25949474.20 -25949473.98 -25949473.76 0.0534 0.0105
 Neptune -75759-04-08 00:13 J -25949454.51 -25949454.49 -25949454.46 0.0089 0.0088
 Neptune -75758-04-10 09:06 J -25949087.24 -25949087.12 -25949086.96 0.0089 0.0074
 Neptune -75757-04-11 18:28 J -25948719.90 -25948719.73 -25948719.53 0.0089 0.0060
 Saturn -75757-11-20 12:56 J -25948497.08 -25948496.96 -25948496.81 0.0290 0.0244

Neptune -75756-04-14 03:49 J -25948352.55 -25948352.34 -25948352.12 0.0089 0.0045
 Saturn -75756-12-05 12:42 J -25948117.21 -25948116.97 -25948116.74 0.0294 0.0097
 Neptune -75755-04-16 12:42 J -25947985.20 -25947984.97 -25947984.72 0.0089 0.0031
 Saturn -75755-12-20 17:30 J -25947737.01 -25947736.77 -25947736.52 0.0297 0.0062
 Neptune -75754-04-18 21:49 J -25947617.83 -25947617.59 -25947617.34 0.0089 0.0016
 Jupiter -75754-09-01 02:52 J -25947482.45 -25947482.38 -25947482.31 0.0494 0.0469
 Saturn -75753-01-05 01:11 J -25947356.61 -25947356.45 -25947356.28 0.0299 0.0220
 Neptune -75753-04-20 06:56 J -25947250.46 -25947250.21 -25947249.96 0.0089 0.0002
 Neptune -75752-04-22 15:35 J -25946883.09 -25946882.85 -25946882.59 0.0089 0.0013
 Neptune -75751-04-25 00:42 J -25946515.70 -25946515.47 -25946515.22 0.0089 0.0027
 Neptune -75750-04-27 09:20 J -25946148.31 -25946148.11 -25946147.87 0.0089 0.0042
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 Neptune -75748-05-01 03:20 J -25945413.48 -25945413.36 -25945413.18 0.0089 0.0071
 Jupiter -75747-03-24 12:28 J -25945086.14 -25945085.98 -25945085.80 0.0534 0.0358
 Neptune -75747-05-03 12:13 J -25945046.03 -25945045.99 -25945045.88 0.0089 0.0085
 Saturn -75743-05-18 16:32 J -25943569.93 -25943569.81 -25943569.67 0.0272 0.0230
 Saturn -75742-05-30 07:25 J -25943193.40 -25943193.19 -25943192.97 0.0269 0.0119
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 Saturn -75741-06-09 17:30 J -25942817.01 -25942816.77 -25942816.53 0.0266 0.0008
 Saturn -75740-06-21 00:28 J -25942440.70 -25942440.48 -25942440.25 0.0264 0.0100
 Saturn -75739-07-02 05:59 J -25942064.39 -25942064.25 -25942064.08 0.0263 0.0203
 Uranus -75738-01-01 18:13 J -25941880.88 -25941880.74 -25941880.58 0.0132 0.0107
 Uranus -75737-01-06 02:23 J -25941511.61 -25941511.40 -25941511.17 0.0132 0.0067
 Uranus -75736-01-09 09:49 J -25941142.33 -25941142.09 -25941141.83 0.0132 0.0028
 Uranus -75735-01-13 16:32 J -25940773.06 -25940772.81 -25940772.55 0.0132 0.0011
 Uranus -75734-01-17 22:18 J -25940403.80 -25940403.57 -25940403.32 0.0132 0.0049
 Uranus -75733-01-22 03:35 J -25940034.52 -25940034.35 -25940034.14 0.0131 0.0087
 Uranus -75732-01-25 08:23 J -25939665.21 -25939665.15 -25939665.05 0.0131 0.0125
 Jupiter -75730-09-10 01:11 J -25938707.69 -25938707.45 -25938707.22 0.0493 0.0073
 Saturn -75727-11-29 05:30 J -25937531.47 -25937531.27 -25937531.06 0.0292 0.0167

Saturn -75726-12-14 08:52 J -25937151.38 -25937151.13 -25937150.88 0.0295 0.0013
 Saturn -75725-12-28 16:32 J -25936771.02 -25936770.81 -25936770.59 0.0298 0.0149
 Jupiter -75718-09-14 14:23 J -25934320.13 -25934319.90 -25934319.67 0.0493 0.0132
 Saturn -75713-05-24 19:40 J -25932605.86 -25932605.68 -25932605.48 0.0270 0.0166
 Saturn -75712-06-05 07:25 J -25932229.43 -25932229.19 -25932228.96 0.0267 0.0055
 Saturn -75711-06-16 15:20 J -25931853.09 -25931852.86 -25931852.62 0.0265 0.0054
 Saturn -75710-06-27 21:20 J -25931476.79 -25931476.61 -25931476.40 0.0263 0.0158
 Saturn -75709-07-08 02:52 J -25931100.41 -25931100.38 -25931100.32 0.0262 0.0256
 Jupiter -75706-09-19 03:20 J -25929932.53 -25929932.36 -25929932.18 0.0493 0.0334
 Jupiter -75700-03-08 16:04 J -25927934.97 -25927934.83 -25927934.69 0.0533 0.0421
 Saturn -75698-11-23 02:08 J -25926945.56 -25926945.41 -25926945.25 0.0290 0.0228
 Saturn -75697-12-07 02:37 J -25926565.62 -25926565.39 -25926565.14 0.0294 0.0078
 Saturn -75696-12-22 08:37 J -25926185.38 -25926185.14 -25926184.90 0.0297 0.0082
 Uranus -75695-06-27 10:47 J -25925998.17 -25925998.05 -25925997.88 0.0146 0.0119
 Saturn -75694-01-06 16:32 J -25925804.95 -25925804.81 -25925804.66 0.0299 0.0240
 Uranus -75694-07-02 11:44 J -25925628.23 -25925628.01 -25925627.78 0.0147 0.0067
 Uranus -75693-07-06 12:56 J -25925258.20 -25925257.96 -25925257.70 0.0147 0.0014
 Uranus -75692-07-11 15:20 J -25924888.10 -25924887.86 -25924887.61 0.0147 0.0040
 Uranus -75691-07-16 17:59 J -25924517.92 -25924517.75 -25924517.54 0.0147 0.0095
 Jupiter -75688-03-13 16:18 J -25923547.03 -25923546.82 -25923546.60 0.0533 0.0170
 Mars -75686-06-11 22:18 J -25922726.76 -25922726.57 -25922726.39 0.1715 0.0112
 Saturn -75684-05-20 00:28 J -25922018.61 -25922018.48 -25922018.33 0.0271 0.0216
 Saturn -75683-05-31 14:08 J -25921642.12 -25921641.91 -25921641.68 0.0268 0.0105
 Saturn -75682-06-11 23:30 J -25921265.76 -25921265.52 -25921265.28 0.0266 0.0007
 Saturn -75681-06-22 05:44 J -25920889.47 -25920889.26 -25920889.03 0.0264 0.0114
 Saturn -75680-07-03 11:01 J -25920513.17 -25920513.04 -25920512.89 0.0262 0.0215
 Neptune -75677-10-06 12:56 J -25919322.04 -25919321.96 -25919321.82 0.0089 0.0081
 Jupiter -75676-03-18 17:01 J -25919159.02 -25919158.79 -25919158.57 0.0534 0.0084
 Neptune -75676-10-09 03:35 J -25918954.50 -25918954.35 -25918954.15 0.0089 0.0066
 Neptune -75675-10-11 17:59 J -25918586.95 -25918586.75 -25918586.52 0.0089 0.0051

Neptune -75674-10-14 08:23 J -25918219.38 -25918219.15 -25918218.90 0.0088 0.0036
 Neptune -75673-10-15 22:47 J -25917851.80 -25917851.55 -25917851.29 0.0088 0.0021
 Neptune -75672-10-18 13:25 J -25917484.20 -25917483.94 -25917483.67 0.0088 0.0005
 Jupiter -75671-08-31 06:13 J -25917167.27 -25917167.24 -25917167.20 0.0494 0.0487
 Neptune -75671-10-21 03:49 J -25917116.60 -25917116.34 -25917116.08 0.0088 0.0010
 Neptune -75670-10-23 18:13 J -25916748.99 -25916748.74 -25916748.48 0.0088 0.0025
 Neptune -75669-10-25 08:37 J -25916381.37 -25916381.14 -25916380.89 0.0088 0.0040
 Neptune -75668-10-27 23:01 J -25916013.73 -25916013.54 -25916013.32 0.0088 0.0055
 Saturn -75668-11-30 16:04 J -25915980.03 -25915979.83 -25915979.60 0.0292 0.0151
 Neptune -75667-10-30 13:25 J -25915646.08 -25915645.94 -25915645.76 0.0088 0.0070
 Saturn -75667-12-15 20:23 J -25915599.90 -25915599.65 -25915599.40 0.0296 0.0006
 Pluto -75666-08-28 04:47 J -25915344.56 -25915344.30 -25915344.04 0.0065 0.0000
 Neptune -75666-11-02 03:20 J -25915278.41 -25915278.36 -25915278.25 0.0088 0.0085
 Saturn -75666-12-31 04:18 J -25915219.52 -25915219.32 -25915219.11 0.0298 0.0168
 Jupiter -75664-03-23 12:13 J -25914771.16 -25914770.99 -25914770.81 0.0533 0.0328
 Jupiter -75659-09-04 18:13 J -25912779.93 -25912779.74 -25912779.54 0.0494 0.0286
 Saturn -75655-05-15 08:37 J -25911431.18 -25911431.14 -25911431.06 0.0273 0.0264
 Uranus -75654-01-02 04:47 J -25911199.44 -25911199.30 -25911199.13 0.0132 0.0104
 Saturn -75654-05-27 01:11 J -25911054.64 -25911054.45 -25911054.25 0.0270 0.0153
 Uranus -75653-01-06 13:11 J -25910830.17 -25910829.95 -25910829.72 0.0132 0.0065
 Saturn -75653-06-06 12:13 J -25910678.23 -25910677.99 -25910677.75 0.0267 0.0042
 Uranus -75652-01-09 20:37 J -25910460.89 -25910460.64 -25910460.39 0.0132 0.0025
 Saturn -75652-06-17 19:40 J -25910301.91 -25910301.68 -25910301.44 0.0264 0.0067
 Uranus -75651-01-14 03:06 J -25910091.62 -25910091.37 -25910091.11 0.0132 0.0014
 Saturn -75651-06-29 00:56 J -25909925.63 -25909925.46 -25909925.26 0.0263 0.0171
 Uranus -75650-01-18 08:52 J -25909722.36 -25909722.13 -25909721.89 0.0132 0.0053
 Uranus -75649-01-22 13:54 J -25909353.08 -25909352.92 -25909352.71 0.0131 0.0092
 Uranus -75648-01-25 18:56 J -25908983.75 -25908983.71 -25908983.65 0.0131 0.0129
 Jupiter -75647-09-09 07:25 J -25908392.42 -25908392.19 -25908391.95 0.0493 0.0082
 Saturn -75639-11-24 10:32 J -25905394.22 -25905394.06 -25905393.88 0.0291 0.0213

Saturn	-75638-12-09 11:59 J	-25905014.24	-25905014.00	-25905013.76	0.0295	0.0061
Saturn	-75637-12-23 18:28 J	-25904633.96	-25904633.73	-25904633.49	0.0297	0.0100
Saturn	-75635-01-08 02:37 J	-25904253.50	-25904253.39	-25904253.25	0.0299	0.0258
Jupiter	-75635-09-13 20:37 J	-25904004.87	-25904004.64	-25904004.41	0.0493	0.0120
Saturn	-75625-05-21 05:16 J	-25900467.43	-25900467.28	-25900467.11	0.0271	0.0204
Saturn	-75624-06-01 18:13 J	-25900090.96	-25900090.74	-25900090.51	0.0268	0.0092
Saturn	-75623-06-13 02:52 J	-25899714.62	-25899714.38	-25899714.14	0.0265	0.0019
Jupiter	-75623-09-18 08:08 J	-25899617.33	-25899617.16	-25899616.97	0.0493	0.0319
Saturn	-75622-06-24 08:37 J	-25899338.35	-25899338.14	-25899337.92	0.0263	0.0126
Saturn	-75621-07-04 13:40 J	-25898962.05	-25898961.93	-25898961.81	0.0262	0.0226
Jupiter	-75617-03-07 21:35 J	-25897619.72	-25897619.60	-25897619.46	0.0533	0.0439
Uranus	-75611-06-28 00:13 J	-25895316.64	-25895316.49	-25895316.33	0.0146	0.0115
Uranus	-75610-07-03 00:28 J	-25894946.69	-25894946.48	-25894946.24	0.0147	0.0063
Saturn	-75610-11-17 23:16 J	-25894808.58	-25894808.53	-25894808.46	0.0289	0.0280
Uranus	-75609-07-07 02:08 J	-25894576.66	-25894576.41	-25894576.16	0.0147	0.0009
Saturn	-75609-12-01 21:20 J	-25894428.82	-25894428.61	-25894428.38	0.0293	0.0137
Uranus	-75608-07-12 04:18 J	-25894206.55	-25894206.32	-25894206.07	0.0147	0.0046
Saturn	-75608-12-17 02:08 J	-25894048.66	-25894048.41	-25894048.16	0.0296	0.0022
Mars	-75607-06-14 05:16 J	-25893869.43	-25893869.28	-25893869.13	0.1709	0.1037
Uranus	-75607-07-17 07:25 J	-25893836.37	-25893836.19	-25893836.00	0.0147	0.0100
Saturn	-75606-01-01 10:18 J	-25893668.25	-25893668.07	-25893667.87	0.0298	0.0184
Jupiter	-75605-03-12 19:40 J	-25893231.89	-25893231.68	-25893231.47	0.0533	0.0189
Saturn	-75596-05-16 12:28 J	-25889880.06	-25889879.98	-25889879.88	0.0273	0.0251
Saturn	-75595-05-28 04:04 J	-25889503.53	-25889503.33	-25889503.12	0.0269	0.0140
Neptune	-75594-04-09 20:52 J	-25889186.74	-25889186.63	-25889186.50	0.0089	0.0078
Saturn	-75594-06-08 14:37 J	-25889127.13	-25889126.89	-25889126.65	0.0266	0.0029
Jupiter	-75593-03-17 17:44 J	-25888843.99	-25888843.76	-25888843.53	0.0533	0.0059
Neptune	-75593-04-11 05:59 J	-25888819.41	-25888819.25	-25888819.06	0.0089	0.0064
Saturn	-75593-06-18 21:35 J	-25888750.83	-25888750.60	-25888750.37	0.0264	0.0079
Neptune	-75592-04-13 15:06 J	-25888452.06	-25888451.87	-25888451.65	0.0089	0.0050

Saturn -75592-06-30 02:08 J -25888374.57 -25888374.41 -25888374.22 0.0262 0.0183
 Neptune -75591-04-16 00:13 J -25888084.70 -25888084.49 -25888084.24 0.0089 0.0036
 Neptune -75590-04-18 09:35 J -25887717.33 -25887717.10 -25887716.85 0.0089 0.0022
 Neptune -75589-04-19 18:42 J -25887349.97 -25887349.72 -25887349.46 0.0089 0.0007
 Neptune -75588-04-22 03:49 J -25886982.59 -25886982.34 -25886982.09 0.0089 0.0007
 Jupiter -75588-08-30 13:25 J -25886851.94 -25886851.94 -25886851.92 0.0495 0.0494
 Neptune -75587-04-24 12:28 J -25886615.21 -25886614.98 -25886614.72 0.0089 0.0022
 Neptune -75586-04-26 21:20 J -25886247.82 -25886247.61 -25886247.36 0.0089 0.0036
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 Neptune -75584-04-30 15:20 J -25885513.02 -25885512.86 -25885512.67 0.0089 0.0064
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 Saturn -75314-12-08 08:52 J -25786674.38 -25786674.13 -25786673.89 0.0293 0.0073
 Uranus -75313-01-24 11:30 J -25786627.15 -25786627.02 -25786626.86 0.0131 0.0107
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Saturn -75300-06-02 17:44 J -25781748.99 -25781748.76 -25781748.53 0.0269 0.0079
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 Mars -75298-12-13 10:32 J -25780825.23 -25780825.06 -25780824.89 0.1810 0.0971
 Saturn -75297-07-05 14:37 J -25780619.98 -25780619.89 -25780619.78 0.0262 0.0239
 Jupiter -75291-09-16 23:59 J -25778355.68 -25778355.50 -25778355.31 0.0494 0.0309
 Saturn -75286-11-17 06:42 J -25776468.26 -25776468.22 -25776468.16 0.0287 0.0280
 Jupiter -75285-03-06 04:04 J -25776358.42 -25776358.33 -25776358.23 0.0531 0.0480
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 Uranus -75275-06-29 11:59 J -25772591.16 -25772591.00 -25772590.83 0.0147 0.0109
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 Jupiter -75273-03-11 02:37 J -25771970.59 -25771970.39 -25771970.18 0.0532 0.0235
 Uranus -75273-07-08 14:23 J -25771851.15 -25771850.90 -25771850.65 0.0147 0.0002
 Saturn -75272-05-17 04:18 J -25771538.41 -25771538.32 -25771538.21 0.0274 0.0246
 Uranus -75272-07-13 17:01 J -25771481.02 -25771480.79 -25771480.56 0.0147 0.0057
 Saturn -75271-05-28 22:32 J -25771161.76 -25771161.56 -25771161.34 0.0270 0.0132
 Uranus -75271-07-18 20:08 J -25771110.81 -25771110.66 -25771110.49 0.0148 0.0113
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 Neptune -75265-04-10 02:23 J -25769018.53 -25769018.40 -25769018.24 0.0089 0.0073
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 Saturn -75255-12-09 09:49 J -25765123.34 -25765123.09 -25765122.85 0.0293 0.0057
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 Uranus -75234-01-04 15:20 J -25757792.03 -25757791.86 -25757791.66 0.0132 0.0090
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 Uranus -75231-01-16 12:28 J -25756684.22 -25756683.98 -25756683.72 0.0132 0.0032
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 Saturn -75226-12-03 04:04 J -25754537.55 -25754537.33 -25754537.09 0.0292 0.0122
 Saturn -75225-12-17 06:28 J -25754157.48 -25754157.23 -25754156.98 0.0295 0.0038

Saturn -75223-01-01 13:40 J -25753777.10 -25753776.93 -25753776.73 0.0298 0.0202
 Jupiter -75220-09-11 19:54 J -25752427.90 -25752427.67 -25752427.43 0.0494 0.0099
 Mars -75219-12-16 15:35 J -25751967.04 -25751966.85 -25751966.67 0.1818 0.0657
 Saturn -75213-05-18 03:49 J -25749987.45 -25749987.34 -25749987.21 0.0274 0.0234
 Saturn -75212-05-29 22:18 J -25749610.78 -25749610.57 -25749610.35 0.0270 0.0118
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 Neptune -75184-10-06 18:13 J -25739253.83 -25739253.74 -25739253.61 0.0089 0.0080
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 Saturn -75182-06-05 16:32 J -25738647.04 -25738646.81 -25738646.57 0.0269 0.0052
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 Neptune -75180-10-16 03:49 J -25737783.59 -25737783.34 -25737783.08 0.0088 0.0023

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 Pluto -75170-08-30 05:16 J -25734178.34 -25734178.28 -25734178.14 0.0065 0.0060
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 Saturn -75168-11-19 17:01 J -25733365.91 -25733365.79 -25733365.66 0.0287 0.0250
 Saturn -75167-12-04 11:59 J -25732986.23 -25732986.00 -25732985.77 0.0292 0.0104
 Jupiter -75166-03-21 06:42 J -25732879.42 -25732879.22 -25732879.02 0.0532 0.0248
 Saturn -75166-12-19 14:23 J -25732606.15 -25732605.90 -25732605.66 0.0295 0.0057
 Saturn -75164-01-02 21:35 J -25732225.76 -25732225.60 -25732225.43 0.0298 0.0220
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Saturn -75138-11-28 02:52 J -25722400.58 -25722400.38 -25722400.18 0.0290 0.0172
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 Saturn -75109-11-21 04:32 J -25711814.45 -25711814.31 -25711814.15 0.0288 0.0233
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 Saturn -75092-06-24 02:23 J -25705755.61 -25705755.40 -25705755.20 0.0264 0.0137
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 Uranus -75066-01-05 17:16 J -25696428.97 -25696428.78 -25696428.57 0.0132 0.0083
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Saturn -75062-06-30 18:42 J -25694791.87 -25694791.72 -25694791.56 0.0264 0.0199
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 Jupiter -75042-09-15 15:35 J -25687410.04 -25687409.85 -25687409.64 0.0494 0.0267
 Mars -75039-06-16 01:40 J -25686405.47 -25686405.43 -25686405.39 0.1724 0.1677
 Saturn -75036-05-22 18:28 J -25685333.90 -25685333.73 -25685333.55 0.0274 0.0191
 Saturn -75035-06-03 12:28 J -25684957.21 -25684956.98 -25684956.75 0.0270 0.0072
 Saturn -75034-06-15 00:42 J -25684580.71 -25684580.47 -25684580.23 0.0267 0.0043
 Saturn -75033-06-25 09:06 J -25684204.31 -25684204.12 -25684203.92 0.0264 0.0153
 Saturn -75032-07-06 15:20 J -25683827.90 -25683827.86 -25683827.79 0.0262 0.0255
 Jupiter -75030-09-20 04:32 J -25683022.38 -25683022.31 -25683022.24 0.0494 0.0470
 Jupiter -75024-03-09 11:16 J -25681025.22 -25681025.03 -25681024.84 0.0531 0.0302
 Uranus -75023-07-01 04:32 J -25680546.48 -25680546.31 -25680546.10 0.0147 0.0098
 Uranus -75022-07-06 05:44 J -25680176.50 -25680176.26 -25680176.02 0.0147 0.0042
 Uranus -75021-07-10 07:25 J -25679806.43 -25679806.19 -25679805.93 0.0147 0.0016
 Saturn -75021-11-16 21:06 J -25679676.69 -25679676.62 -25679676.54 0.0286 0.0272
 Uranus -75020-07-15 10:04 J -25679436.29 -25679436.08 -25679435.85 0.0147 0.0072
 Neptune -75020-10-05 20:52 J -25679353.68 -25679353.63 -25679353.52 0.0089 0.0085
 Saturn -75020-12-01 12:42 J -25679297.19 -25679296.97 -25679296.75 0.0290 0.0129
 Uranus -75019-07-20 13:25 J -25679066.04 -25679065.94 -25679065.81 0.0148 0.0130
 Neptune -75019-10-08 11:30 J -25678986.16 -25678986.02 -25678985.84 0.0089 0.0071
 Saturn -75019-12-16 12:28 J -25678917.23 -25678916.98 -25678916.73 0.0294 0.0029
 Neptune -75018-10-11 01:54 J -25678618.61 -25678618.42 -25678618.21 0.0088 0.0057
 Saturn -75018-12-31 17:30 J -25678536.94 -25678536.77 -25678536.57 0.0297 0.0193
 Neptune -75017-10-12 16:04 J -25678251.04 -25678250.83 -25678250.58 0.0088 0.0043
 Neptune -75016-10-15 06:28 J -25677883.47 -25677883.23 -25677882.97 0.0088 0.0029

Neptune -75015-10-17 20:52 J -25677515.88 -25677515.63 -25677515.35 0.0088 0.0015

Neptune -75014-10-20 11:16 J -25677148.29 -25677148.03 -25677147.76 0.0088 0.0001

Mars -75014-12-13 07:54 J -25677094.34 -25677094.17 -25677094.00 0.1799 0.0992

Neptune -75013-10-22 01:25 J -25676780.69 -25676780.44 -25676780.17 0.0088 0.0015

Jupiter -75012-03-14 12:13 J -25676637.22 -25676636.99 -25676636.76 0.0532 0.0049

Neptune -75012-10-24 15:35 J -25676413.09 -25676412.85 -25676412.59 0.0088 0.0029

Neptune -75011-10-27 05:44 J -25676045.47 -25676045.26 -25676045.01 0.0088 0.0043

Neptune -75010-10-29 19:54 J -25675677.85 -25675677.67 -25675677.45 0.0088 0.0057

Neptune -75009-10-31 09:49 J -25675310.22 -25675310.09 -25675309.90 0.0088 0.0071

Neptune -75008-11-03 00:13 J -25674942.54 -25674942.49 -25674942.39 0.0088 0.0085

Saturn -75007-05-17 20:37 J -25674746.74 -25674746.64 -25674746.52 0.0276 0.0243

Saturn -75006-05-29 17:59 J -25674369.97 -25674369.75 -25674369.54 0.0272 0.0123

Saturn -75005-06-09 08:52 J -25673993.37 -25673993.13 -25673992.89 0.0269 0.0005

Saturn -75004-06-20 18:56 J -25673616.92 -25673616.71 -25673616.48 0.0266 0.0109

Saturn -75003-07-02 02:08 J -25673240.53 -25673240.41 -25673240.26 0.0264 0.0216

75TH MILLENNIUM BCE

This is a list of transits of Earth in the 75th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Jupiter -75000-03-19 11:16 J -25672249.24 -25672249.03 -25672248.81 0.0532 0.0199

Jupiter -74995-09-01 03:20 J -25670257.52 -25670257.36 -25670257.20 0.0495 0.0363

Mars -74992-06-08 17:44 J -25669245.90 -25669245.76 -25669245.61 0.1751 0.1123

Saturn -74991-11-25 15:35 J -25668711.03 -25668710.85 -25668710.66 0.0288 0.0194

Saturn	-74990-12-10 12:28 J	-25668331.23	-25668330.98	-25668330.73	0.0293	0.0040
Saturn	-74989-12-24 16:04 J	-25667951.05	-25667950.83	-25667950.60	0.0296	0.0125
Jupiter	-74988-03-24 05:01 J	-25667861.41	-25667861.29	-25667861.16	0.0532	0.0436
Saturn	-74987-01-08 23:44 J	-25667570.58	-25667570.51	-25667570.44	0.0299	0.0286
Uranus	-74983-01-01 23:01 J	-25666116.62	-25666116.54	-25666116.42	0.0133	0.0122
Jupiter	-74983-09-05 16:18 J	-25665870.04	-25665869.82	-25665869.59	0.0495	0.0160
Uranus	-74982-01-06 07:40 J	-25665747.37	-25665747.18	-25665746.96	0.0132	0.0079
Uranus	-74981-01-10 15:35 J	-25665378.09	-25665377.85	-25665377.60	0.0132	0.0037
Uranus	-74980-01-13 22:47 J	-25665008.80	-25665008.55	-25665008.29	0.0132	0.0005
Uranus	-74979-01-18 05:16 J	-25664639.51	-25664639.28	-25664639.03	0.0131	0.0046
Uranus	-74978-01-22 11:16 J	-25664270.22	-25664270.03	-25664269.84	0.0131	0.0087
Uranus	-74977-01-26 16:18 J	-25663900.86	-25663900.82	-25663900.74	0.0131	0.0127
Saturn	-74977-05-24 04:32 J	-25663782.49	-25663782.31	-25663782.13	0.0273	0.0174
Saturn	-74976-06-04 21:35 J	-25663405.83	-25663405.60	-25663405.36	0.0270	0.0056
Saturn	-74975-06-16 09:20 J	-25663029.34	-25663029.11	-25663028.87	0.0267	0.0060
Saturn	-74974-06-27 17:59 J	-25662652.94	-25662652.75	-25662652.57	0.0264	0.0170
Jupiter	-74971-09-10 05:01 J	-25661482.52	-25661482.29	-25661482.05	0.0494	0.0045
Saturn	-74962-11-19 17:30 J	-25658124.88	-25658124.77	-25658124.65	0.0287	0.0253
Saturn	-74961-12-03 10:04 J	-25657745.31	-25657745.08	-25657744.85	0.0291	0.0106
Saturn	-74960-12-18 10:32 J	-25657365.30	-25657365.06	-25657364.81	0.0295	0.0055
Jupiter	-74959-09-14 17:01 J	-25657094.99	-25657094.79	-25657094.58	0.0494	0.0246
Saturn	-74958-01-02 16:04 J	-25656984.98	-25656984.83	-25656984.65	0.0297	0.0219
Saturn	-74948-05-19 07:54 J	-25653195.30	-25653195.17	-25653195.03	0.0275	0.0227
Saturn	-74947-05-31 04:04 J	-25652818.55	-25652818.33	-25652818.11	0.0271	0.0107
Jupiter	-74947-09-19 02:08 J	-25652707.51	-25652707.41	-25652707.30	0.0493	0.0440
Saturn	-74946-06-11 18:13 J	-25652441.98	-25652441.74	-25652441.49	0.0268	0.0012
Saturn	-74945-06-22 03:49 J	-25652065.54	-25652065.34	-25652065.11	0.0266	0.0126
Saturn	-74944-07-03 11:01 J	-25651689.14	-25651689.04	-25651688.92	0.0264	0.0231
Jupiter	-74941-03-08 12:42 J	-25650710.15	-25650709.97	-25650709.79	0.0531	0.0329
Uranus	-74939-07-01 18:13 J	-25649864.93	-25649864.74	-25649864.54	0.0147	0.0094

Uranus -74938-07-06 19:11 J -25649494.93 -25649494.70 -25649494.45 0.0147 0.0038
 Neptune -74937-04-08 18:56 J -25649217.79 -25649217.71 -25649217.60 0.0089 0.0082
 Uranus -74937-07-10 21:06 J -25649124.86 -25649124.62 -25649124.37 0.0147 0.0020
 Neptune -74936-04-11 04:04 J -25648850.47 -25648850.33 -25648850.15 0.0089 0.0069
 Uranus -74936-07-15 23:59 J -25648754.71 -25648754.50 -25648754.28 0.0148 0.0078
 Neptune -74935-04-13 13:40 J -25648483.12 -25648482.93 -25648482.73 0.0089 0.0055
 Uranus -74935-07-21 03:20 J -25648384.44 -25648384.36 -25648384.25 0.0148 0.0136
 Mars -74935-12-16 10:18 J -25648236.26 -25648236.07 -25648235.88 0.1807 0.0566
 Neptune -74934-04-15 22:32 J -25648115.77 -25648115.56 -25648115.33 0.0089 0.0042
 Neptune -74933-04-17 07:25 J -25647748.41 -25647748.19 -25647747.93 0.0089 0.0029
 Neptune -74932-04-19 16:47 J -25647381.04 -25647380.80 -25647380.55 0.0089 0.0015
 Saturn -74932-11-27 11:01 J -25647159.23 -25647159.04 -25647158.83 0.0289 0.0174
 Neptune -74931-04-22 01:54 J -25647013.67 -25647013.42 -25647013.16 0.0089 0.0002
 Saturn -74931-12-12 09:06 J -25646779.37 -25646779.12 -25646778.87 0.0293 0.0017
 Neptune -74930-04-24 11:01 J -25646646.29 -25646646.04 -25646645.79 0.0089 0.0012
 Saturn -74930-12-27 13:11 J -25646399.16 -25646398.95 -25646398.73 0.0296 0.0149
 Jupiter -74929-03-13 07:40 J -25646322.41 -25646322.18 -25646321.96 0.0531 0.0089
 Neptune -74929-04-25 19:54 J -25646278.90 -25646278.67 -25646278.42 0.0089 0.0026
 Neptune -74928-04-28 05:16 J -25645911.50 -25645911.28 -25645911.05 0.0089 0.0039
 Neptune -74927-04-30 13:54 J -25645544.10 -25645543.92 -25645543.69 0.0089 0.0053
 Neptune -74926-05-02 23:16 J -25645176.68 -25645176.53 -25645176.34 0.0089 0.0066
 Neptune -74925-05-04 08:23 J -25644809.24 -25644809.15 -25644809.02 0.0089 0.0079
 Pluto -74921-08-31 19:54 J -25643228.93 -25643228.67 -25643228.41 0.0065 0.0002
 Saturn -74918-05-26 15:49 J -25642231.03 -25642230.84 -25642230.64 0.0273 0.0158
 Jupiter -74917-03-18 04:18 J -25641934.54 -25641934.32 -25641934.10 0.0532 0.0154
 Saturn -74917-06-06 08:08 J -25641854.39 -25641854.16 -25641853.92 0.0269 0.0039
 Saturn -74916-06-17 19:25 J -25641477.92 -25641477.69 -25641477.45 0.0266 0.0077
 Saturn -74915-06-29 03:20 J -25641101.52 -25641101.36 -25641101.18 0.0264 0.0186
 Mars -74913-06-11 04:18 J -25640388.50 -25640388.32 -25640388.13 0.1744 0.0063
 Jupiter -74912-08-31 05:59 J -25639942.39 -25639942.25 -25639942.09 0.0496 0.0382

Jupiter -74905-03-23 00:56 J -25637546.61 -25637546.46 -25637546.31 0.0533 0.0398
 Saturn -74903-11-21 13:40 J -25636573.07 -25636572.93 -25636572.79 0.0287 0.0234
 Saturn -74902-12-06 07:11 J -25636193.43 -25636193.20 -25636192.95 0.0291 0.0084
 Saturn -74901-12-20 08:52 J -25635813.37 -25635813.13 -25635812.89 0.0295 0.0079
 Jupiter -74900-09-04 17:59 J -25635554.96 -25635554.75 -25635554.52 0.0495 0.0181
 Uranus -74899-01-02 13:54 J -25635435.02 -25635434.92 -25635434.78 0.0132 0.0118
 Saturn -74899-01-04 15:06 J -25635433.01 -25635432.87 -25635432.72 0.0298 0.0243
 Uranus -74898-01-06 22:18 J -25635065.77 -25635065.57 -25635065.34 0.0132 0.0075
 Uranus -74897-01-11 06:13 J -25634696.48 -25634696.24 -25634695.98 0.0132 0.0033
 Uranus -74896-01-14 13:40 J -25634327.19 -25634326.93 -25634326.67 0.0132 0.0010
 Uranus -74895-01-18 19:54 J -25633957.89 -25633957.67 -25633957.42 0.0131 0.0052
 Uranus -74894-01-23 01:40 J -25633588.60 -25633588.43 -25633588.23 0.0131 0.0093
 Saturn -74889-05-20 19:54 J -25631643.81 -25631643.67 -25631643.50 0.0274 0.0212
 Saturn -74888-06-01 15:20 J -25631267.08 -25631266.86 -25631266.63 0.0271 0.0091
 Jupiter -74888-09-09 03:20 J -25631167.59 -25631167.36 -25631167.12 0.0494 0.0018
 Saturn -74887-06-13 04:32 J -25630890.55 -25630890.31 -25630890.07 0.0268 0.0028
 Saturn -74886-06-24 13:40 J -25630514.13 -25630513.93 -25630513.72 0.0265 0.0141
 Saturn -74885-07-04 20:23 J -25630137.73 -25630137.65 -25630137.56 0.0263 0.0247
 Jupiter -74876-09-13 15:35 J -25626780.07 -25626779.85 -25626779.64 0.0494 0.0217
 Saturn -74873-11-29 06:28 J -25625607.43 -25625607.23 -25625607.01 0.0289 0.0154
 Saturn -74872-12-14 05:30 J -25625227.52 -25625227.27 -25625227.02 0.0293 0.0006
 Saturn -74871-12-29 10:18 J -25624847.26 -25624847.07 -25624846.86 0.0297 0.0172
 Jupiter -74864-09-18 04:32 J -25622392.42 -25622392.31 -25622392.18 0.0494 0.0422
 Saturn -74860-05-16 05:16 J -25621056.35 -25621056.28 -25621056.20 0.0276 0.0261
 Saturn -74859-05-28 03:06 J -25620679.57 -25620679.37 -25620679.17 0.0272 0.0141
 Jupiter -74858-03-08 06:28 J -25620395.40 -25620395.23 -25620395.07 0.0530 0.0370
 Saturn -74858-06-08 18:28 J -25620302.97 -25620302.73 -25620302.49 0.0269 0.0023
 Saturn -74857-06-19 05:16 J -25619926.51 -25619926.28 -25619926.05 0.0266 0.0093
 Uranus -74856-06-27 07:11 J -25619553.21 -25619553.20 -25619553.18 0.0146 0.0146
 Saturn -74856-06-30 12:28 J -25619550.12 -25619549.98 -25619549.81 0.0264 0.0202

Uranus -74855-07-02 06:42 J -25619183.40 -25619183.22 -25619183.00 0.0147 0.0091
 Neptune -74855-10-07 13:11 J -25619086.06 -25619085.95 -25619085.79 0.0089 0.0076
 Uranus -74854-07-07 07:54 J -25618813.40 -25618813.17 -25618812.91 0.0147 0.0034
 Neptune -74854-10-10 03:35 J -25618718.53 -25618718.35 -25618718.15 0.0088 0.0062
 Uranus -74853-07-11 10:04 J -25618443.32 -25618443.08 -25618442.83 0.0147 0.0024
 Neptune -74853-10-11 17:59 J -25618350.97 -25618350.75 -25618350.53 0.0088 0.0048
 Uranus -74852-07-16 12:42 J -25618073.17 -25618072.97 -25618072.75 0.0148 0.0083
 Neptune -74852-10-14 08:23 J -25617983.39 -25617983.15 -25617982.90 0.0088 0.0034
 Uranus -74851-07-21 16:18 J -25617702.88 -25617702.82 -25617702.74 0.0148 0.0141
 Neptune -74851-10-16 22:18 J -25617615.81 -25617615.57 -25617615.30 0.0088 0.0021
 Neptune -74850-10-19 12:56 J -25617248.22 -25617247.96 -25617247.69 0.0088 0.0006
 Neptune -74849-10-21 03:20 J -25616880.62 -25616880.36 -25616880.10 0.0088 0.0008
 Neptune -74848-10-23 17:44 J -25616513.02 -25616512.76 -25616512.50 0.0088 0.0022
 Neptune -74847-10-26 07:54 J -25616145.40 -25616145.17 -25616144.92 0.0088 0.0036
 Jupiter -74846-03-13 03:06 J -25616007.59 -25616007.37 -25616007.14 0.0531 0.0127
 Neptune -74846-10-28 21:49 J -25615777.79 -25615777.59 -25615777.36 0.0088 0.0050
 Neptune -74845-10-30 11:59 J -25615410.16 -25615410.00 -25615409.79 0.0088 0.0064
 Neptune -74844-11-02 01:54 J -25615042.52 -25615042.42 -25615042.26 0.0088 0.0078
 Saturn -74844-11-23 07:40 J -25615021.34 -25615021.18 -25615021.01 0.0288 0.0215
 Saturn -74843-12-08 02:37 J -25614641.64 -25614641.39 -25614641.15 0.0292 0.0062
 Saturn -74842-12-23 04:47 J -25614261.53 -25614261.30 -25614261.06 0.0296 0.0103
 Saturn -74840-01-06 11:30 J -25613881.11 -25613881.02 -25613880.90 0.0298 0.0267
 Jupiter -74834-03-18 03:06 J -25611619.59 -25611619.37 -25611619.15 0.0532 0.0123
 Mars -74834-06-14 13:25 J -25611531.09 -25611530.94 -25611530.78 0.1738 0.0975
 Pluto -74833-03-08 06:28 J -25611263.49 -25611263.23 -25611262.98 0.0079 0.0004
 Saturn -74830-05-23 07:54 J -25610092.33 -25610092.17 -25610092.00 0.0274 0.0195
 Saturn -74829-06-03 01:54 J -25609715.65 -25609715.42 -25609715.18 0.0270 0.0074
 Jupiter -74829-08-30 06:28 J -25609627.35 -25609627.23 -25609627.09 0.0495 0.0405
 Saturn -74828-06-14 14:08 J -25609339.14 -25609338.91 -25609338.67 0.0267 0.0044
 Saturn -74827-06-25 22:32 J -25608962.74 -25608962.56 -25608962.35 0.0265 0.0157

Saturn -74826-07-07 04:47 J -25608586.31 -25608586.30 -25608586.26 0.0263 0.0261
 Jupiter -74822-03-23 02:52 J -25607231.54 -25607231.38 -25607231.21 0.0533 0.0372
 Jupiter -74817-09-03 18:13 J -25605239.95 -25605239.74 -25605239.52 0.0495 0.0206
 Uranus -74815-01-03 04:18 J -25604753.43 -25604753.32 -25604753.17 0.0132 0.0114
 Saturn -74815-11-17 07:11 J -25604435.23 -25604435.20 -25604435.13 0.0286 0.0280
 Uranus -74814-01-07 13:11 J -25604384.17 -25604383.95 -25604383.73 0.0132 0.0071
 Saturn -74814-12-01 22:32 J -25604055.78 -25604055.56 -25604055.33 0.0290 0.0134
 Uranus -74813-01-11 20:52 J -25604014.88 -25604014.63 -25604014.37 0.0132 0.0028
 Saturn -74813-12-15 22:32 J -25603675.81 -25603675.56 -25603675.31 0.0294 0.0027
 Uranus -74812-01-15 04:04 J -25603645.58 -25603645.33 -25603645.07 0.0132 0.0014
 Saturn -74812-12-31 04:18 J -25603295.50 -25603295.32 -25603295.13 0.0297 0.0193
 Uranus -74811-01-19 10:18 J -25603276.29 -25603276.07 -25603275.82 0.0131 0.0057
 Uranus -74810-01-23 15:49 J -25602907.00 -25602906.84 -25602906.65 0.0131 0.0098
 Jupiter -74805-09-08 06:28 J -25600852.46 -25600852.23 -25600851.99 0.0495 0.0006
 Saturn -74801-05-17 16:32 J -25599504.91 -25599504.81 -25599504.70 0.0276 0.0246
 Saturn -74800-05-29 13:25 J -25599128.15 -25599127.94 -25599127.72 0.0272 0.0125
 Saturn -74799-06-10 04:04 J -25598751.57 -25598751.33 -25598751.09 0.0268 0.0007
 Saturn -74798-06-21 13:54 J -25598375.14 -25598374.92 -25598374.70 0.0265 0.0109
 Saturn -74797-07-01 20:23 J -25597998.77 -25597998.65 -25597998.50 0.0263 0.0216
 Jupiter -74793-09-12 19:25 J -25596464.91 -25596464.69 -25596464.48 0.0494 0.0204
 Saturn -74785-11-24 22:47 J -25593469.73 -25593469.55 -25593469.37 0.0288 0.0198
 Saturn -74784-12-09 18:56 J -25593089.95 -25593089.71 -25593089.46 0.0293 0.0042
 Saturn -74783-12-24 22:04 J -25592709.80 -25592709.58 -25592709.35 0.0296 0.0125
 Saturn -74781-01-09 05:30 J -25592329.32 -25592329.27 -25592329.20 0.0299 0.0288
 Jupiter -74781-09-17 08:08 J -25592077.29 -25592077.16 -25592077.02 0.0494 0.0404
 Jupiter -74775-03-07 05:16 J -25590080.42 -25590080.28 -25590080.12 0.0531 0.0401
 Neptune -74773-04-08 01:40 J -25589317.47 -25589317.43 -25589317.36 0.0089 0.0086
 Neptune -74772-04-10 11:16 J -25588950.16 -25588950.03 -25588949.88 0.0089 0.0073
 Uranus -74772-06-27 15:35 J -25588871.88 -25588871.85 -25588871.81 0.0146 0.0145
 Neptune -74771-04-12 20:23 J -25588582.82 -25588582.65 -25588582.45 0.0089 0.0060

Saturn -74771-05-24 17:59 J -25588540.93 -25588540.75 -25588540.57 0.0273 0.0179
 Uranus -74771-07-02 15:35 J -25588502.05 -25588501.85 -25588501.65 0.0147 0.0089
 Neptune -74770-04-15 05:30 J -25588215.47 -25588215.27 -25588215.04 0.0089 0.0047
 Saturn -74770-06-05 10:47 J -25588164.28 -25588164.05 -25588163.81 0.0270 0.0059
 Uranus -74770-07-07 16:32 J -25588132.05 -25588131.81 -25588131.56 0.0147 0.0032
 Neptune -74769-04-16 14:37 J -25587848.11 -25587847.89 -25587847.64 0.0089 0.0034
 Saturn -74769-06-15 22:18 J -25587787.80 -25587787.57 -25587787.33 0.0267 0.0059
 Uranus -74769-07-11 18:13 J -25587761.98 -25587761.74 -25587761.49 0.0147 0.0027
 Neptune -74768-04-18 23:59 J -25587480.73 -25587480.50 -25587480.24 0.0089 0.0021
 Saturn -74768-06-27 06:13 J -25587411.42 -25587411.24 -25587411.06 0.0264 0.0171
 Uranus -74768-07-16 20:52 J -25587391.82 -25587391.63 -25587391.41 0.0148 0.0085
 Neptune -74767-04-21 09:20 J -25587113.36 -25587113.11 -25587112.86 0.0089 0.0007
 Uranus -74767-07-22 00:28 J -25587021.52 -25587021.48 -25587021.42 0.0148 0.0144
 Neptune -74766-04-23 18:28 J -25586745.98 -25586745.73 -25586745.48 0.0089 0.0006
 Neptune -74765-04-25 03:20 J -25586378.60 -25586378.36 -25586378.11 0.0089 0.0020
 Neptune -74764-04-27 12:13 J -25586011.21 -25586010.99 -25586010.74 0.0089 0.0033
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 Neptune -74763-04-29 21:35 J -25585643.81 -25585643.60 -25585643.38 0.0089 0.0046
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 Neptune -74761-05-03 16:18 J -25584908.97 -25584908.82 -25584908.68 0.0089 0.0072
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 Jupiter -74751-03-17 02:37 J -25581304.61 -25581304.39 -25581304.16 0.0532 0.0096
 Jupiter -74746-08-30 10:04 J -25579312.19 -25579312.08 -25579311.95 0.0496 0.0421
 Saturn -74742-05-20 00:56 J -25577953.57 -25577953.46 -25577953.32 0.0275 0.0231
 Saturn -74741-05-30 21:20 J -25577576.83 -25577576.61 -25577576.39 0.0271 0.0110
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Jupiter -74739-03-22 00:13 J -25576916.66 -25576916.49 -25576916.31 0.0532 0.0340
 Saturn -74739-06-22 20:08 J -25576823.87 -25576823.66 -25576823.45 0.0265 0.0123
 Saturn -74738-07-04 02:08 J -25576447.51 -25576447.41 -25576447.28 0.0263 0.0230
 Jupiter -74734-09-03 23:16 J -25574924.74 -25574924.53 -25574924.32 0.0496 0.0217
 Uranus -74731-01-03 18:42 J -25574071.84 -25574071.72 -25574071.56 0.0132 0.0110
 Uranus -74730-01-08 03:20 J -25573702.58 -25573702.36 -25573702.13 0.0132 0.0066
 Mars -74730-12-13 06:42 J -25573363.38 -25573363.22 -25573363.05 0.1788 0.0990
 Uranus -74729-01-12 11:30 J -25573333.27 -25573333.02 -25573332.77 0.0132 0.0023
 Uranus -74728-01-15 18:28 J -25572963.98 -25572963.73 -25572963.47 0.0132 0.0020
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 Jupiter -74722-09-08 12:13 J -25570537.22 -25570536.99 -25570536.75 0.0495 0.0014
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 Neptune -74691-10-06 15:20 J -25559185.94 -25559185.86 -25559185.72 0.0089 0.0081
 Neptune -74690-10-09 05:30 J -25558818.42 -25558818.27 -25558818.08 0.0089 0.0067
 Neptune -74689-10-10 19:25 J -25558450.88 -25558450.69 -25558450.46 0.0088 0.0054

Uranus -74688-06-28 02:52 J -25558190.42 -25558190.38 -25558190.32 0.0146 0.0143
 Neptune -74688-10-13 09:49 J -25558083.32 -25558083.09 -25558082.84 0.0088 0.0040
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 Neptune -74687-10-16 00:13 J -25557715.74 -25557715.49 -25557715.23 0.0088 0.0026
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 Neptune -74686-10-18 14:08 J -25557348.16 -25557347.91 -25557347.64 0.0088 0.0013
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 Neptune -74685-10-20 04:47 J -25556980.57 -25556980.30 -25556980.04 0.0088 0.0002
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 Neptune -74684-10-22 18:56 J -25556612.96 -25556612.71 -25556612.44 0.0088 0.0016
 Saturn -74683-05-21 06:42 J -25556402.35 -25556402.22 -25556402.06 0.0275 0.0217
 Neptune -74683-10-25 08:52 J -25556245.37 -25556245.13 -25556244.87 0.0088 0.0030
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 Neptune -74682-10-27 23:30 J -25555877.75 -25555877.52 -25555877.29 0.0088 0.0043
 Saturn -74681-06-12 15:20 J -25555649.10 -25555648.86 -25555648.62 0.0268 0.0024
 Neptune -74681-10-29 13:25 J -25555510.13 -25555509.94 -25555509.73 0.0088 0.0057
 Jupiter -74680-03-11 07:25 J -25555377.41 -25555377.19 -25555376.97 0.0531 0.0173
 Saturn -74680-06-23 23:44 J -25555272.71 -25555272.51 -25555272.30 0.0265 0.0137
 Neptune -74680-11-01 03:20 J -25555142.49 -25555142.36 -25555142.17 0.0088 0.0071
 Saturn -74679-07-05 05:30 J -25554896.35 -25554896.27 -25554896.17 0.0263 0.0242
 Neptune -74679-11-03 17:30 J -25554774.83 -25554774.77 -25554774.66 0.0088 0.0084
 Pluto -74673-09-01 18:13 J -25552645.95 -25552645.74 -25552645.50 0.0065 0.0033
 Pluto -74672-09-03 07:25 J -25552279.26 -25552279.19 -25552279.05 0.0065 0.0061
 Jupiter -74668-03-16 03:49 J -25550989.56 -25550989.34 -25550989.11 0.0531 0.0071
 Saturn -74667-11-28 13:11 J -25550367.14 -25550366.95 -25550366.73 0.0289 0.0168
 Saturn -74666-12-13 11:16 J -25549987.28 -25549987.03 -25549986.78 0.0293 0.0007
 Saturn -74665-12-27 15:49 J -25549607.04 -25549606.84 -25549606.62 0.0297 0.0161
 Jupiter -74663-08-29 18:28 J -25548996.84 -25548996.73 -25548996.61 0.0496 0.0429
 Jupiter -74656-03-21 03:49 J -25546601.52 -25546601.34 -25546601.16 0.0532 0.0319
 Saturn -74654-05-16 05:59 J -25545815.28 -25545815.25 -25545815.21 0.0276 0.0272

Saturn -74653-05-27 04:32 J -25545438.50 -25545438.31 -25545438.11 0.0272 0.0151
 Saturn -74652-06-07 20:08 J -25545061.90 -25545061.66 -25545061.42 0.0269 0.0030
 Saturn -74651-06-19 06:13 J -25544685.46 -25544685.24 -25544685.00 0.0266 0.0087
 Jupiter -74651-09-03 06:42 J -25544609.42 -25544609.22 -25544609.00 0.0495 0.0226
 Mars -74651-12-16 06:56 J -25544505.40 -25544505.21 -25544505.01 0.1797 0.0508
 Saturn -74650-06-30 12:56 J -25544309.11 -25544308.96 -25544308.79 0.0263 0.0196
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 Uranus -74646-01-08 17:01 J -25543021.01 -25543020.79 -25543020.55 0.0132 0.0063
 Uranus -74645-01-13 01:11 J -25542651.70 -25542651.45 -25542651.19 0.0132 0.0019
 Uranus -74644-01-16 08:37 J -25542282.40 -25542282.14 -25542281.89 0.0132 0.0024
 Uranus -74643-01-20 14:52 J -25541913.09 -25541912.88 -25541912.65 0.0131 0.0067
 Uranus -74642-01-24 20:08 J -25541543.78 -25541543.66 -25541543.50 0.0131 0.0109
 Jupiter -74639-09-07 19:54 J -25540221.90 -25540221.67 -25540221.43 0.0495 0.0024
 Saturn -74638-11-22 02:52 J -25539781.51 -25539781.38 -25539781.24 0.0287 0.0238
 Saturn -74637-12-05 20:52 J -25539401.87 -25539401.63 -25539401.39 0.0291 0.0086
 Saturn -74636-12-20 22:32 J -25539021.80 -25539021.56 -25539021.32 0.0295 0.0079
 Saturn -74634-01-05 05:16 J -25538641.40 -25538641.28 -25538641.13 0.0298 0.0246
 Mars -74629-06-11 21:35 J -25536656.78 -25536656.60 -25536656.41 0.1753 0.0156
 Jupiter -74627-09-12 07:11 J -25535834.42 -25535834.20 -25535833.98 0.0495 0.0182
 Saturn -74624-05-22 08:37 J -25534851.29 -25534851.14 -25534850.97 0.0275 0.0203
 Saturn -74623-06-03 03:35 J -25534474.58 -25534474.35 -25534474.12 0.0271 0.0082
 Saturn -74622-06-14 16:04 J -25534098.06 -25534097.83 -25534097.59 0.0267 0.0037
 Saturn -74621-06-25 00:13 J -25533721.68 -25533721.49 -25533721.29 0.0265 0.0150
 Saturn -74620-07-06 05:30 J -25533345.32 -25533345.27 -25533345.20 0.0262 0.0254
 Jupiter -74615-09-16 21:06 J -25531446.76 -25531446.62 -25531446.47 0.0494 0.0387
 Jupiter -74609-03-05 12:28 J -25529450.11 -25529449.98 -25529449.86 0.0530 0.0437
 Neptune -74608-04-09 16:18 J -25529049.91 -25529049.82 -25529049.67 0.0089 0.0078
 Saturn -74608-11-29 13:54 J -25528816.13 -25528815.92 -25528815.71 0.0289 0.0154
 Neptune -74607-04-12 01:54 J -25528682.57 -25528682.42 -25528682.23 0.0089 0.0065
 Saturn -74607-12-14 12:13 J -25528436.24 -25528435.99 -25528435.74 0.0294 0.0008

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 Uranus -74604-06-28 15:20 J -25527508.91 -25527508.86 -25527508.76 0.0146 0.0139
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 Neptune -74600-04-26 18:28 J -25526110.95 -25526110.73 -25526110.47 0.0089 0.0027
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 Jupiter -74597-03-10 11:59 J -25525062.22 -25525062.00 -25525061.79 0.0531 0.0192
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 Neptune -74596-05-05 06:42 J -25524641.30 -25524641.22 -25524641.07 0.0089 0.0079
 Saturn -74595-05-17 06:56 J -25524264.27 -25524264.21 -25524264.11 0.0276 0.0260
 Saturn -74594-05-29 05:16 J -25523887.48 -25523887.28 -25523887.07 0.0272 0.0138
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 Pluto -74585-03-08 21:20 J -25520680.72 -25520680.61 -25520680.46 0.0079 0.0067
 Jupiter -74585-03-15 12:56 J -25520674.19 -25520673.96 -25520673.73 0.0532 0.0061
 Jupiter -74580-08-29 04:18 J -25518681.42 -25518681.32 -25518681.20 0.0496 0.0433
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 Saturn -74565-05-23 07:25 J -25513300.36 -25513300.19 -25513300.02 0.0274 0.0191
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 Jupiter -74544-09-11 18:42 J -25505518.94 -25505518.72 -25505518.50 0.0495 0.0181
 Saturn -74536-05-18 05:16 J -25502713.38 -25502713.28 -25502713.17 0.0276 0.0248
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 Jupiter -74526-03-05 22:04 J -25499134.70 -25499134.58 -25499134.45 0.0530 0.0444
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 Neptune -74518-10-27 00:28 J -25495977.71 -25495977.48 -25495977.23 0.0088 0.0037
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 Uranus -74517-07-13 11:01 J -25495717.28 -25495717.04 -25495716.80 0.0147 0.0042
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 Neptune -74516-10-31 04:47 J -25495242.46 -25495242.30 -25495242.09 0.0088 0.0064
 Neptune -74515-11-02 18:56 J -25494874.82 -25494874.71 -25494874.56 0.0088 0.0077
 Jupiter -74514-03-10 23:16 J -25494746.74 -25494746.53 -25494746.31 0.0530 0.0191
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 Saturn -74505-06-04 22:32 J -25491372.79 -25491372.56 -25491372.33 0.0270 0.0056
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Uranus -74479-01-05 14:52 J -25482027.05 -25482026.88 -25482026.70 0.0133 0.0097
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 Jupiter -74443-03-05 10:32 J -25468819.18 -25468819.06 -25468818.93 0.0529 0.0443
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 Uranus -74432-07-19 05:01 J -25464665.45 -25464665.29 -25464665.11 0.0148 0.0109
 Saturn -74432-11-18 11:01 J -25464543.12 -25464543.04 -25464542.94 0.0285 0.0263
 Jupiter -74431-03-10 07:11 J -25464431.41 -25464431.20 -25464430.98 0.0530 0.0203
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 Saturn -74431-12-03 00:28 J -25464163.70 -25464163.48 -25464163.24 0.0290 0.0116
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 Pluto -74425-09-02 18:28 J -25462062.76 -25462062.73 -25462062.62 0.0065 0.0063
 Mars -74424-06-10 02:37 J -25461782.56 -25461782.39 -25461782.22 0.1769 0.0756
 Pluto -74424-09-04 08:08 J -25461696.37 -25461696.16 -25461695.90 0.0065 0.0030
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 Jupiter -74414-08-29 01:54 J -25458050.53 -25458050.42 -25458050.31 0.0497 0.0437
 Jupiter -74407-03-20 06:28 J -25455655.42 -25455655.23 -25455655.04 0.0532 0.0296
 Jupiter -74402-09-02 15:35 J -25453663.06 -25453662.85 -25453662.64 0.0496 0.0233

Saturn -74402-11-26 10:18 J -25453578.26 -25453578.07 -25453577.88 0.0287 0.0189
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 Jupiter -74378-09-11 14:23 J -25444888.12 -25444887.90 -25444887.67 0.0496 0.0174
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 Mars -74367-12-16 05:44 J -25440774.45 -25440774.26 -25440774.07 0.1786 0.0480
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 Neptune -74363-10-04 19:25 J -25439385.69 -25439385.69 -25439385.67 0.0088 0.0088
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 Neptune -74270-04-30 00:56 J -25405575.68 -25405575.46 -25405575.24 0.0089 0.0040
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 Uranus -74265-07-15 05:30 J -25403672.48 -25403672.27 -25403672.02 0.0147 0.0060
 Uranus -74264-07-20 08:08 J -25403302.30 -25403302.16 -25403302.01 0.0147 0.0120
 Saturn -74255-11-22 12:28 J -25399890.13 -25399889.98 -25399889.81 0.0285 0.0222
 Saturn -74254-12-07 02:23 J -25399510.65 -25399510.40 -25399510.16 0.0290 0.0070
 Jupiter -74253-03-13 23:01 J -25399412.77 -25399412.54 -25399412.31 0.0530 0.0023
 Saturn -74253-12-21 00:42 J -25399130.70 -25399130.47 -25399130.23 0.0294 0.0096
 Saturn -74251-01-05 05:59 J -25398750.36 -25398750.25 -25398750.14 0.0297 0.0264
 Jupiter -74248-08-27 17:01 J -25397419.87 -25397419.79 -25397419.70 0.0498 0.0459
 Jupiter -74241-03-18 20:23 J -25395024.84 -25395024.65 -25395024.45 0.0531 0.0268
 Saturn -74241-05-23 16:47 J -25394958.96 -25394958.80 -25394958.61 0.0276 0.0188
 Saturn -74240-06-04 15:35 J -25394582.08 -25394581.85 -25394581.61 0.0272 0.0060
 Saturn -74239-06-16 07:11 J -25394205.43 -25394205.20 -25394204.97 0.0268 0.0062

Saturn -74238-06-27 17:01 J -25393828.96 -25393828.79 -25393828.60 0.0265 0.0178
 Jupiter -74236-09-01 06:42 J -25393032.42 -25393032.22 -25393032.01 0.0497 0.0251
 Jupiter -74229-03-23 18:56 J -25390636.76 -25390636.71 -25390636.65 0.0531 0.0515
 Uranus -74228-01-03 03:20 J -25390351.42 -25390351.36 -25390351.28 0.0133 0.0127
 Uranus -74227-01-07 12:56 J -25389982.16 -25389981.96 -25389981.75 0.0133 0.0082
 Uranus -74226-01-11 21:35 J -25389612.84 -25389612.60 -25389612.35 0.0132 0.0036
 Uranus -74225-01-16 05:16 J -25389243.53 -25389243.28 -25389243.02 0.0132 0.0009
 Saturn -74225-11-29 18:56 J -25388924.92 -25388924.71 -25388924.49 0.0287 0.0141
 Uranus -74224-01-19 11:59 J -25388874.22 -25388874.00 -25388873.75 0.0132 0.0053
 Jupiter -74224-09-05 19:40 J -25388644.91 -25388644.68 -25388644.44 0.0496 0.0048
 Saturn -74224-12-14 13:11 J -25388545.20 -25388544.95 -25388544.70 0.0292 0.0020
 Uranus -74223-01-23 18:13 J -25388504.89 -25388504.74 -25388504.55 0.0131 0.0096
 Saturn -74223-12-29 15:06 J -25388165.05 -25388164.87 -25388164.66 0.0296 0.0188
 Saturn -74212-05-18 13:54 J -25384372.03 -25384371.92 -25384371.80 0.0279 0.0244
 Jupiter -74212-09-10 04:04 J -25384257.55 -25384257.33 -25384257.10 0.0496 0.0152
 Saturn -74211-05-30 16:32 J -25383995.02 -25383994.81 -25383994.59 0.0274 0.0115
 Saturn -74210-06-11 11:44 J -25383618.25 -25383618.01 -25383617.77 0.0271 0.0011
 Saturn -74209-06-22 00:42 J -25383241.67 -25383241.47 -25383241.25 0.0267 0.0131
 Saturn -74208-07-03 09:20 J -25382865.19 -25382865.11 -25382865.00 0.0265 0.0242
 Jupiter -74200-09-14 16:47 J -25379869.96 -25379869.80 -25379869.63 0.0495 0.0355
 Neptune -74198-10-06 11:16 J -25379118.11 -25379118.03 -25379117.89 0.0088 0.0080
 Neptune -74197-10-08 01:25 J -25378750.59 -25378750.44 -25378750.25 0.0088 0.0067
 Neptune -74196-10-10 15:35 J -25378383.05 -25378382.85 -25378382.63 0.0088 0.0054
 Saturn -74196-11-23 22:47 J -25378338.72 -25378338.55 -25378338.37 0.0285 0.0205
 Neptune -74195-10-13 05:44 J -25378015.49 -25378015.26 -25378015.02 0.0088 0.0041
 Saturn -74195-12-08 12:56 J -25377959.21 -25377958.96 -25377958.71 0.0290 0.0050
 Jupiter -74194-03-04 05:44 J -25377873.35 -25377873.26 -25377873.18 0.0528 0.0488
 Neptune -74194-10-15 19:40 J -25377647.93 -25377647.68 -25377647.43 0.0088 0.0028
 Saturn -74194-12-23 11:44 J -25377579.24 -25377579.01 -25377578.78 0.0294 0.0117
 Neptune -74193-10-17 09:49 J -25377280.35 -25377280.09 -25377279.83 0.0088 0.0015

Saturn -74192-01-06 16:47 J -25377198.86 -25377198.80 -25377198.72 0.0298 0.0284
 Neptune -74192-10-19 23:30 J -25376912.78 -25376912.52 -25376912.25 0.0088 0.0002
 Neptune -74191-10-22 13:25 J -25376545.19 -25376544.94 -25376544.67 0.0088 0.0012
 Neptune -74190-10-25 03:35 J -25376177.60 -25376177.35 -25376177.09 0.0088 0.0025
 Neptune -74189-10-26 17:30 J -25375810.00 -25375809.77 -25375809.52 0.0088 0.0038
 Neptune -74188-10-29 07:40 J -25375442.38 -25375442.18 -25375441.95 0.0088 0.0051
 Neptune -74187-10-31 21:49 J -25375074.76 -25375074.59 -25375074.39 0.0088 0.0064
 Neptune -74186-11-03 11:59 J -25374707.11 -25374707.00 -25374706.85 0.0088 0.0077
 Uranus -74184-07-01 14:52 J -25374101.02 -25374100.88 -25374100.73 0.0146 0.0117
 Uranus -74183-07-06 14:08 J -25373731.13 -25373730.91 -25373730.67 0.0146 0.0059
 Jupiter -74182-03-09 02:52 J -25373485.58 -25373485.38 -25373485.17 0.0529 0.0248
 Saturn -74182-05-25 21:06 J -25373407.80 -25373407.62 -25373407.43 0.0276 0.0172
 Uranus -74182-07-11 14:37 J -25373361.14 -25373360.89 -25373360.64 0.0147 0.0002
 Saturn -74181-06-05 19:25 J -25373030.92 -25373030.69 -25373030.45 0.0272 0.0045
 Uranus -74181-07-15 15:49 J -25372991.06 -25372990.84 -25372990.60 0.0147 0.0063
 Saturn -74180-06-17 11:01 J -25372654.27 -25372654.04 -25372653.80 0.0268 0.0078
 Uranus -74180-07-20 18:13 J -25372620.86 -25372620.74 -25372620.59 0.0147 0.0124
 Saturn -74179-06-28 21:20 J -25372277.77 -25372277.61 -25372277.44 0.0265 0.0193
 Pluto -74176-09-05 07:25 J -25371113.45 -25371113.19 -25371112.92 0.0065 0.0005
 Jupiter -74170-03-14 00:56 J -25369097.69 -25369097.46 -25369097.23 0.0530 0.0009
 Saturn -74167-11-17 23:44 J -25367752.60 -25367752.51 -25367752.43 0.0283 0.0266
 Saturn -74166-12-02 08:23 J -25367373.38 -25367373.15 -25367372.92 0.0288 0.0120
 Jupiter -74165-08-26 23:16 J -25367104.60 -25367104.53 -25367104.45 0.0498 0.0472
 Saturn -74165-12-16 02:37 J -25366993.63 -25366993.39 -25366993.14 0.0292 0.0042
 Saturn -74164-12-31 04:47 J -25366613.46 -25366613.30 -25366613.12 0.0296 0.0210
 Mars -74162-12-13 09:20 J -25365901.28 -25365901.11 -25365900.94 0.1768 0.0920
 Jupiter -74158-03-19 01:54 J -25364709.62 -25364709.42 -25364709.21 0.0531 0.0253
 Saturn -74153-05-19 19:11 J -25362820.83 -25362820.70 -25362820.56 0.0278 0.0230
 Jupiter -74153-08-31 07:40 J -25362717.37 -25362717.18 -25362716.98 0.0497 0.0276
 Saturn -74152-05-31 21:35 J -25362443.81 -25362443.60 -25362443.37 0.0274 0.0100

Saturn -74151-06-12 16:47 J -25362067.04 -25362066.80 -25362066.56 0.0270 0.0027
 Saturn -74150-06-24 05:30 J -25361690.46 -25361690.27 -25361690.06 0.0267 0.0147
 Saturn -74149-07-04 14:37 J -25361313.94 -25361313.89 -25361313.83 0.0265 0.0257
 Jupiter -74146-03-24 01:25 J -25360321.52 -25360321.44 -25360321.37 0.0531 0.0498
 Uranus -74144-01-03 16:32 J -25359669.88 -25359669.81 -25359669.69 0.0133 0.0124
 Uranus -74143-01-08 02:23 J -25359300.60 -25359300.40 -25359300.18 0.0133 0.0078
 Uranus -74142-01-12 11:01 J -25358931.28 -25358931.04 -25358930.78 0.0132 0.0032
 Uranus -74141-01-16 18:56 J -25358561.96 -25358561.71 -25358561.45 0.0132 0.0013
 Jupiter -74141-09-04 19:25 J -25358329.92 -25358329.69 -25358329.46 0.0496 0.0072
 Uranus -74140-01-20 01:40 J -25358192.65 -25358192.43 -25358192.18 0.0132 0.0058
 Mars -74140-06-10 17:16 J -25358050.96 -25358050.78 -25358050.61 0.1778 0.0607
 Uranus -74139-01-24 08:08 J -25357823.30 -25357823.16 -25357822.98 0.0131 0.0102
 Saturn -74137-11-25 13:11 J -25356787.14 -25356786.95 -25356786.76 0.0285 0.0186
 Saturn -74136-12-10 03:35 J -25356407.60 -25356407.35 -25356407.10 0.0290 0.0029
 Saturn -74135-12-25 02:37 J -25356027.60 -25356027.39 -25356027.16 0.0294 0.0139
 Jupiter -74129-09-09 09:06 J -25353942.35 -25353942.12 -25353941.89 0.0496 0.0135
 Saturn -74123-05-27 04:32 J -25351856.51 -25351856.31 -25351856.11 0.0276 0.0156
 Saturn -74122-06-08 02:23 J -25351479.64 -25351479.40 -25351479.16 0.0272 0.0028
 Saturn -74121-06-18 17:44 J -25351102.98 -25351102.76 -25351102.53 0.0268 0.0095
 Saturn -74120-06-30 04:04 J -25350726.47 -25350726.33 -25350726.17 0.0265 0.0210
 Jupiter -74117-09-13 22:04 J -25349554.75 -25349554.58 -25349554.40 0.0495 0.0341
 Neptune -74115-04-09 17:59 J -25348981.85 -25348981.75 -25348981.61 0.0089 0.0078
 Neptune -74114-04-12 03:20 J -25348614.51 -25348614.36 -25348614.17 0.0089 0.0066
 Neptune -74113-04-13 12:56 J -25348247.15 -25348246.96 -25348246.75 0.0089 0.0053
 Neptune -74112-04-15 22:04 J -25347879.78 -25347879.58 -25347879.34 0.0089 0.0041
 Jupiter -74111-03-03 04:04 J -25347558.36 -25347558.33 -25347558.29 0.0528 0.0520
 Neptune -74111-04-18 07:54 J -25347512.40 -25347512.17 -25347511.93 0.0089 0.0028
 Neptune -74110-04-20 17:01 J -25347145.03 -25347144.79 -25347144.53 0.0089 0.0016
 Neptune -74109-04-22 02:37 J -25346777.64 -25346777.39 -25346777.13 0.0089 0.0004
 Neptune -74108-04-24 11:59 J -25346410.24 -25346410.00 -25346409.74 0.0089 0.0010

Saturn -74108-11-19 16:32 J -25346200.93 -25346200.81 -25346200.68 0.0284 0.0247
 Neptune -74107-04-26 21:20 J -25346042.85 -25346042.61 -25346042.36 0.0089 0.0022
 Saturn -74107-12-04 02:23 J -25345821.64 -25345821.40 -25345821.16 0.0288 0.0098
 Neptune -74106-04-29 06:13 J -25345675.45 -25345675.24 -25345674.99 0.0089 0.0035
 Saturn -74106-12-18 21:20 J -25345441.85 -25345441.61 -25345441.36 0.0292 0.0066
 Neptune -74105-04-30 15:35 J -25345308.05 -25345307.85 -25345307.63 0.0089 0.0047
 Saturn -74104-01-01 23:44 J -25345061.65 -25345061.51 -25345061.35 0.0296 0.0234
 Neptune -74104-05-03 00:56 J -25344940.64 -25344940.46 -25344940.27 0.0089 0.0059
 Neptune -74103-05-05 09:35 J -25344573.22 -25344573.10 -25344572.92 0.0089 0.0072
 Neptune -74102-05-07 18:42 J -25344205.77 -25344205.72 -25344205.61 0.0089 0.0084
 Uranus -74100-07-02 00:42 J -25343419.60 -25343419.47 -25343419.30 0.0146 0.0115
 Jupiter -74099-03-08 05:01 J -25343170.48 -25343170.29 -25343170.09 0.0529 0.0272
 Uranus -74099-07-07 00:13 J -25343049.72 -25343049.49 -25343049.26 0.0146 0.0056
 Uranus -74098-07-12 00:13 J -25342679.74 -25342679.49 -25342679.24 0.0147 0.0005
 Uranus -74097-07-16 01:40 J -25342309.65 -25342309.43 -25342309.20 0.0147 0.0066
 Uranus -74096-07-21 03:20 J -25341939.46 -25341939.36 -25341939.21 0.0147 0.0128
 Saturn -74094-05-22 04:18 J -25341269.46 -25341269.32 -25341269.16 0.0278 0.0214
 Saturn -74093-06-02 06:13 J -25340892.47 -25340892.24 -25340892.01 0.0274 0.0083
 Saturn -74092-06-14 00:42 J -25340515.71 -25340515.47 -25340515.23 0.0270 0.0044
 Saturn -74091-06-25 12:56 J -25340139.14 -25340138.96 -25340138.76 0.0267 0.0164
 Pluto -74088-03-12 11:44 J -25339148.24 -25339148.01 -25339147.77 0.0079 0.0028
 Jupiter -74087-03-13 04:47 J -25338782.53 -25338782.30 -25338782.07 0.0530 0.0025
 Mars -74083-12-16 06:56 J -25337043.40 -25337043.21 -25337043.02 0.1776 0.0488
 Saturn -74078-11-28 07:11 J -25335235.39 -25335235.20 -25335234.98 0.0286 0.0166
 Saturn -74077-12-11 22:47 J -25334855.80 -25334855.55 -25334855.30 0.0290 0.0007
 Saturn -74076-12-26 22:32 J -25334475.76 -25334475.56 -25334475.35 0.0294 0.0163
 Jupiter -74075-03-17 23:30 J -25334394.73 -25334394.52 -25334394.31 0.0530 0.0217
 Jupiter -74070-08-31 10:18 J -25332402.25 -25332402.07 -25332401.87 0.0497 0.0297
 Saturn -74065-05-16 09:06 J -25330682.18 -25330682.12 -25330682.06 0.0280 0.0270
 Saturn -74064-05-28 14:08 J -25330305.11 -25330304.91 -25330304.70 0.0275 0.0140

Jupiter -74063-03-22 19:40 J -25330006.78 -25330006.68 -25330006.55 0.0531 0.0458
 Saturn -74063-06-09 11:30 J -25329928.26 -25329928.02 -25329927.78 0.0271 0.0011
 Saturn -74062-06-21 02:23 J -25329551.62 -25329551.40 -25329551.18 0.0268 0.0112
 Mars -74061-06-13 04:47 J -25329193.48 -25329193.30 -25329193.12 0.1771 0.0539
 Saturn -74061-07-01 12:28 J -25329175.09 -25329174.98 -25329174.84 0.0265 0.0226
 Uranus -74060-01-04 04:32 J -25328988.40 -25328988.31 -25328988.19 0.0133 0.0121
 Uranus -74059-01-08 14:23 J -25328619.10 -25328618.90 -25328618.68 0.0133 0.0074
 Uranus -74058-01-12 23:30 J -25328249.77 -25328249.52 -25328249.27 0.0133 0.0028
 Jupiter -74058-09-04 23:16 J -25328014.76 -25328014.53 -25328014.30 0.0497 0.0089
 Uranus -74057-01-17 07:25 J -25327880.45 -25327880.19 -25327879.93 0.0132 0.0018
 Uranus -74056-01-20 14:23 J -25327511.11 -25327510.90 -25327510.66 0.0132 0.0063
 Uranus -74055-01-24 21:06 J -25327141.75 -25327141.62 -25327141.45 0.0132 0.0107
 Saturn -74049-11-21 12:13 J -25324649.14 -25324648.99 -25324648.84 0.0284 0.0227
 Saturn -74048-12-05 23:01 J -25324269.78 -25324269.54 -25324269.30 0.0289 0.0075
 Saturn -74047-12-20 18:42 J -25323889.95 -25323889.72 -25323889.48 0.0293 0.0091
 Jupiter -74046-09-09 11:30 J -25323627.25 -25323627.02 -25323626.79 0.0496 0.0115
 Saturn -74045-01-04 21:35 J -25323509.71 -25323509.60 -25323509.47 0.0296 0.0259
 Saturn -74035-05-23 15:35 J -25319718.01 -25319717.85 -25319717.67 0.0277 0.0198
 Saturn -74034-06-04 16:32 J -25319341.04 -25319340.81 -25319340.58 0.0273 0.0066
 Jupiter -74034-09-13 20:08 J -25319239.84 -25319239.66 -25319239.47 0.0495 0.0311
 Neptune -74034-10-05 14:37 J -25319217.98 -25319217.89 -25319217.80 0.0088 0.0083
 Saturn -74033-06-15 10:04 J -25318964.31 -25318964.08 -25318963.84 0.0270 0.0061
 Neptune -74033-10-07 04:04 J -25318850.47 -25318850.33 -25318850.16 0.0088 0.0071
 Saturn -74032-06-26 22:18 J -25318587.74 -25318587.57 -25318587.39 0.0267 0.0180
 Neptune -74032-10-09 18:13 J -25318482.93 -25318482.74 -25318482.53 0.0088 0.0058
 Neptune -74031-10-12 07:54 J -25318115.38 -25318115.17 -25318114.92 0.0088 0.0046
 Neptune -74030-10-14 22:04 J -25317747.81 -25317747.58 -25317747.32 0.0088 0.0033
 Neptune -74029-10-16 11:59 J -25317380.25 -25317380.00 -25317379.73 0.0088 0.0020
 Neptune -74028-10-19 02:08 J -25317012.67 -25317012.41 -25317012.14 0.0088 0.0007
 Neptune -74027-10-21 16:18 J -25316645.08 -25316644.82 -25316644.56 0.0088 0.0006

Neptune -74026-10-24 05:59 J -25316277.50 -25316277.25 -25316276.98 0.0088 0.0019
 Neptune -74025-10-25 19:54 J -25315909.90 -25315909.67 -25315909.41 0.0088 0.0032
 Neptune -74024-10-28 10:04 J -25315542.30 -25315542.08 -25315541.85 0.0088 0.0045
 Neptune -74023-10-31 00:13 J -25315174.68 -25315174.49 -25315174.28 0.0088 0.0058
 Neptune -74022-11-02 13:54 J -25314807.05 -25314806.92 -25314806.73 0.0088 0.0071
 Neptune -74021-11-04 04:32 J -25314439.39 -25314439.31 -25314439.21 0.0088 0.0083
 Saturn -74019-11-30 03:06 J -25313683.58 -25313683.37 -25313683.15 0.0286 0.0145
 Saturn -74018-12-14 19:40 J -25313303.93 -25313303.68 -25313303.43 0.0291 0.0017
 Saturn -74017-12-28 20:08 J -25312923.85 -25312923.66 -25312923.46 0.0295 0.0187
 Jupiter -74016-03-07 01:11 J -25312855.63 -25312855.45 -25312855.26 0.0529 0.0308
 Uranus -74016-07-02 15:35 J -25312738.00 -25312737.85 -25312737.67 0.0146 0.0110
 Uranus -74015-07-07 14:52 J -25312368.11 -25312367.88 -25312367.64 0.0146 0.0051
 Uranus -74014-07-12 14:52 J -25311998.12 -25311997.88 -25311997.62 0.0147 0.0010
 Uranus -74013-07-16 16:18 J -25311628.04 -25311627.82 -25311627.60 0.0147 0.0071
 Uranus -74012-07-21 17:59 J -25311257.83 -25311257.75 -25311257.62 0.0147 0.0134
 Saturn -74006-05-18 21:35 J -25309130.68 -25309130.60 -25309130.48 0.0279 0.0254
 Saturn -74005-05-30 01:54 J -25308753.63 -25308753.42 -25308753.20 0.0275 0.0122
 Jupiter -74004-03-11 22:18 J -25308467.80 -25308467.57 -25308467.34 0.0529 0.0066
 Saturn -74004-06-10 22:18 J -25308376.81 -25308376.57 -25308376.33 0.0271 0.0008
 Saturn -74003-06-22 12:28 J -25308000.18 -25307999.98 -25307999.76 0.0268 0.0129
 Saturn -74002-07-03 22:18 J -25307623.66 -25307623.57 -25307623.47 0.0265 0.0242

74TH MILLENNIUM BCE

This is a list of transits of Earth in the 74th millennium BCE.

FROM MAX- C START MAX END SUNRAD DEPTH S

TRANSIT

TIME

Jupiter -73992-03-16 18:42 J -25304079.94 -25304079.72 -25304079.50 0.0530 0.0178

Saturn -73990-11-24 08:52 J -25303097.29 -25303097.13 -25303096.95 0.0285 0.0207

Saturn -73989-12-07 20:52 J -25302717.87 -25302717.63 -25302717.38 0.0289 0.0052

Saturn -73988-12-22 17:44 J -25302337.98 -25302337.76 -25302337.53 0.0293 0.0117

Jupiter -73987-08-30 12:28 J -25302087.16 -25302086.98 -25302086.80 0.0497 0.0317

Saturn -73986-01-06 21:06 J -25301957.67 -25301957.62 -25301957.54 0.0297 0.0285

Mars -73982-06-16 16:18 J -25300335.87 -25300335.82 -25300335.76 0.1764 0.1676

Jupiter -73980-03-21 18:42 J -25299691.86 -25299691.72 -25299691.59 0.0531 0.0427

Uranus -73976-01-04 17:59 J -25298306.86 -25298306.75 -25298306.62 0.0133 0.0117

Saturn -73976-05-25 04:04 J -25298166.50 -25298166.33 -25298166.14 0.0277 0.0181

Uranus -73975-01-09 03:49 J -25297937.55 -25297937.34 -25297937.11 0.0133 0.0070

Saturn -73975-06-06 03:49 J -25297789.58 -25297789.34 -25297789.10 0.0273 0.0049

Jupiter -73975-09-03 22:04 J -25297699.81 -25297699.58 -25297699.35 0.0496 0.0118

Uranus -73974-01-13 12:42 J -25297568.21 -25297567.97 -25297567.71 0.0133 0.0024

Saturn -73974-06-17 20:37 J -25297412.87 -25297412.64 -25297412.41 0.0269 0.0077

Uranus -73973-01-17 21:06 J -25297198.87 -25297198.62 -25297198.36 0.0132 0.0022

Saturn -73973-06-28 07:54 J -25297036.32 -25297036.17 -25297035.99 0.0266 0.0197

Uranus -73972-01-21 04:18 J -25296829.53 -25296829.32 -25296829.09 0.0132 0.0068

Uranus -73971-01-25 11:01 J -25296460.15 -25296460.04 -25296459.89 0.0132 0.0113

Jupiter -73963-09-08 09:20 J -25293312.34 -25293312.11 -25293311.87 0.0496 0.0086

Saturn -73961-11-17 15:06 J -25292510.93 -25292510.87 -25292510.80 0.0282 0.0271

Saturn -73960-12-01 22:47 J -25292131.77 -25292131.55 -25292131.31 0.0287 0.0124

Saturn -73959-12-16 16:32 J -25291752.06 -25291751.81 -25291751.56 0.0291 0.0040

Saturn -73958-12-31 17:59 J -25291371.92 -25291371.75 -25291371.57 0.0295 0.0210

Neptune -73951-04-08 23:30 J -25289081.59 -25289081.52 -25289081.39 0.0089 0.0082

Jupiter -73951-09-12 21:49 J -25288924.78 -25288924.59 -25288924.39 0.0496 0.0291

Neptune -73950-04-11 09:06 J -25288714.25 -25288714.12 -25288713.94 0.0089 0.0070

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Neptune -73948-04-15 04:32 J -25287979.52 -25287979.31 -25287979.09 0.0089 0.0045
 Neptune -73947-04-17 13:40 J -25287612.15 -25287611.93 -25287611.68 0.0089 0.0033
 Saturn -73947-05-20 10:47 J -25287579.17 -25287579.05 -25287578.91 0.0279 0.0236
 Neptune -73946-04-19 23:01 J -25287244.77 -25287244.54 -25287244.28 0.0089 0.0021
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 Saturn -73945-06-12 09:20 J -25286825.35 -25286825.11 -25286824.87 0.0271 0.0025
 Neptune -73944-04-23 18:13 J -25286509.99 -25286509.74 -25286509.49 0.0089 0.0004
 Saturn -73944-06-23 22:18 J -25286448.76 -25286448.57 -25286448.36 0.0267 0.0147
 Neptune -73943-04-26 03:35 J -25286142.59 -25286142.35 -25286142.09 0.0089 0.0017
 Saturn -73943-07-05 07:40 J -25286072.22 -25286072.18 -25286072.12 0.0265 0.0258
 Neptune -73942-04-28 12:42 J -25285775.19 -25285774.97 -25285774.72 0.0089 0.0029
 Neptune -73941-04-29 22:18 J -25285407.78 -25285407.57 -25285407.34 0.0089 0.0041
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 Jupiter -73939-09-17 10:32 J -25284537.06 -25284537.06 -25284537.05 0.0495 0.0495
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 Mars -73935-06-08 15:06 J -25283176.90 -25283176.87 -25283176.83 0.1795 0.1761
 Jupiter -73933-03-05 19:54 J -25282540.84 -25282540.67 -25282540.50 0.0529 0.0348
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 Uranus -73931-07-08 06:42 J -25281686.45 -25281686.22 -25281685.98 0.0146 0.0044
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Saturn -73917-05-26 16:47 J -25276614.98 -25276614.80 -25276614.60 0.0276 0.0163
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 Jupiter -73909-03-15 19:11 J -25273764.91 -25273764.70 -25273764.47 0.0531 0.0151
 Jupiter -73904-08-29 12:13 J -25271772.16 -25271771.99 -25271771.82 0.0497 0.0342
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 Saturn -73901-12-03 16:18 J -25270580.05 -25270579.82 -25270579.58 0.0288 0.0104
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 Jupiter -73897-03-20 15:06 J -25269377.01 -25269376.87 -25269376.71 0.0531 0.0394
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 Uranus -73888-01-21 17:59 J -25266147.95 -25266147.75 -25266147.52 0.0132 0.0074
 Saturn -73888-05-21 23:16 J -25266027.67 -25266027.53 -25266027.37 0.0278 0.0218
 Uranus -73887-01-26 01:11 J -25265778.55 -25265778.45 -25265778.33 0.0132 0.0118
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 Jupiter -73880-09-07 12:13 J -25262997.23 -25262996.99 -25262996.76 0.0496 0.0069
 Mars -73878-12-13 13:40 J -25262170.10 -25262169.93 -25262169.75 0.1758 0.0843
 Saturn -73872-11-27 19:25 J -25259993.89 -25259993.69 -25259993.49 0.0286 0.0168
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Neptune -73868-10-08 21:49 J -25258582.76 -25258582.59 -25258582.39 0.0088 0.0062
 Neptune -73867-10-11 11:44 J -25258215.21 -25258215.01 -25258214.77 0.0088 0.0049
 Neptune -73866-10-14 01:54 J -25257847.65 -25257847.42 -25257847.17 0.0088 0.0037
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 Neptune -73863-10-20 19:54 J -25256744.93 -25256744.67 -25256744.40 0.0088 0.0002
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 Neptune -73859-10-30 03:49 J -25255274.55 -25255274.34 -25255274.13 0.0088 0.0052
 Saturn -73858-05-29 03:49 J -25255063.53 -25255063.34 -25255063.13 0.0275 0.0146
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 Mars -73856-06-11 06:13 J -25254319.42 -25254319.24 -25254319.05 0.1787 0.0490
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 Jupiter -73850-03-05 20:52 J -25252225.79 -25252225.63 -25252225.47 0.0529 0.0374
 Uranus -73848-07-03 23:30 J -25251374.68 -25251374.52 -25251374.32 0.0146 0.0099
 Uranus -73847-07-08 23:01 J -25251004.78 -25251004.54 -25251004.29 0.0146 0.0038
 Uranus -73846-07-13 23:16 J -25250634.77 -25250634.53 -25250634.28 0.0147 0.0023
 Uranus -73845-07-18 00:13 J -25250264.68 -25250264.49 -25250264.27 0.0147 0.0086
 Saturn -73843-11-21 18:56 J -25249407.83 -25249407.71 -25249407.56 0.0284 0.0238
 Saturn -73842-12-06 05:30 J -25249028.50 -25249028.27 -25249028.02 0.0288 0.0084
 Saturn -73841-12-20 01:25 J -25248648.68 -25248648.44 -25248648.20 0.0292 0.0083
 Saturn -73839-01-04 04:32 J -25248268.43 -25248268.31 -25248268.18 0.0296 0.0254
 Jupiter -73838-03-10 18:42 J -25247837.95 -25247837.72 -25247837.50 0.0529 0.0126
 Saturn -73829-05-23 10:04 J -25244476.24 -25244476.08 -25244475.91 0.0277 0.0201

Saturn -73828-06-04 10:32 J -25244099.29 -25244099.06 -25244098.83 0.0273 0.0069
 Saturn -73827-06-16 03:35 J -25243722.58 -25243722.35 -25243722.11 0.0270 0.0059
 Jupiter -73826-03-15 16:32 J -25243450.03 -25243449.81 -25243449.58 0.0530 0.0120
 Saturn -73826-06-27 15:20 J -25243346.03 -25243345.86 -25243345.68 0.0266 0.0178
 Jupiter -73821-08-28 15:06 J -25241457.03 -25241456.87 -25241456.70 0.0498 0.0359
 Jupiter -73814-03-20 12:56 J -25239062.13 -25239061.96 -25239061.80 0.0530 0.0361
 Saturn -73813-11-29 06:28 J -25238442.44 -25238442.23 -25238442.02 0.0287 0.0151
 Saturn -73812-12-13 22:18 J -25238062.82 -25238062.57 -25238062.32 0.0291 0.0013
 Saturn -73811-12-28 22:32 J -25237682.75 -25237682.56 -25237682.36 0.0295 0.0184
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 Uranus -73808-01-05 21:06 J -25236943.75 -25236943.62 -25236943.45 0.0133 0.0109
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 Uranus -73804-01-22 08:23 J -25235466.34 -25235466.15 -25235465.93 0.0132 0.0079
 Uranus -73803-01-26 15:20 J -25235096.93 -25235096.86 -25235096.77 0.0132 0.0124
 Saturn -73800-05-18 08:37 J -25233889.21 -25233889.14 -25233889.04 0.0279 0.0261
 Saturn -73799-05-30 12:42 J -25233512.17 -25233511.97 -25233511.75 0.0275 0.0129
 Mars -73799-12-16 11:01 J -25233312.23 -25233312.04 -25233311.85 0.1766 0.0546
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 Saturn -73725-11-24 05:44 J -25206305.43 -25206305.26 -25206305.09 0.0284 0.0208
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Saturn -73445-06-06 10:04 J -25104206.31 -25104206.08 -25104205.84 0.0274 0.0044
 Neptune -73444-05-08 20:23 J -25103869.71 -25103869.65 -25103869.54 0.0089 0.0084
 Saturn -73444-06-18 05:01 J -25103829.51 -25103829.29 -25103829.06 0.0270 0.0086
 Saturn -73443-06-29 17:44 J -25103452.91 -25103452.76 -25103452.61 0.0266 0.0206
 Jupiter -73441-09-14 09:35 J -25102645.19 -25102645.10 -25102645.00 0.0496 0.0450
 Jupiter -73435-03-03 06:42 J -25100649.35 -25100649.22 -25100649.09 0.0527 0.0435
 Pluto -73431-09-09 23:44 J -25098997.78 -25098997.51 -25098997.25 0.0065 0.0001
 Saturn -73430-11-30 12:42 J -25098551.18 -25098550.97 -25098550.75 0.0285 0.0142
 Uranus -73429-07-01 09:35 J -25098337.11 -25098337.10 -25098337.05 0.0145 0.0144
 Saturn -73429-12-14 01:11 J -25098171.70 -25098171.45 -25098171.20 0.0289 0.0021
 Uranus -73428-07-06 06:56 J -25097967.40 -25097967.21 -25097966.99 0.0145 0.0084
 Saturn -73428-12-28 22:47 J -25097791.72 -25097791.55 -25097791.35 0.0294 0.0192
 Uranus -73427-07-11 05:30 J -25097597.51 -25097597.27 -25097597.02 0.0146 0.0021
 Uranus -73426-07-16 04:32 J -25097227.54 -25097227.31 -25097227.06 0.0146 0.0042
 Uranus -73425-07-20 04:47 J -25096857.46 -25096857.30 -25096857.12 0.0147 0.0106
 Jupiter -73423-03-08 09:06 J -25096261.33 -25096261.12 -25096260.90 0.0528 0.0181
 Saturn -73417-05-19 22:18 J -25093996.68 -25093996.57 -25093996.44 0.0281 0.0242
 Saturn -73416-06-01 06:28 J -25093619.45 -25093619.23 -25093619.00 0.0277 0.0104
 Saturn -73415-06-13 05:59 J -25093242.49 -25093242.25 -25093242.01 0.0272 0.0031
 Saturn -73414-06-24 22:04 J -25092865.77 -25092865.58 -25092865.39 0.0269 0.0157
 Jupiter -73411-03-13 09:35 J -25091873.33 -25091873.10 -25091872.87 0.0528 0.0070
 Jupiter -73406-08-27 11:30 J -25089880.16 -25089880.02 -25089879.87 0.0499 0.0397
 Saturn -73401-11-23 14:23 J -25087965.06 -25087964.90 -25087964.73 0.0282 0.0208
 Saturn -73400-12-07 21:35 J -25087585.84 -25087585.60 -25087585.35 0.0287 0.0052
 Jupiter -73399-03-18 05:44 J -25087485.44 -25087485.26 -25087485.07 0.0529 0.0311
 Saturn -73399-12-22 14:52 J -25087206.10 -25087205.88 -25087205.64 0.0292 0.0117
 Saturn -73397-01-06 16:32 J -25086825.85 -25086825.81 -25086825.75 0.0296 0.0289
 Jupiter -73394-09-01 02:08 J -25085492.63 -25085492.41 -25085492.19 0.0499 0.0185
 Uranus -73388-01-08 03:20 J -25083536.53 -25083536.36 -25083536.16 0.0134 0.0095
 Uranus -73387-01-12 13:54 J -25083167.16 -25083166.92 -25083166.67 0.0133 0.0045

Saturn -73387-05-27 03:35 J -25083032.54 -25083032.35 -25083032.16 0.0279 0.0168
 Uranus -73386-01-16 23:44 J -25082797.76 -25082797.51 -25082797.25 0.0133 0.0005
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 Uranus -73385-01-21 08:23 J -25082428.38 -25082428.15 -25082427.91 0.0133 0.0053
 Saturn -73385-06-19 01:40 J -25082278.64 -25082278.43 -25082278.20 0.0270 0.0100
 Uranus -73384-01-24 16:04 J -25082058.99 -25082058.83 -25082058.66 0.0132 0.0101
 Saturn -73384-06-30 14:37 J -25081902.02 -25081901.89 -25081901.74 0.0266 0.0219
 Jupiter -73382-09-05 16:32 J -25081105.05 -25081104.81 -25081104.57 0.0498 0.0027
 Neptune -73377-10-04 00:13 J -25079249.56 -25079249.49 -25079249.37 0.0089 0.0083
 Neptune -73376-10-06 14:08 J -25078882.05 -25078881.91 -25078881.73 0.0089 0.0071
 Neptune -73375-10-09 04:04 J -25078514.52 -25078514.33 -25078514.13 0.0089 0.0059
 Neptune -73374-10-11 17:59 J -25078146.97 -25078146.75 -25078146.53 0.0089 0.0047
 Neptune -73373-10-13 07:25 J -25077779.41 -25077779.19 -25077778.93 0.0089 0.0036
 Neptune -73372-10-15 21:35 J -25077411.85 -25077411.60 -25077411.34 0.0088 0.0023
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 Neptune -73371-10-18 11:30 J -25077044.27 -25077044.02 -25077043.75 0.0088 0.0011
 Saturn -73371-12-01 13:25 J -25077000.16 -25076999.94 -25076999.71 0.0285 0.0126
 Jupiter -73370-09-10 06:13 J -25076717.45 -25076717.24 -25076717.03 0.0497 0.0236
 Neptune -73370-10-21 01:40 J -25076676.69 -25076676.43 -25076676.16 0.0088 0.0001
 Saturn -73370-12-16 01:54 J -25076620.67 -25076620.42 -25076620.17 0.0289 0.0037
 Neptune -73369-10-22 15:35 J -25076309.10 -25076308.85 -25076308.58 0.0088 0.0014
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 Neptune -73368-10-25 05:44 J -25075941.50 -25075941.26 -25075941.00 0.0088 0.0026
 Mars -73367-06-09 12:13 J -25075714.05 -25075713.99 -25075713.92 0.1814 0.1687
 Neptune -73367-10-27 19:40 J -25075573.90 -25075573.68 -25075573.43 0.0088 0.0038
 Neptune -73366-10-30 09:49 J -25075206.29 -25075206.09 -25075205.85 0.0088 0.0050
 Neptune -73365-10-31 23:44 J -25074838.68 -25074838.51 -25074838.30 0.0088 0.0062
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 Neptune -73363-11-06 03:49 J -25074103.40 -25074103.34 -25074103.25 0.0088 0.0085
 Saturn -73358-05-21 18:56 J -25072445.83 -25072445.71 -25072445.56 0.0281 0.0232

Jupiter -73358-09-14 14:37 J -25072329.99 -25072329.89 -25072329.77 0.0497 0.0436
 Saturn -73357-06-02 03:20 J -25072068.58 -25072068.36 -25072068.13 0.0277 0.0091
 Saturn -73356-06-14 03:06 J -25071691.61 -25071691.37 -25071691.13 0.0272 0.0045
 Saturn -73355-06-25 19:11 J -25071314.88 -25071314.70 -25071314.51 0.0269 0.0171
 Jupiter -73352-03-02 18:56 J -25070333.83 -25070333.71 -25070333.58 0.0526 0.0438
 Uranus -73345-07-02 00:13 J -25067655.55 -25067655.49 -25067655.42 0.0145 0.0139
 Uranus -73344-07-06 21:20 J -25067285.81 -25067285.61 -25067285.39 0.0145 0.0079
 Pluto -73343-03-17 00:56 J -25067032.68 -25067032.46 -25067032.21 0.0079 0.0029
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 Uranus -73342-07-16 18:42 J -25066545.95 -25066545.72 -25066545.47 0.0146 0.0048
 Saturn -73342-11-25 16:18 J -25066413.99 -25066413.82 -25066413.62 0.0282 0.0194
 Uranus -73341-07-20 18:56 J -25066175.86 -25066175.71 -25066175.54 0.0147 0.0112
 Saturn -73341-12-08 23:59 J -25066034.75 -25066034.50 -25066034.25 0.0287 0.0036
 Jupiter -73340-03-07 15:20 J -25065946.07 -25065945.86 -25065945.64 0.0527 0.0198
 Saturn -73340-12-23 17:16 J -25065655.00 -25065654.78 -25065654.56 0.0292 0.0134
 Jupiter -73328-03-12 13:11 J -25061558.18 -25061557.95 -25061557.72 0.0528 0.0047
 Saturn -73328-05-28 02:23 J -25061481.59 -25061481.40 -25061481.19 0.0279 0.0155
 Saturn -73327-06-09 05:44 J -25061104.50 -25061104.26 -25061104.02 0.0274 0.0017
 Saturn -73326-06-21 00:56 J -25060727.67 -25060727.46 -25060727.24 0.0270 0.0114
 Saturn -73325-07-01 13:54 J -25060351.02 -25060350.92 -25060350.79 0.0266 0.0234
 Jupiter -73323-08-26 22:32 J -25059564.70 -25059564.56 -25059564.42 0.0500 0.0401
 Jupiter -73316-03-17 11:30 J -25057170.21 -25057170.02 -25057169.83 0.0529 0.0295
 Saturn -73313-11-18 16:47 J -25055827.89 -25055827.80 -25055827.69 0.0280 0.0257
 Saturn -73312-12-02 18:42 J -25055448.95 -25055448.72 -25055448.48 0.0285 0.0109
 Jupiter -73311-08-31 11:45 J -25055177.23 -25055177.01 -25055176.79 0.0499 0.0193
 Saturn -73311-12-17 07:25 J -25055069.44 -25055069.19 -25055068.95 0.0290 0.0056
 Mars -73310-12-14 04:33 J -25054707.49 -25054707.31 -25054707.12 0.1739 0.0606
 Saturn -73309-01-01 05:01 J -25054689.44 -25054689.29 -25054689.13 0.0294 0.0227
 Uranus -73304-01-08 15:06 J -25052855.05 -25052854.87 -25052854.67 0.0134 0.0091
 Uranus -73303-01-13 01:25 J -25052485.67 -25052485.44 -25052485.18 0.0133 0.0041

Uranus -73302-01-17 11:16 J -25052116.28 -25052116.03 -25052115.76 0.0133 0.0009
 Uranus -73301-01-21 19:40 J -25051746.90 -25051746.68 -25051746.43 0.0133 0.0058
 Uranus -73300-01-25 03:21 J -25051377.49 -25051377.36 -25051377.18 0.0132 0.0106
 Saturn -73299-05-22 19:11 J -25050894.84 -25050894.70 -25050894.54 0.0281 0.0218
 Jupiter -73299-09-04 20:09 J -25050789.89 -25050789.66 -25050789.42 0.0498 0.0007
 Saturn -73298-06-04 03:21 J -25050517.59 -25050517.36 -25050517.13 0.0277 0.0077
 Saturn -73297-06-15 02:52 J -25050140.61 -25050140.38 -25050140.15 0.0272 0.0059
 Saturn -73296-06-26 19:11 J -25049763.87 -25049763.70 -25049763.52 0.0269 0.0185
 Neptune -73294-04-08 18:28 J -25049112.82 -25049112.73 -25049112.62 0.0089 0.0081
 Neptune -73293-04-10 03:49 J -25048745.48 -25048745.34 -25048745.17 0.0089 0.0070
 Neptune -73292-04-12 13:25 J -25048378.11 -25048377.94 -25048377.73 0.0089 0.0059
 Neptune -73291-04-14 23:30 J -25048010.72 -25048010.52 -25048010.29 0.0089 0.0047
 Neptune -73290-04-17 08:52 J -25047643.34 -25047643.13 -25047642.88 0.0089 0.0036
 Neptune -73289-04-18 18:42 J -25047275.96 -25047275.72 -25047275.47 0.0089 0.0024
 Neptune -73288-04-21 04:04 J -25046908.57 -25046908.33 -25046908.07 0.0089 0.0013
 Mars -73288-06-12 05:30 J -25046856.45 -25046856.27 -25046856.09 0.1806 0.0319
 Neptune -73287-04-23 13:40 J -25046541.18 -25046540.93 -25046540.68 0.0089 0.0001
 Jupiter -73287-09-09 08:23 J -25046402.36 -25046402.15 -25046401.93 0.0497 0.0215
 Neptune -73286-04-25 22:47 J -25046173.79 -25046173.55 -25046173.29 0.0089 0.0011
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 Neptune -73283-05-02 02:37 J -25045071.60 -25045071.39 -25045071.16 0.0089 0.0045
 Saturn -73283-11-26 23:30 J -25044862.71 -25044862.52 -25044862.31 0.0283 0.0177
 Neptune -73282-05-04 11:59 J -25044704.19 -25044704.00 -25044703.80 0.0089 0.0056
 Saturn -73282-12-11 07:25 J -25044483.44 -25044483.19 -25044482.94 0.0287 0.0018
 Neptune -73281-05-05 20:52 J -25044336.77 -25044336.63 -25044336.45 0.0089 0.0068
 Saturn -73281-12-25 00:57 J -25044103.67 -25044103.46 -25044103.24 0.0292 0.0153
 Neptune -73280-05-08 06:13 J -25043969.33 -25043969.24 -25043969.10 0.0089 0.0079
 Jupiter -73275-09-13 22:47 J -25042014.66 -25042014.55 -25042014.42 0.0497 0.0425
 Saturn -73270-05-17 16:04 J -25040307.85 -25040307.83 -25040307.80 0.0283 0.0281

Jupiter -73269-03-01 20:09 J -25040018.77 -25040018.66 -25040018.55 0.0526 0.0465
 Saturn -73269-05-29 04:18 J -25039930.52 -25039930.32 -25039930.11 0.0278 0.0140
 Saturn -73268-06-10 07:25 J -25039553.43 -25039553.19 -25039552.95 0.0274 0.0001
 Saturn -73267-06-22 02:52 J -25039176.59 -25039176.38 -25039176.17 0.0270 0.0129
 Saturn -73266-07-03 15:49 J -25038799.92 -25038799.84 -25038799.75 0.0266 0.0248
 Uranus -73261-07-02 13:40 J -25036974.00 -25036973.93 -25036973.83 0.0145 0.0135
 Uranus -73260-07-07 11:01 J -25036604.25 -25036604.04 -25036603.82 0.0145 0.0074
 Uranus -73259-07-12 09:21 J -25036234.36 -25036234.11 -25036233.86 0.0146 0.0011
 Uranus -73258-07-17 08:23 J -25035864.38 -25035864.15 -25035863.91 0.0146 0.0053
 Jupiter -73257-03-06 17:59 J -25035630.96 -25035630.75 -25035630.54 0.0527 0.0222
 Uranus -73257-07-21 08:23 J -25035494.28 -25035494.15 -25035493.98 0.0147 0.0118
 Saturn -73254-11-21 02:23 J -25034276.52 -25034276.40 -25034276.26 0.0281 0.0241
 Saturn -73253-12-04 04:47 J -25033897.53 -25033897.30 -25033897.06 0.0285 0.0090
 Saturn -73252-12-18 17:30 J -25033518.01 -25033517.77 -25033517.52 0.0290 0.0077
 Saturn -73250-01-02 15:35 J -25033137.98 -25033137.85 -25033137.71 0.0294 0.0248
 Jupiter -73245-03-11 19:11 J -25031242.93 -25031242.70 -25031242.47 0.0528 0.0031
 Saturn -73240-05-23 23:16 J -25029343.68 -25029343.53 -25029343.35 0.0281 0.0204
 Jupiter -73240-08-26 00:28 J -25029249.59 -25029249.48 -25029249.35 0.0499 0.0425
 Saturn -73239-06-05 07:11 J -25028966.44 -25028966.20 -25028965.97 0.0276 0.0062
 Saturn -73238-06-17 06:13 J -25028589.47 -25028589.24 -25028589.01 0.0272 0.0074
 Saturn -73237-06-27 22:04 J -25028212.72 -25028212.58 -25028212.41 0.0269 0.0201
 Jupiter -73233-03-16 18:57 J -25026854.90 -25026854.71 -25026854.51 0.0529 0.0280
 Mars -73231-12-17 00:28 J -25025849.66 -25025849.48 -25025849.30 0.1747 0.0729
 Jupiter -73228-08-30 12:28 J -25024862.19 -25024861.98 -25024861.77 0.0499 0.0219
 Saturn -73224-11-28 11:01 J -25023311.24 -25023311.04 -25023310.83 0.0283 0.0159
 Saturn -73223-12-12 19:40 J -25022931.93 -25022931.68 -25022931.43 0.0288 0.0003
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 Neptune -73212-10-05 21:21 J -25018981.74 -25018981.61 -25018981.44 0.0089 0.0073
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 Mars -73209-06-14 20:52 J -25017998.79 -25017998.63 -25017998.48 0.1799 0.0988
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 Saturn -73208-06-23 07:54 J -25017625.37 -25017625.17 -25017624.96 0.0270 0.0146
 Neptune -73208-10-15 04:33 J -25017511.55 -25017511.31 -25017511.05 0.0089 0.0026
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 Jupiter -73192-09-13 03:35 J -25011699.48 -25011699.35 -25011699.22 0.0497 0.0409

Saturn -73191-01-04 08:09 J -25011586.25 -25011586.16 -25011586.07 0.0294 0.0272
 Jupiter -73186-03-01 22:18 J -25009703.65 -25009703.57 -25009703.48 0.0526 0.0490
 Pluto -73183-09-10 22:47 J -25008414.77 -25008414.55 -25008414.32 0.0065 0.0033
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 Saturn -73180-06-06 14:09 J -25007415.15 -25007414.91 -25007414.68 0.0276 0.0045
 Saturn -73179-06-18 12:28 J -25007038.20 -25007037.98 -25007037.75 0.0272 0.0091
 Saturn -73178-06-30 04:18 J -25006661.45 -25006661.32 -25006661.17 0.0268 0.0216
 Uranus -73177-07-03 00:13 J -25006292.57 -25006292.49 -25006292.38 0.0145 0.0133
 Uranus -73176-07-07 21:21 J -25005922.81 -25005922.61 -25005922.38 0.0145 0.0072
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 Jupiter -73174-03-06 22:18 J -25005315.77 -25005315.57 -25005315.36 0.0527 0.0243
 Uranus -73174-07-17 18:57 J -25005182.94 -25005182.71 -25005182.47 0.0146 0.0056
 Uranus -73173-07-21 18:57 J -25004812.83 -25004812.71 -25004812.55 0.0147 0.0122
 Saturn -73165-11-30 02:52 J -25001759.60 -25001759.38 -25001759.16 0.0283 0.0139
 Saturn -73164-12-14 12:13 J -25001380.24 -25001379.99 -25001379.74 0.0288 0.0025
 Saturn -73163-12-29 06:57 J -25001000.38 -25001000.21 -25001000.02 0.0293 0.0198
 Jupiter -73162-03-11 17:59 J -25000927.98 -25000927.75 -25000927.52 0.0528 0.0006
 Jupiter -73157-08-25 03:49 J -24998934.44 -24998934.34 -24998934.23 0.0500 0.0445
 Saturn -73152-05-20 09:06 J -24997205.23 -24997205.12 -24997205.01 0.0282 0.0249
 Saturn -73151-06-01 19:40 J -24996827.90 -24996827.68 -24996827.46 0.0278 0.0106
 Jupiter -73150-03-16 15:06 J -24996540.08 -24996539.87 -24996539.67 0.0528 0.0243
 Saturn -73150-06-13 21:35 J -24996450.84 -24996450.60 -24996450.36 0.0273 0.0033
 Saturn -73149-06-24 16:04 J -24996074.02 -24996073.83 -24996073.63 0.0270 0.0163
 Jupiter -73145-08-29 16:33 J -24994547.02 -24994546.81 -24994546.60 0.0499 0.0236
 Jupiter -73138-03-21 11:16 J -24992152.11 -24992152.03 -24992151.94 0.0529 0.0486
 Uranus -73136-01-09 11:45 J -24991492.19 -24991492.01 -24991491.80 0.0133 0.0086
 Saturn -73136-11-24 10:18 J -24991173.23 -24991173.07 -24991172.88 0.0282 0.0203
 Uranus -73135-01-13 22:04 J -24991122.82 -24991122.58 -24991122.32 0.0133 0.0035
 Saturn -73135-12-08 14:52 J -24990794.12 -24990793.88 -24990793.63 0.0286 0.0046

Uranus -73134-01-18 07:54 J -24990753.43 -24990753.17 -24990752.91 0.0133 0.0015
 Saturn -73134-12-23 05:16 J -24990414.50 -24990414.28 -24990414.05 0.0291 0.0124
 Uranus -73133-01-22 15:49 J -24990384.05 -24990383.84 -24990383.60 0.0132 0.0065
 Jupiter -73133-09-03 05:01 J -24990159.52 -24990159.29 -24990159.05 0.0498 0.0028
 Uranus -73132-01-25 23:45 J -24990014.62 -24990014.51 -24990014.36 0.0132 0.0113
 Neptune -73130-04-08 04:33 J -24989212.37 -24989212.31 -24989212.20 0.0089 0.0083
 Neptune -73129-04-09 14:23 J -24988845.03 -24988844.90 -24988844.74 0.0089 0.0072
 Neptune -73128-04-11 23:59 J -24988477.66 -24988477.50 -24988477.29 0.0089 0.0061
 Neptune -73127-04-14 09:35 J -24988110.29 -24988110.10 -24988109.87 0.0089 0.0050
 Neptune -73126-04-16 19:40 J -24987742.90 -24987742.68 -24987742.44 0.0089 0.0038
 Neptune -73125-04-18 05:16 J -24987375.51 -24987375.28 -24987375.03 0.0089 0.0027
 Neptune -73124-04-20 15:06 J -24987008.11 -24987007.87 -24987007.62 0.0089 0.0016
 Neptune -73123-04-23 00:42 J -24986640.72 -24986640.47 -24986640.21 0.0089 0.0005
 Neptune -73122-04-25 10:04 J -24986273.33 -24986273.08 -24986272.83 0.0089 0.0007
 Saturn -73122-05-27 18:42 J -24986240.90 -24986240.72 -24986240.52 0.0280 0.0170
 Neptune -73121-04-26 19:25 J -24985905.93 -24985905.69 -24985905.44 0.0089 0.0019
 Saturn -73121-06-08 00:28 J -24985863.71 -24985863.48 -24985863.24 0.0275 0.0028
 Jupiter -73121-09-07 13:54 J -24985772.14 -24985771.92 -24985771.70 0.0497 0.0174
 Neptune -73120-04-29 04:33 J -24985538.53 -24985538.31 -24985538.06 0.0089 0.0030
 Saturn -73120-06-19 22:18 J -24985486.79 -24985486.57 -24985486.34 0.0271 0.0108
 Neptune -73119-05-01 13:54 J -24985171.13 -24985170.92 -24985170.68 0.0089 0.0041
 Saturn -73119-07-01 13:25 J -24985110.04 -24985109.94 -24985109.81 0.0268 0.0233
 Neptune -73118-05-03 23:16 J -24984803.72 -24984803.53 -24984803.32 0.0089 0.0052
 Neptune -73117-05-05 08:37 J -24984436.30 -24984436.14 -24984435.95 0.0089 0.0063
 Neptune -73116-05-07 17:59 J -24984068.88 -24984068.75 -24984068.60 0.0089 0.0074
 Neptune -73115-05-10 03:06 J -24983701.42 -24983701.37 -24983701.28 0.0089 0.0085
 Jupiter -73109-09-12 01:25 J -24981384.58 -24981384.44 -24981384.28 0.0497 0.0379
 Saturn -73107-11-18 21:49 J -24980586.65 -24980586.59 -24980586.50 0.0279 0.0266
 Saturn -73106-12-02 22:04 J -24980207.81 -24980207.58 -24980207.35 0.0284 0.0117
 Mars -73105-12-10 21:35 J -24979833.61 -24979833.60 -24979833.58 0.1723 0.1716

Saturn -73105-12-16 08:23 J -24979828.39 -24979828.15 -24979827.90 0.0289 0.0049
 Saturn -73104-12-31 04:04 J -24979448.48 -24979448.33 -24979448.15 0.0293 0.0222
 Jupiter -73103-02-28 19:40 J -24979388.70 -24979388.68 -24979388.65 0.0526 0.0521
 Pluto -73094-03-19 20:37 J -24976082.72 -24976082.64 -24976082.51 0.0079 0.0072
 Saturn -73093-05-21 22:04 J -24975653.70 -24975653.58 -24975653.43 0.0282 0.0231
 Uranus -73093-07-03 08:09 J -24975611.25 -24975611.16 -24975611.05 0.0145 0.0132
 Saturn -73092-06-03 07:40 J -24975276.40 -24975276.18 -24975275.95 0.0277 0.0087
 Uranus -73092-07-08 05:01 J -24975241.49 -24975241.29 -24975241.06 0.0145 0.0071
 Jupiter -73091-03-05 17:01 J -24975000.98 -24975000.79 -24975000.59 0.0526 0.0281
 Saturn -73091-06-15 08:37 J -24974899.37 -24974899.14 -24974898.90 0.0273 0.0051
 Uranus -73091-07-13 03:35 J -24974871.60 -24974871.35 -24974871.10 0.0146 0.0007
 Saturn -73090-06-27 02:09 J -24974522.58 -24974522.41 -24974522.22 0.0269 0.0180
 Uranus -73090-07-18 02:37 J -24974501.62 -24974501.39 -24974501.16 0.0146 0.0058
 Uranus -73089-07-22 02:37 J -24974131.51 -24974131.39 -24974131.24 0.0146 0.0124
 Mars -73083-06-09 20:37 J -24971982.70 -24971982.64 -24971982.57 0.1824 0.1700
 Jupiter -73079-03-10 13:11 J -24970613.18 -24970612.95 -24970612.72 0.0528 0.0040
 Saturn -73077-11-26 05:59 J -24969621.44 -24969621.25 -24969621.05 0.0282 0.0182
 Saturn -73076-12-10 11:45 J -24969242.26 -24969242.01 -24969241.76 0.0287 0.0022
 Saturn -73075-12-25 03:21 J -24968862.57 -24968862.36 -24968862.14 0.0291 0.0150
 Jupiter -73074-08-25 05:59 J -24968619.32 -24968619.25 -24968619.16 0.0500 0.0467
 Jupiter -73067-03-15 12:42 J -24966225.18 -24966224.97 -24966224.75 0.0529 0.0210
 Saturn -73063-05-29 08:23 J -24964689.35 -24964689.15 -24964688.95 0.0279 0.0151
 Saturn -73062-06-10 12:57 J -24964312.20 -24964311.96 -24964311.72 0.0275 0.0010
 Jupiter -73062-08-29 16:04 J -24964232.03 -24964231.83 -24964231.63 0.0499 0.0263
 Saturn -73061-06-21 09:49 J -24963935.30 -24963935.09 -24963934.87 0.0271 0.0126
 Saturn -73060-07-03 00:13 J -24963558.56 -24963558.49 -24963558.39 0.0268 0.0250
 Jupiter -73055-03-20 11:59 J -24961837.10 -24961837.00 -24961836.88 0.0529 0.0460
 Uranus -73052-01-09 20:09 J -24960810.85 -24960810.66 -24960810.45 0.0134 0.0084
 Uranus -73051-01-14 06:28 J -24960441.47 -24960441.23 -24960440.97 0.0133 0.0033
 Uranus -73050-01-18 16:04 J -24960072.08 -24960071.83 -24960071.57 0.0133 0.0017

Jupiter -73050-09-03 03:21 J -24959844.59 -24959844.36 -24959844.13 0.0498 0.0058
 Uranus -73049-01-23 00:28 J -24959702.69 -24959702.48 -24959702.24 0.0132 0.0067
 Neptune -73049-10-02 15:35 J -24959448.89 -24959448.85 -24959448.76 0.0089 0.0086
 Uranus -73048-01-26 08:23 J -24959333.26 -24959333.15 -24959333.01 0.0132 0.0116
 Neptune -73048-10-05 05:30 J -24959081.39 -24959081.27 -24959081.11 0.0089 0.0075
 Saturn -73048-11-20 16:18 J -24959034.93 -24959034.82 -24959034.70 0.0280 0.0247
 Neptune -73047-10-07 19:40 J -24958713.85 -24958713.68 -24958713.49 0.0089 0.0063
 Saturn -73047-12-04 17:30 J -24958656.00 -24958655.77 -24958655.53 0.0284 0.0095
 Neptune -73046-10-10 09:06 J -24958346.31 -24958346.12 -24958345.89 0.0089 0.0052
 Saturn -73046-12-19 05:01 J -24958276.53 -24958276.29 -24958276.05 0.0289 0.0072
 Neptune -73045-10-11 22:47 J -24957978.76 -24957978.55 -24957978.29 0.0089 0.0041
 Saturn -73044-01-02 01:54 J -24957896.55 -24957896.42 -24957896.28 0.0293 0.0246
 Neptune -73044-10-14 12:57 J -24957611.20 -24957610.96 -24957610.70 0.0089 0.0029
 Neptune -73043-10-17 03:06 J -24957243.63 -24957243.37 -24957243.11 0.0089 0.0017
 Neptune -73042-10-19 17:01 J -24956876.05 -24956875.79 -24956875.53 0.0089 0.0006
 Neptune -73041-10-21 06:28 J -24956508.48 -24956508.23 -24956507.96 0.0089 0.0007
 Neptune -73040-10-23 20:37 J -24956140.89 -24956140.64 -24956140.38 0.0088 0.0018
 Neptune -73039-10-26 10:18 J -24955773.30 -24955773.07 -24955772.81 0.0088 0.0030
 Jupiter -73038-09-07 14:52 J -24955457.10 -24955456.88 -24955456.66 0.0498 0.0152
 Neptune -73038-10-29 00:13 J -24955405.70 -24955405.49 -24955405.23 0.0088 0.0042
 Neptune -73037-10-30 14:37 J -24955038.09 -24955037.89 -24955037.67 0.0088 0.0053
 Neptune -73036-11-02 04:18 J -24954670.47 -24954670.32 -24954670.11 0.0088 0.0065
 Neptune -73035-11-04 18:42 J -24954302.83 -24954302.72 -24954302.56 0.0088 0.0076
 Saturn -73034-05-24 13:11 J -24954102.11 -24954101.95 -24954101.79 0.0281 0.0211
 Neptune -73034-11-07 08:52 J -24953935.16 -24953935.13 -24953935.06 0.0088 0.0087
 Saturn -73033-06-04 21:21 J -24953724.84 -24953724.61 -24953724.38 0.0277 0.0067
 Saturn -73032-06-16 21:06 J -24953347.85 -24953347.62 -24953347.39 0.0273 0.0071
 Saturn -73031-06-28 13:54 J -24952971.08 -24952970.92 -24952970.76 0.0269 0.0198
 Jupiter -73026-09-12 03:35 J -24951069.51 -24951069.35 -24951069.19 0.0497 0.0360
 Mars -73026-12-14 14:09 J -24950976.10 -24950975.91 -24950975.72 0.1730 0.0470

Saturn	-73018-11-29 01:40 J	-24948069.63	-24948069.43	-24948069.21	0.0283	0.0161
Saturn	-73017-12-12 09:06 J	-24947690.37	-24947690.12	-24947689.87	0.0288	0.0004
Saturn	-73016-12-27 02:09 J	-24947310.61	-24947310.41	-24947310.21	0.0292	0.0175
Uranus	-73009-07-03 13:40 J	-24944930.00	-24944929.93	-24944929.81	0.0145	0.0133
Jupiter	-73008-03-04 13:11 J	-24944686.13	-24944685.95	-24944685.76	0.0527	0.0318
Uranus	-73008-07-08 10:47 J	-24944560.25	-24944560.05	-24944559.81	0.0145	0.0071
Uranus	-73007-07-13 09:06 J	-24944190.37	-24944190.12	-24944189.87	0.0146	0.0006
Uranus	-73006-07-18 07:54 J	-24943820.38	-24943820.17	-24943819.92	0.0146	0.0059
Saturn	-73005-05-18 10:47 J	-24943515.10	-24943515.05	-24943514.99	0.0283	0.0275
Uranus	-73005-07-22 08:09 J	-24943450.27	-24943450.16	-24943450.01	0.0146	0.0125
Saturn	-73004-05-30 23:01 J	-24943137.75	-24943137.54	-24943137.33	0.0278	0.0131
Mars	-73004-06-12 13:54 J	-24943125.11	-24943124.92	-24943124.74	0.1816	0.0302
Saturn	-73003-06-12 02:23 J	-24942760.64	-24942760.40	-24942760.16	0.0274	0.0011
Saturn	-73002-06-23 21:49 J	-24942383.79	-24942383.59	-24942383.38	0.0270	0.0144
Saturn	-73001-07-04 11:30 J	-24942007.04	-24942007.02	-24942006.99	0.0267	0.0265

73RD MILLENNIUM BCE

This is a list of transits of Earth in the 73rd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Jupiter	-72996-03-09 12:28 J	-24940298.21	-24940297.98	-24940297.75	0.0528	0.0070
Jupiter	-72991-08-24 05:59 J	-24938304.29	-24938304.25	-24938304.21	0.0500	0.0492
Saturn	-72989-11-22 09:21 J	-24937483.25	-24937483.11	-24937482.96	0.0280	0.0229
Saturn	-72988-12-06 11:59 J	-24937104.24	-24937104.00	-24937103.75	0.0285	0.0074

Saturn -72987-12-21 00:42 J -24936724.70 -24936724.47 -24936724.23 0.0290 0.0096
 Saturn -72985-01-04 22:47 J -24936344.65 -24936344.55 -24936344.45 0.0294 0.0269
 Jupiter -72984-03-14 09:35 J -24935910.32 -24935910.10 -24935909.88 0.0528 0.0178
 Jupiter -72979-08-28 16:04 J -24933917.01 -24933916.83 -24933916.63 0.0500 0.0287
 Saturn -72975-05-26 03:21 J -24932550.53 -24932550.36 -24932550.18 0.0281 0.0191
 Saturn -72974-06-07 10:18 J -24932173.31 -24932173.07 -24932172.84 0.0276 0.0048
 Saturn -72973-06-18 08:52 J -24931796.35 -24931796.13 -24931795.90 0.0272 0.0089
 Jupiter -72972-03-19 06:42 J -24931522.35 -24931522.22 -24931522.08 0.0529 0.0423
 Saturn -72972-06-30 00:42 J -24931419.60 -24931419.47 -24931419.32 0.0268 0.0215
 Uranus -72969-01-06 16:33 J -24930498.81 -24930498.81 -24930498.80 0.0134 0.0134
 Uranus -72968-01-10 03:35 J -24930129.53 -24930129.35 -24930129.13 0.0134 0.0083
 Uranus -72967-01-14 14:23 J -24929760.14 -24929759.90 -24929759.64 0.0133 0.0031
 Jupiter -72967-09-02 04:47 J -24929529.53 -24929529.30 -24929529.07 0.0499 0.0078
 Uranus -72966-01-18 23:59 J -24929390.74 -24929390.50 -24929390.23 0.0133 0.0020
 Neptune -72966-04-07 16:47 J -24929311.87 -24929311.80 -24929311.71 0.0089 0.0084
 Uranus -72965-01-23 08:37 J -24929021.35 -24929021.14 -24929020.91 0.0133 0.0070
 Neptune -72965-04-09 02:09 J -24928944.52 -24928944.41 -24928944.24 0.0089 0.0074
 Uranus -72964-01-26 16:47 J -24928651.89 -24928651.80 -24928651.67 0.0132 0.0118
 Neptune -72964-04-11 11:45 J -24928577.16 -24928577.01 -24928576.80 0.0089 0.0063
 Neptune -72963-04-13 21:35 J -24928209.78 -24928209.60 -24928209.37 0.0089 0.0052
 Neptune -72962-04-16 06:57 J -24927842.41 -24927842.21 -24927841.96 0.0089 0.0041
 Neptune -72961-04-17 16:47 J -24927475.02 -24927474.80 -24927474.54 0.0089 0.0030
 Neptune -72960-04-20 02:52 J -24927107.63 -24927107.38 -24927107.13 0.0089 0.0018
 Neptune -72959-04-22 12:13 J -24926740.24 -24926739.99 -24926739.74 0.0089 0.0007
 Saturn -72959-11-30 18:42 J -24926517.93 -24926517.72 -24926517.50 0.0283 0.0140
 Neptune -72958-04-24 21:49 J -24926372.84 -24926372.59 -24926372.33 0.0089 0.0004
 Saturn -72958-12-15 03:06 J -24926138.62 -24926138.37 -24926138.12 0.0288 0.0025
 Neptune -72957-04-26 07:25 J -24926005.44 -24926005.19 -24926004.94 0.0089 0.0015
 Saturn -72957-12-28 21:21 J -24925758.79 -24925758.61 -24925758.43 0.0293 0.0199
 Neptune -72956-04-28 16:33 J -24925638.04 -24925637.81 -24925637.56 0.0089 0.0027

Neptune -72955-05-01 02:09 J -24925270.64 -24925270.41 -24925270.18 0.0089 0.0037
 Jupiter -72955-09-06 17:16 J -24925142.00 -24925141.78 -24925141.55 0.0498 0.0132
 Neptune -72954-05-03 11:30 J -24924903.23 -24924903.02 -24924902.81 0.0089 0.0048
 Neptune -72953-05-04 20:37 J -24924535.82 -24924535.64 -24924535.45 0.0089 0.0059
 Neptune -72952-05-07 05:45 J -24924168.40 -24924168.26 -24924168.09 0.0089 0.0070
 Neptune -72951-05-09 14:37 J -24923800.96 -24923800.89 -24923800.76 0.0089 0.0081
 Mars -72947-12-17 09:06 J -24922118.30 -24922118.12 -24922117.95 0.1737 0.0848
 Saturn -72946-05-21 01:11 J -24921963.54 -24921963.45 -24921963.34 0.0282 0.0256
 Saturn -72945-06-01 12:13 J -24921586.21 -24921585.99 -24921585.77 0.0278 0.0111
 Saturn -72944-06-13 14:23 J -24921209.14 -24921208.90 -24921208.66 0.0273 0.0030
 Saturn -72943-06-25 08:23 J -24920832.33 -24920832.15 -24920831.94 0.0270 0.0162
 Jupiter -72943-09-11 04:18 J -24920754.48 -24920754.32 -24920754.14 0.0497 0.0338
 Pluto -72935-09-11 23:16 J -24917831.57 -24917831.53 -24917831.41 0.0065 0.0062
 Pluto -72934-09-13 12:42 J -24917465.18 -24917464.97 -24917464.72 0.0065 0.0030
 Saturn -72930-11-24 23:16 J -24915931.70 -24915931.53 -24915931.37 0.0281 0.0211
 Saturn -72929-12-08 03:21 J -24915552.61 -24915552.36 -24915552.12 0.0286 0.0053
 Saturn -72928-12-22 17:30 J -24915173.00 -24915172.77 -24915172.54 0.0290 0.0118
 Saturn -72926-01-06 16:33 J -24914792.84 -24914792.81 -24914792.79 0.0294 0.0292
 Jupiter -72925-03-03 11:30 J -24914371.19 -24914371.02 -24914370.84 0.0526 0.0344
 Mars -72925-06-15 06:42 J -24914267.36 -24914267.22 -24914267.06 0.1809 0.1066
 Uranus -72925-07-03 22:33 J -24914248.65 -24914248.56 -24914248.45 0.0145 0.0131
 Uranus -72924-07-08 19:25 J -24913878.91 -24913878.69 -24913878.47 0.0145 0.0068
 Uranus -72923-07-13 17:30 J -24913509.02 -24913508.77 -24913508.52 0.0146 0.0005
 Uranus -72922-07-18 16:18 J -24913139.04 -24913138.82 -24913138.58 0.0146 0.0061
 Uranus -72921-07-22 16:18 J -24912768.93 -24912768.82 -24912768.68 0.0146 0.0127
 Saturn -72916-05-27 16:04 J -24910999.02 -24910998.83 -24910998.64 0.0280 0.0171
 Saturn -72915-06-08 21:35 J -24910621.83 -24910621.60 -24910621.36 0.0276 0.0029
 Saturn -72914-06-20 19:25 J -24910244.91 -24910244.69 -24910244.47 0.0271 0.0108
 Jupiter -72913-03-08 10:18 J -24909983.30 -24909983.07 -24909982.84 0.0527 0.0099
 Saturn -72913-07-01 10:04 J -24909868.18 -24909868.08 -24909867.95 0.0268 0.0232

Jupiter -72901-03-13 06:13 J -24905595.46 -24905595.24 -24905595.02 0.0528 0.0143
 Saturn -72901-11-18 08:37 J -24905345.19 -24905345.14 -24905345.08 0.0279 0.0271
 Saturn -72900-12-02 07:54 J -24904966.39 -24904966.17 -24904965.94 0.0284 0.0121
 Saturn -72899-12-16 17:30 J -24904587.02 -24904586.77 -24904586.52 0.0289 0.0046
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 Jupiter -72889-03-18 05:01 J -24901207.44 -24901207.29 -24901207.13 0.0529 0.0391
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 Neptune -72632-04-19 04:04 J -24807306.56 -24807306.33 -24807306.07 0.0089 0.0023
 Uranus -72631-01-15 23:30 J -24807034.77 -24807034.52 -24807034.26 0.0133 0.0023
 Neptune -72631-04-21 13:40 J -24806939.18 -24806938.93 -24806938.67 0.0089 0.0012
 Uranus -72630-01-20 09:35 J -24806665.35 -24806665.10 -24806664.84 0.0133 0.0029
 Neptune -72630-04-23 23:30 J -24806571.78 -24806571.52 -24806571.27 0.0089 0.0001
 Uranus -72629-01-24 18:28 J -24806295.91 -24806295.73 -24806295.50 0.0133 0.0081
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 Neptune -72625-05-03 22:33 J -24804734.74 -24804734.56 -24804734.34 0.0089 0.0053

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 Jupiter -72623-09-04 19:54 J -24803880.90 -24803880.67 -24803880.43 0.0499 0.0089
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Saturn -72563-05-23 07:11 J -24782070.33 -24782070.20 -24782070.05 0.0284 0.0229
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 Neptune -72552-10-12 16:18 J -24777910.05 -24777909.82 -24777909.56 0.0089 0.0035
 Neptune -72551-10-15 06:13 J -24777542.48 -24777542.24 -24777541.97 0.0089 0.0024
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 Neptune -72542-11-05 12:13 J -24774234.12 -24774233.99 -24774233.84 0.0088 0.0075

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 Saturn -72533-05-29 14:09 J -24771106.10 -24771105.91 -24771105.70 0.0281 0.0149
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 Uranus -72503-07-15 17:59 J -24760101.99 -24760101.75 -24760101.49 0.0146 0.0010
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 Saturn -72488-11-26 20:52 J -24754488.81 -24754488.63 -24754488.42 0.0280 0.0180
 Saturn -72487-12-10 21:49 J -24754109.84 -24754109.59 -24754109.34 0.0285 0.0020
 Jupiter -72486-03-11 22:47 J -24754018.78 -24754018.55 -24754018.33 0.0526 0.0092
 Saturn -72486-12-25 09:35 J -24753730.31 -24753730.10 -24753729.89 0.0290 0.0153
 Jupiter -72481-08-25 16:18 J -24752024.98 -24752024.82 -24752024.65 0.0502 0.0349
 Jupiter -72474-03-16 20:37 J -24749630.81 -24749630.64 -24749630.45 0.0527 0.0338
 Neptune -72474-04-06 06:42 J -24749610.26 -24749610.22 -24749610.13 0.0089 0.0086

Saturn -72474-05-31 10:04 J -24749555.29 -24749555.08 -24749554.87 0.0281 0.0136
 Neptune -72473-04-07 16:47 J -24749242.91 -24749242.80 -24749242.65 0.0089 0.0076
 Saturn -72473-06-11 18:28 J -24749177.97 -24749177.73 -24749177.49 0.0276 0.0013
 Neptune -72472-04-10 02:37 J -24748875.53 -24748875.39 -24748875.19 0.0089 0.0066
 Saturn -72472-06-23 18:13 J -24748800.94 -24748800.74 -24748800.54 0.0272 0.0150
 Neptune -72471-04-12 12:57 J -24748508.15 -24748507.96 -24748507.75 0.0089 0.0055
 Neptune -72470-04-14 22:33 J -24748140.77 -24748140.56 -24748140.33 0.0089 0.0045
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 Neptune -72468-04-18 17:45 J -24747406.00 -24747405.76 -24747405.51 0.0089 0.0024
 Neptune -72467-04-21 03:21 J -24747038.60 -24747038.36 -24747038.10 0.0089 0.0014
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 Uranus -72465-01-08 16:33 J -24746410.87 -24746410.81 -24746410.70 0.0134 0.0126
 Neptune -72465-04-24 22:18 J -24746303.81 -24746303.57 -24746303.31 0.0089 0.0008
 Uranus -72464-01-12 04:18 J -24746041.52 -24746041.32 -24746041.08 0.0134 0.0073
 Neptune -72464-04-27 07:54 J -24745936.42 -24745936.17 -24745935.92 0.0089 0.0018
 Uranus -72463-01-16 15:35 J -24745672.11 -24745671.85 -24745671.59 0.0133 0.0019
 Neptune -72463-04-29 17:01 J -24745569.01 -24745568.79 -24745568.53 0.0089 0.0029
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 Neptune -72458-05-10 16:18 J -24743731.90 -24743731.82 -24743731.69 0.0089 0.0080
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 Mars -72458-12-15 13:11 J -24743513.15 -24743512.95 -24743512.76 0.1713 0.0148
 Jupiter -72457-09-03 20:52 J -24743249.86 -24743249.63 -24743249.39 0.0500 0.0085
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Saturn -72455-01-01 15:06 J -24742764.98 -24742764.87 -24742764.72 0.0292 0.0247
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 Neptune -72392-10-02 20:23 J -24719479.76 -24719479.65 -24719479.52 0.0089 0.0078
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 Neptune -72377-11-06 11:59 J -24713966.09 -24713966.00 -24713965.89 0.0088 0.0082
 Jupiter -72374-09-04 00:13 J -24712934.72 -24712934.49 -24712934.26 0.0500 0.0063

Saturn -72370-11-30 03:49 J -24711386.55 -24711386.34 -24711386.13 0.0280 0.0149
 Saturn -72369-12-13 04:47 J -24711007.55 -24711007.30 -24711007.05 0.0285 0.0014
 Saturn -72368-12-27 16:18 J -24710628.00 -24710627.82 -24710627.62 0.0290 0.0188
 Jupiter -72362-09-08 14:09 J -24708547.11 -24708546.91 -24708546.72 0.0499 0.0277
 Saturn -72357-05-20 14:09 J -24706830.99 -24706830.91 -24706830.80 0.0286 0.0263
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 Saturn -72355-06-14 17:30 J -24706076.00 -24706075.77 -24706075.53 0.0276 0.0041
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 Jupiter -72344-02-28 11:45 J -24702164.13 -24702164.01 -24702163.88 0.0524 0.0442
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 Jupiter -72315-08-25 04:47 J -24691394.44 -24691394.30 -24691394.14 0.0502 0.0381
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Saturn -72282-11-25 22:33 J -24679248.74 -24679248.56 -24679248.38 0.0278 0.0197
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 Saturn -72266-06-22 23:16 J -24673560.73 -24673560.53 -24673560.32 0.0274 0.0137
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 Saturn -72253-11-19 12:42 J -24668662.04 -24668661.97 -24668661.89 0.0276 0.0261
 Mars -72253-12-12 12:57 J -24668639.10 -24668638.96 -24668638.81 0.1698 0.1141
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 Saturn -72252-12-03 04:04 J -24668283.56 -24668283.33 -24668283.10 0.0280 0.0112
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Jupiter -72225-03-14 06:57 J -24658685.41 -24658685.21 -24658685.01 0.0527 0.0273
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 Jupiter -72220-08-28 22:04 J -24656691.79 -24656691.58 -24656691.36 0.0501 0.0185
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 Saturn -72090-06-16 06:42 J -24609283.45 -24609283.22 -24609282.98 0.0276 0.0050
 Saturn -72089-06-27 07:11 J -24608906.37 -24608906.20 -24608906.03 0.0272 0.0190
 Uranus -72085-07-07 18:28 J -24607434.87 -24607434.73 -24607434.56 0.0145 0.0113
 Uranus -72084-07-12 15:21 J -24607065.10 -24607064.86 -24607064.63 0.0145 0.0046
 Jupiter -72083-03-03 06:42 J -24606831.41 -24606831.22 -24606831.02 0.0525 0.0288
 Uranus -72083-07-17 12:42 J -24606695.22 -24606694.97 -24606694.72 0.0146 0.0022
 Uranus -72082-07-22 11:01 J -24606325.22 -24606325.04 -24606324.83 0.0146 0.0091
 Saturn -72076-11-25 14:37 J -24604007.06 -24604006.89 -24604006.72 0.0278 0.0204
 Saturn -72075-12-09 10:33 J -24603628.30 -24603628.06 -24603627.81 0.0282 0.0045
 Saturn -72074-12-23 16:47 J -24603249.02 -24603248.80 -24603248.57 0.0287 0.0127
 Mars -72073-06-16 00:57 J -24603073.61 -24603073.46 -24603073.30 0.1840 0.1024
 Jupiter -72071-03-08 04:33 J -24602443.54 -24602443.31 -24602443.08 0.0525 0.0038
 Jupiter -72066-08-23 08:37 J -24600449.23 -24600449.14 -24600449.03 0.0503 0.0452
 Neptune -72065-09-29 03:49 J -24600046.36 -24600046.34 -24600046.30 0.0089 0.0088
 Neptune -72064-10-01 17:16 J -24599678.89 -24599678.78 -24599678.65 0.0089 0.0078
 Neptune -72063-10-04 06:57 J -24599311.38 -24599311.21 -24599311.04 0.0089 0.0068
 Saturn -72062-05-29 23:59 J -24599073.68 -24599073.50 -24599073.30 0.0283 0.0168
 Neptune -72062-10-06 20:23 J -24598943.84 -24598943.65 -24598943.45 0.0089 0.0058
 Saturn -72061-06-10 13:11 J -24598696.19 -24598695.95 -24598695.71 0.0279 0.0012
 Neptune -72061-10-08 09:35 J -24598576.31 -24598576.10 -24598575.87 0.0089 0.0048

Saturn -72060-06-22 16:47 J -24598319.01 -24598318.80 -24598318.59 0.0274 0.0134
 Neptune -72060-10-10 23:16 J -24598208.76 -24598208.53 -24598208.28 0.0089 0.0038
 Jupiter -72059-03-13 02:23 J -24598055.61 -24598055.40 -24598055.19 0.0526 0.0209
 Saturn -72059-07-04 12:28 J -24597942.01 -24597941.98 -24597941.92 0.0270 0.0266
 Neptune -72059-10-13 12:42 J -24597841.20 -24597840.97 -24597840.70 0.0089 0.0028
 Neptune -72058-10-16 02:37 J -24597473.65 -24597473.39 -24597473.13 0.0089 0.0017
 Neptune -72057-10-17 16:18 J -24597106.08 -24597105.82 -24597105.55 0.0089 0.0007
 Neptune -72056-10-20 05:59 J -24596738.51 -24596738.25 -24596737.98 0.0089 0.0004
 Neptune -72055-10-22 19:54 J -24596370.92 -24596370.67 -24596370.40 0.0089 0.0014
 Jupiter -72054-08-27 20:52 J -24596061.83 -24596061.63 -24596061.42 0.0502 0.0239
 Neptune -72054-10-25 09:35 J -24596003.34 -24596003.10 -24596002.83 0.0089 0.0025
 Neptune -72053-10-26 23:30 J -24595635.75 -24595635.52 -24595635.26 0.0089 0.0035
 Neptune -72052-10-29 13:54 J -24595268.14 -24595267.92 -24595267.69 0.0089 0.0045
 Neptune -72051-11-01 03:35 J -24594900.53 -24594900.35 -24594900.12 0.0088 0.0056
 Neptune -72050-11-03 17:30 J -24594532.92 -24594532.77 -24594532.57 0.0088 0.0066
 Neptune -72049-11-05 07:25 J -24594165.29 -24594165.19 -24594165.02 0.0088 0.0076
 Neptune -72048-11-07 21:35 J -24593797.64 -24593797.60 -24593797.50 0.0088 0.0086
 Jupiter -72047-03-17 21:49 J -24593667.70 -24593667.59 -24593667.47 0.0527 0.0451
 Saturn -72047-11-20 05:45 J -24593420.32 -24593420.26 -24593420.19 0.0276 0.0265
 Saturn -72046-12-03 20:52 J -24593041.86 -24593041.63 -24593041.40 0.0281 0.0113
 Uranus -72045-01-10 06:42 J -24593004.32 -24593004.22 -24593004.09 0.0134 0.0120
 Saturn -72045-12-16 22:33 J -24592662.80 -24592662.56 -24592662.31 0.0286 0.0055
 Uranus -72044-01-13 17:59 J -24592634.96 -24592634.75 -24592634.50 0.0134 0.0065
 Saturn -72044-12-31 10:47 J -24592283.19 -24592283.05 -24592282.89 0.0290 0.0232
 Uranus -72043-01-18 05:16 J -24592265.53 -24592265.28 -24592265.02 0.0133 0.0010
 Uranus -72042-01-22 14:52 J -24591896.11 -24591895.88 -24591895.62 0.0133 0.0045
 Jupiter -72042-09-01 09:49 J -24591674.32 -24591674.09 -24591673.86 0.0501 0.0024
 Uranus -72041-01-27 00:13 J -24591526.65 -24591526.49 -24591526.31 0.0133 0.0098
 Saturn -72033-05-23 20:09 J -24588486.78 -24588486.66 -24588486.52 0.0285 0.0238
 Saturn -72032-06-05 13:11 J -24588109.18 -24588108.95 -24588108.72 0.0280 0.0080

Saturn	-72031-06-17 20:23 J	-24587731.88	-24587731.65	-24587731.41	0.0276	0.0071
Saturn	-72030-06-29 19:25 J	-24587354.83	-24587354.69	-24587354.53	0.0272	0.0209
Jupiter	-72030-09-05 21:21 J	-24587286.83	-24587286.61	-24587286.39	0.0499	0.0188
Jupiter	-72018-09-10 08:52 J	-24582899.27	-24582899.13	-24582898.99	0.0499	0.0398
Saturn	-72017-11-27 05:16 J	-24582455.46	-24582455.28	-24582455.09	0.0278	0.0184
Saturn	-72016-12-11 02:52 J	-24582076.63	-24582076.38	-24582076.13	0.0283	0.0023
Saturn	-72015-12-25 10:33 J	-24581697.26	-24581697.06	-24581696.84	0.0288	0.0151
Saturn	-72003-05-31 14:37 J	-24577522.09	-24577521.89	-24577521.68	0.0283	0.0145
Saturn	-72002-06-13 02:23 J	-24577144.64	-24577144.40	-24577144.16	0.0278	0.0011
Saturn	-72001-06-24 04:33 J	-24576767.50	-24576767.31	-24576767.10	0.0274	0.0154
Uranus	-72001-07-08 02:09 J	-24576753.56	-24576753.41	-24576753.25	0.0145	0.0112

72ND MILLENNIUM BCE

This is a list of transits of Earth in the 72nd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-72000-03-02 04:33 J	-24576516.49	-24576516.31	-24576516.12	0.0524	0.0317		
Uranus	-72000-07-12 22:33 J	-24576383.79	-24576383.56	-24576383.31	0.0145	0.0045		
Uranus	-71999-07-17 20:09 J	-24576013.90	-24576013.66	-24576013.40	0.0146	0.0024		
Uranus	-71998-07-22 18:57 J	-24575643.89	-24575643.71	-24575643.51	0.0146	0.0093		
Jupiter	-71988-03-07 00:42 J	-24572128.70	-24572128.47	-24572128.24	0.0525	0.0076		
Saturn	-71988-11-21 17:45 J	-24571868.86	-24571868.76	-24571868.63	0.0277	0.0247		
Saturn	-71987-12-05 10:18 J	-24571490.30	-24571490.07	-24571489.83	0.0281	0.0093		
Saturn	-71986-12-19 13:25 J	-24571111.18	-24571110.94	-24571110.69	0.0286	0.0078		

Saturn -71984-01-02 03:06 J -24570731.48 -24570731.37 -24570731.25 0.0291 0.0255
 Jupiter -71983-08-22 11:45 J -24570134.08 -24570134.01 -24570133.93 0.0503 0.0473
 Neptune -71982-04-04 21:49 J -24569908.63 -24569908.59 -24569908.50 0.0089 0.0086
 Neptune -71981-04-06 08:09 J -24569541.28 -24569541.16 -24569541.02 0.0089 0.0076
 Neptune -71980-04-08 17:59 J -24569173.90 -24569173.75 -24569173.56 0.0089 0.0067
 Neptune -71979-04-11 03:49 J -24568806.52 -24568806.34 -24568806.13 0.0089 0.0057
 Neptune -71978-04-13 14:09 J -24568439.13 -24568438.91 -24568438.70 0.0089 0.0047
 Neptune -71977-04-14 23:30 J -24568071.73 -24568071.52 -24568071.27 0.0089 0.0038
 Jupiter -71976-03-11 22:47 J -24567740.76 -24567740.55 -24567740.33 0.0526 0.0174
 Neptune -71976-04-17 09:35 J -24567704.33 -24567704.10 -24567703.85 0.0089 0.0028
 Neptune -71975-04-19 19:25 J -24567336.93 -24567336.69 -24567336.43 0.0089 0.0018
 Neptune -71974-04-22 05:16 J -24566969.53 -24566969.28 -24566969.02 0.0089 0.0008
 Saturn -71974-05-26 10:33 J -24566935.20 -24566935.06 -24566934.89 0.0284 0.0216
 Neptune -71973-04-23 15:21 J -24566602.11 -24566601.86 -24566601.61 0.0089 0.0002
 Saturn -71973-06-07 02:23 J -24566557.63 -24566557.40 -24566557.16 0.0280 0.0059
 Neptune -71972-04-26 00:57 J -24566234.71 -24566234.46 -24566234.21 0.0089 0.0012
 Saturn -71972-06-19 08:23 J -24566180.37 -24566180.15 -24566179.92 0.0275 0.0091
 Neptune -71971-04-28 10:18 J -24565867.31 -24565867.07 -24565866.82 0.0089 0.0022
 Saturn -71971-07-01 06:13 J -24565803.36 -24565803.24 -24565803.10 0.0271 0.0227
 Jupiter -71971-08-27 00:42 J -24565746.67 -24565746.47 -24565746.27 0.0502 0.0257
 Neptune -71970-04-30 19:25 J -24565499.91 -24565499.69 -24565499.44 0.0089 0.0032
 Neptune -71969-05-02 05:01 J -24565132.50 -24565132.29 -24565132.05 0.0089 0.0042
 Mars -71969-12-13 04:47 J -24564907.46 -24564907.30 -24564907.14 0.1690 0.0921
 Neptune -71968-05-04 14:37 J -24564765.09 -24564764.89 -24564764.68 0.0089 0.0051
 Neptune -71967-05-06 23:45 J -24564397.68 -24564397.51 -24564397.31 0.0089 0.0061
 Neptune -71966-05-09 08:52 J -24564030.26 -24564030.13 -24564029.95 0.0089 0.0071
 Neptune -71965-05-10 18:28 J -24563662.82 -24563662.73 -24563662.61 0.0089 0.0080
 Jupiter -71964-03-16 21:49 J -24563352.72 -24563352.59 -24563352.45 0.0527 0.0425
 Uranus -71961-01-10 15:49 J -24562322.96 -24562322.84 -24562322.72 0.0134 0.0118
 Uranus -71960-01-14 03:21 J -24561953.59 -24561953.36 -24561953.13 0.0134 0.0062

Uranus -71959-01-18 14:09 J -24561584.17 -24561583.91 -24561583.65 0.0133 0.0007
 Jupiter -71959-08-31 12:42 J -24561359.20 -24561358.97 -24561358.74 0.0501 0.0044
 Uranus -71958-01-22 23:45 J -24561214.74 -24561214.51 -24561214.26 0.0133 0.0047
 Saturn -71958-11-29 15:35 J -24560904.04 -24560903.85 -24560903.64 0.0279 0.0166
 Uranus -71957-01-27 08:52 J -24560845.28 -24560845.13 -24560844.95 0.0133 0.0101
 Saturn -71957-12-12 14:23 J -24560525.15 -24560524.90 -24560524.65 0.0284 0.0004
 Saturn -71956-12-26 23:45 J -24560145.71 -24560145.51 -24560145.31 0.0288 0.0173
 Jupiter -71947-09-04 22:04 J -24556971.79 -24556971.58 -24556971.35 0.0500 0.0167
 Saturn -71945-05-20 06:13 J -24556348.27 -24556348.24 -24556348.19 0.0287 0.0282
 Saturn -71944-06-02 02:52 J -24555970.59 -24555970.38 -24555970.16 0.0282 0.0123
 Saturn -71943-06-14 13:25 J -24555593.18 -24555592.94 -24555592.70 0.0278 0.0031
 Saturn -71942-06-26 14:37 J -24555216.07 -24555215.89 -24555215.70 0.0273 0.0173
 Pluto -71941-09-17 21:49 J -24554766.84 -24554766.59 -24554766.33 0.0065 0.0016
 Jupiter -71935-09-09 10:47 J -24552584.20 -24552584.05 -24552583.89 0.0500 0.0381
 Saturn -71929-11-23 02:37 J -24550317.52 -24550317.39 -24550317.25 0.0277 0.0229
 Saturn -71928-12-06 20:09 J -24549938.90 -24549938.66 -24549938.41 0.0282 0.0073
 Saturn -71927-12-21 00:28 J -24549559.71 -24549559.48 -24549559.24 0.0287 0.0099
 Saturn -71925-01-04 15:06 J -24549179.94 -24549179.87 -24549179.78 0.0291 0.0276
 Jupiter -71917-03-01 03:06 J -24546201.54 -24546201.37 -24546201.20 0.0523 0.0350
 Uranus -71917-07-08 06:57 J -24546072.36 -24546072.21 -24546072.06 0.0145 0.0113
 Uranus -71916-07-13 03:21 J -24545702.59 -24545702.36 -24545702.12 0.0145 0.0046
 Saturn -71915-05-27 21:49 J -24545383.76 -24545383.59 -24545383.41 0.0284 0.0195
 Uranus -71915-07-18 00:57 J -24545332.70 -24545332.46 -24545332.21 0.0146 0.0023
 Saturn -71914-06-09 12:42 J -24545006.21 -24545005.97 -24545005.74 0.0279 0.0038
 Uranus -71914-07-22 23:45 J -24544962.69 -24544962.51 -24544962.31 0.0146 0.0093
 Saturn -71913-06-20 17:45 J -24544628.98 -24544628.76 -24544628.54 0.0275 0.0110
 Saturn -71912-07-02 14:23 J -24544251.99 -24544251.90 -24544251.79 0.0270 0.0245
 Jupiter -71905-03-06 01:54 J -24541813.65 -24541813.42 -24541813.19 0.0525 0.0099
 Neptune -71901-09-28 13:40 J -24540145.94 -24540145.93 -24540145.87 0.0089 0.0088
 Jupiter -71900-08-21 17:45 J -24539818.81 -24539818.76 -24539818.70 0.0503 0.0488

Neptune -71900-10-01 03:21 J -24539778.47 -24539778.36 -24539778.23 0.0089 0.0078
 Neptune -71899-10-03 16:33 J -24539410.95 -24539410.81 -24539410.62 0.0089 0.0069
 Saturn -71899-11-30 21:49 J -24539352.79 -24539352.59 -24539352.37 0.0279 0.0148
 Neptune -71898-10-06 05:59 J -24539043.42 -24539043.25 -24539043.03 0.0089 0.0059
 Saturn -71898-12-14 21:21 J -24538973.86 -24538973.61 -24538973.36 0.0284 0.0017
 Neptune -71897-10-07 19:40 J -24538675.88 -24538675.68 -24538675.44 0.0089 0.0049
 Saturn -71897-12-28 07:25 J -24538594.37 -24538594.19 -24538594.00 0.0289 0.0193
 Neptune -71896-10-10 09:21 J -24538308.33 -24538308.11 -24538307.86 0.0089 0.0039
 Neptune -71895-10-12 23:01 J -24537940.78 -24537940.54 -24537940.28 0.0089 0.0029
 Neptune -71894-10-15 12:42 J -24537573.21 -24537572.97 -24537572.70 0.0089 0.0019
 Jupiter -71893-03-11 02:09 J -24537425.63 -24537425.41 -24537425.19 0.0525 0.0157
 Neptune -71893-10-17 02:23 J -24537205.66 -24537205.40 -24537205.13 0.0089 0.0008
 Neptune -71892-10-19 16:18 J -24536838.08 -24536837.82 -24536837.56 0.0089 0.0002
 Neptune -71891-10-22 05:59 J -24536470.51 -24536470.25 -24536469.99 0.0089 0.0012
 Neptune -71890-10-24 19:11 J -24536102.94 -24536102.70 -24536102.43 0.0089 0.0023
 Mars -71890-12-16 18:13 J -24536049.93 -24536049.74 -24536049.54 0.1697 0.0246
 Neptune -71889-10-26 09:06 J -24535735.35 -24535735.12 -24535734.86 0.0089 0.0033
 Jupiter -71888-08-26 02:23 J -24535431.59 -24535431.40 -24535431.20 0.0502 0.0279
 Neptune -71888-10-28 23:01 J -24535367.75 -24535367.54 -24535367.29 0.0089 0.0043
 Neptune -71887-10-31 12:57 J -24535000.15 -24534999.96 -24534999.73 0.0089 0.0053
 Saturn -71886-05-22 14:52 J -24534796.96 -24534796.88 -24534796.78 0.0287 0.0263
 Neptune -71886-11-03 02:52 J -24534632.54 -24534632.38 -24534632.17 0.0089 0.0063
 Saturn -71885-06-03 11:01 J -24534419.26 -24534419.04 -24534418.81 0.0282 0.0103
 Neptune -71885-11-04 17:01 J -24534264.92 -24534264.79 -24534264.62 0.0088 0.0073
 Saturn -71884-06-15 20:37 J -24534041.87 -24534041.64 -24534041.40 0.0277 0.0050
 Neptune -71884-11-07 07:25 J -24533897.28 -24533897.19 -24533897.08 0.0088 0.0082
 Saturn -71883-06-27 21:21 J -24533664.78 -24533664.61 -24533664.44 0.0273 0.0191
 Jupiter -71881-03-16 01:25 J -24533037.58 -24533037.44 -24533037.29 0.0526 0.0407
 Uranus -71877-01-10 23:01 J -24531641.65 -24531641.54 -24531641.40 0.0134 0.0116
 Uranus -71876-01-14 10:47 J -24531272.27 -24531272.05 -24531271.81 0.0134 0.0061

Jupiter -71876-08-30 15:21 J -24531044.09 -24531043.86 -24531043.63 0.0502 0.0064
 Uranus -71875-01-18 21:49 J -24530902.85 -24530902.59 -24530902.33 0.0133 0.0005
 Uranus -71874-01-23 07:25 J -24530533.41 -24530533.19 -24530532.93 0.0133 0.0050
 Uranus -71873-01-27 16:33 J -24530163.95 -24530163.81 -24530163.63 0.0133 0.0104
 Saturn -71870-11-25 06:28 J -24528766.38 -24528766.23 -24528766.07 0.0277 0.0214
 Saturn -71869-12-08 00:28 J -24528387.72 -24528387.48 -24528387.23 0.0282 0.0056
 Mars -71868-06-13 07:25 J -24528200.36 -24528200.19 -24528200.01 0.1858 0.0663
 Saturn -71868-12-22 05:45 J -24528008.49 -24528008.26 -24528008.03 0.0287 0.0117
 Jupiter -71864-09-04 05:16 J -24526656.50 -24526656.28 -24526656.06 0.0501 0.0154
 Saturn -71856-05-29 04:18 J -24523832.49 -24523832.32 -24523832.12 0.0284 0.0177
 Saturn -71855-06-10 18:42 J -24523454.96 -24523454.72 -24523454.48 0.0279 0.0020
 Saturn -71854-06-22 23:01 J -24523077.74 -24523077.54 -24523077.32 0.0274 0.0128
 Saturn -71853-07-03 19:11 J -24522700.75 -24522700.70 -24522700.63 0.0270 0.0260
 Pluto -71852-03-26 13:54 J -24522435.01 -24522434.92 -24522434.83 0.0079 0.0074
 Jupiter -71852-09-08 19:11 J -24522268.86 -24522268.70 -24522268.55 0.0499 0.0372
 Saturn -71840-12-01 23:59 J -24517801.72 -24517801.50 -24517801.28 0.0280 0.0132
 Saturn -71839-12-15 23:45 J -24517422.76 -24517422.51 -24517422.26 0.0284 0.0035
 Saturn -71838-12-30 10:47 J -24517043.22 -24517043.05 -24517042.88 0.0289 0.0210
 Jupiter -71834-03-01 09:21 J -24515886.27 -24515886.11 -24515885.94 0.0523 0.0361
 Uranus -71833-07-08 11:45 J -24515391.15 -24515391.01 -24515390.84 0.0145 0.0114
 Uranus -71832-07-13 08:09 J -24515021.38 -24515021.16 -24515020.91 0.0145 0.0047
 Uranus -71831-07-18 05:59 J -24514651.49 -24514651.25 -24514651.00 0.0145 0.0024
 Uranus -71830-07-23 04:33 J -24514281.48 -24514281.31 -24514281.10 0.0146 0.0094
 Saturn -71827-05-23 19:25 J -24513245.80 -24513245.69 -24513245.56 0.0287 0.0246
 Saturn -71826-06-05 15:06 J -24512868.10 -24512867.87 -24512867.64 0.0282 0.0085
 Saturn -71825-06-17 00:13 J -24512490.72 -24512490.49 -24512490.25 0.0277 0.0068
 Saturn -71824-06-29 00:13 J -24512113.64 -24512113.49 -24512113.33 0.0272 0.0208
 Jupiter -71822-03-06 10:04 J -24511498.31 -24511498.08 -24511497.85 0.0524 0.0108
 Neptune -71818-04-04 10:18 J -24510008.10 -24510008.07 -24510007.97 0.0089 0.0086
 Neptune -71817-04-05 21:06 J -24509640.74 -24509640.62 -24509640.48 0.0089 0.0076

Neptune -71816-04-08 06:42 J -24509273.37 -24509273.22 -24509273.03 0.0089 0.0067
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 Uranus -71287-01-21 18:42 J -24316132.97 -24316132.72 -24316132.45 0.0133 0.0019
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 Uranus -71285-01-30 13:54 J -24315393.96 -24315393.92 -24315393.86 0.0133 0.0130
 Jupiter -71283-09-01 13:11 J -24314449.18 -24314448.95 -24314448.72 0.0501 0.0071
 Saturn -71281-11-24 12:28 J -24313634.11 -24313633.98 -24313633.82 0.0274 0.0221
 Saturn -71280-12-07 22:18 J -24313255.81 -24313255.57 -24313255.33 0.0278 0.0065

Saturn -71279-12-21 18:42 J -24312876.95 -24312876.72 -24312876.48 0.0283 0.0106
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 Jupiter -71271-09-06 00:28 J -24310061.67 -24310061.48 -24310061.29 0.0501 0.0290
 Saturn -71267-05-29 06:13 J -24308700.40 -24308700.24 -24308700.05 0.0288 0.0195
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 Saturn -71265-06-22 17:01 J -24307944.99 -24307944.79 -24307944.57 0.0278 0.0133
 Jupiter -71253-02-26 05:30 J -24303679.36 -24303679.27 -24303679.17 0.0521 0.0475
 Saturn -71251-12-02 12:57 J -24302669.18 -24302668.96 -24302668.73 0.0277 0.0132
 Saturn -71250-12-16 04:33 J -24302290.56 -24302290.31 -24302290.06 0.0281 0.0034
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 Neptune -71238-10-12 21:06 J -24297971.87 -24297971.62 -24297971.36 0.0089 0.0023
 Saturn -71237-06-04 23:59 J -24297735.72 -24297735.50 -24297735.27 0.0285 0.0101
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 Neptune -71236-10-16 23:59 J -24297236.76 -24297236.50 -24297236.23 0.0089 0.0005
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 Neptune -71235-10-19 13:54 J -24296869.18 -24296868.92 -24296868.66 0.0089 0.0005

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 Neptune -71233-10-23 17:16 J -24296134.03 -24296133.78 -24296133.52 0.0089 0.0024
 Neptune -71232-10-26 07:11 J -24295766.45 -24295766.20 -24295765.96 0.0089 0.0033
 Neptune -71231-10-28 20:37 J -24295398.85 -24295398.64 -24295398.39 0.0089 0.0043
 Neptune -71230-10-31 10:18 J -24295031.26 -24295031.07 -24295030.84 0.0089 0.0052
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 Jupiter -71224-08-22 15:35 J -24292908.99 -24292908.85 -24292908.70 0.0504 0.0389
 Saturn -71222-11-27 05:30 J -24292082.42 -24292082.27 -24292082.08 0.0274 0.0202
 Mars -71221-06-16 06:13 J -24291880.42 -24291880.24 -24291880.06 0.1871 0.0599
 Saturn -71221-12-09 17:01 J -24291704.04 -24291703.79 -24291703.54 0.0279 0.0042
 Saturn -71220-12-23 14:37 J -24291325.10 -24291324.89 -24291324.66 0.0284 0.0131
 Jupiter -71217-03-12 00:57 J -24290515.66 -24290515.46 -24290515.27 0.0525 0.0279
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 Uranus -71205-01-14 05:01 J -24286190.46 -24286190.29 -24286190.10 0.0134 0.0096
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 Uranus -71202-01-26 14:09 J -24285082.11 -24285081.91 -24285081.69 0.0133 0.0078
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 Pluto -71197-09-21 18:28 J -24283016.88 -24283016.73 -24283016.53 0.0064 0.0049
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 Mars -71196-12-13 02:23 J -24282569.52 -24282569.40 -24282569.27 0.1664 0.1264
 Saturn -71193-11-21 00:57 J -24281495.51 -24281495.46 -24281495.37 0.0273 0.0262
 Saturn -71192-12-04 07:40 J -24281117.41 -24281117.18 -24281116.95 0.0277 0.0110

Saturn -71191-12-18 00:42 J -24280738.71 -24280738.47 -24280738.22 0.0282 0.0059
 Saturn -71189-01-01 04:18 J -24280359.45 -24280359.32 -24280359.17 0.0287 0.0236
 Jupiter -71188-09-05 02:23 J -24279746.59 -24279746.40 -24279746.19 0.0501 0.0266
 Saturn -71179-05-25 14:09 J -24276562.02 -24276561.91 -24276561.78 0.0289 0.0249
 Saturn -71178-06-07 15:35 J -24276184.07 -24276183.85 -24276183.61 0.0284 0.0078
 Saturn -71177-06-19 06:57 J -24275806.44 -24275806.21 -24275805.98 0.0279 0.0085
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 Jupiter -71176-09-09 13:11 J -24275359.01 -24275358.95 -24275358.88 0.0500 0.0479
 Jupiter -71170-02-25 02:37 J -24273364.43 -24273364.39 -24273364.34 0.0522 0.0510
 Saturn -71163-11-28 22:47 J -24270530.73 -24270530.55 -24270530.35 0.0275 0.0180
 Neptune -71162-04-02 05:16 J -24270406.33 -24270406.28 -24270406.17 0.0089 0.0084
 Saturn -71162-12-12 11:45 J -24270152.27 -24270152.01 -24270151.76 0.0279 0.0019
 Neptune -71161-04-03 16:04 J -24270038.95 -24270038.83 -24270038.69 0.0089 0.0075
 Uranus -71161-07-11 15:49 J -24269940.01 -24269939.84 -24269939.64 0.0145 0.0096
 Saturn -71161-12-25 10:47 J -24269773.25 -24269773.05 -24269772.84 0.0284 0.0156
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 Uranus -71160-07-16 12:13 J -24269570.23 -24269569.99 -24269569.74 0.0145 0.0024
 Neptune -71159-04-08 12:13 J -24269304.16 -24269303.99 -24269303.78 0.0089 0.0058
 Uranus -71159-07-21 09:35 J -24269200.33 -24269200.10 -24269199.86 0.0146 0.0048
 Jupiter -71158-03-02 01:11 J -24268976.65 -24268976.45 -24268976.24 0.0522 0.0259
 Neptune -71158-04-10 22:47 J -24268936.75 -24268936.55 -24268936.33 0.0089 0.0049
 Uranus -71158-07-26 07:40 J -24268830.31 -24268830.18 -24268830.03 0.0146 0.0121
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 Neptune -71154-04-19 15:06 J -24267467.11 -24267466.87 -24267466.61 0.0089 0.0014
 Neptune -71153-04-21 01:11 J -24267099.70 -24267099.45 -24267099.19 0.0089 0.0005
 Neptune -71152-04-23 11:01 J -24266732.29 -24266732.04 -24266731.79 0.0089 0.0004
 Neptune -71151-04-25 20:37 J -24266364.88 -24266364.64 -24266364.38 0.0089 0.0013
 Neptune -71150-04-28 06:13 J -24265997.48 -24265997.24 -24265996.99 0.0089 0.0022

Neptune -71149-04-29 15:49 J -24265630.07 -24265629.84 -24265629.59 0.0089 0.0031
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 Neptune -71146-05-06 20:23 J -24264527.83 -24264527.65 -24264527.44 0.0089 0.0057
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 Neptune -71144-05-10 15:35 J -24263792.97 -24263792.85 -24263792.69 0.0089 0.0074
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 Saturn -71132-12-19 20:09 J -24259186.89 -24259186.66 -24259186.41 0.0283 0.0084
 Saturn -71130-01-03 01:40 J -24258807.52 -24258807.43 -24258807.32 0.0287 0.0261
 Jupiter -71129-08-26 03:21 J -24258206.57 -24258206.36 -24258206.14 0.0504 0.0198
 Jupiter -71122-03-16 17:01 J -24255812.86 -24255812.79 -24255812.70 0.0525 0.0489
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 Uranus -71120-01-18 04:04 J -24255139.57 -24255139.33 -24255139.07 0.0134 0.0033
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 Uranus -71119-01-22 15:06 J -24254770.12 -24254769.87 -24254769.61 0.0133 0.0026
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 Saturn -71117-07-03 01:54 J -24253877.50 -24253877.42 -24253877.32 0.0274 0.0253
 Jupiter -71117-08-30 15:35 J -24253819.09 -24253818.85 -24253818.62 0.0502 0.0025
 Mars -71117-12-15 11:59 J -24253712.19 -24253712.00 -24253711.80 0.1669 0.0194
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Jupiter -71105-09-04 02:52 J -24249431.59 -24249431.38 -24249431.18 0.0501 0.0240
 Saturn -71104-11-30 14:09 J -24248979.11 -24248978.91 -24248978.70 0.0276 0.0159
 Saturn -71103-12-14 04:33 J -24248600.56 -24248600.31 -24248600.06 0.0280 0.0006
 Saturn -71102-12-28 05:16 J -24248221.47 -24248221.28 -24248221.09 0.0285 0.0180
 Jupiter -71093-09-08 12:28 J -24245044.07 -24245043.98 -24245043.88 0.0501 0.0455
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 Neptune -71079-09-30 09:35 J -24239909.26 -24239909.10 -24239908.93 0.0089 0.0068
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 Jupiter -71075-02-28 20:52 J -24238661.82 -24238661.63 -24238661.43 0.0522 0.0297
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 Neptune -71067-10-28 02:23 J -24235498.63 -24235498.40 -24235498.16 0.0089 0.0040
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 Neptune -71065-11-01 05:59 J -24234763.44 -24234763.25 -24234763.04 0.0089 0.0058
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 Jupiter -71063-03-05 18:42 J -24234273.95 -24234273.72 -24234273.48 0.0523 0.0049
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 Neptune -71062-11-08 23:16 J -24233660.60 -24233660.53 -24233660.43 0.0089 0.0084
 Saturn -71061-05-29 00:13 J -24233458.65 -24233458.49 -24233458.31 0.0287 0.0201
 Saturn -71060-06-10 23:01 J -24233080.78 -24233080.54 -24233080.30 0.0282 0.0030
 Saturn -71059-06-23 11:01 J -24232703.25 -24232703.04 -24232702.82 0.0278 0.0129
 Saturn -71058-07-05 14:09 J -24232325.92 -24232325.91 -24232325.89 0.0273 0.0273
 Jupiter -71058-08-21 17:59 J -24232278.86 -24232278.75 -24232278.64 0.0505 0.0439
 Jupiter -71051-03-10 17:01 J -24229886.00 -24229885.79 -24229885.58 0.0524 0.0206
 Jupiter -71046-08-26 05:59 J -24227891.46 -24227891.25 -24227891.04 0.0503 0.0220
 Saturn -71045-12-02 01:54 J -24227427.63 -24227427.42 -24227427.20 0.0276 0.0139
 Saturn -71044-12-15 17:30 J -24227049.01 -24227048.77 -24227048.51 0.0281 0.0028
 Saturn -71043-12-29 19:54 J -24226669.84 -24226669.67 -24226669.49 0.0286 0.0204
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 Mars -71038-12-18 23:16 J -24224854.69 -24224854.53 -24224854.36 0.1674 0.0925
 Uranus -71037-01-15 04:33 J -24224827.50 -24224827.31 -24224827.11 0.0134 0.0087
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 Uranus -71034-01-27 13:11 J -24223719.12 -24223718.95 -24223718.74 0.0133 0.0088
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 Saturn -71032-05-23 16:47 J -24222871.87 -24222871.80 -24222871.71 0.0290 0.0272
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 Jupiter -71022-09-04 02:52 J -24219116.59 -24219116.38 -24219116.17 0.0502 0.0216

Mars	-71016-06-13 01:25 J	-24217007.54	-24217007.44	-24217007.33	0.1889	0.1552
Saturn	-71016-11-26 16:33 J	-24216840.97	-24216840.81	-24216840.64	0.0274	0.0204
Saturn	-71015-12-10 03:06 J	-24216462.62	-24216462.37	-24216462.12	0.0279	0.0044
Saturn	-71014-12-24 00:13 J	-24216083.71	-24216083.49	-24216083.26	0.0284	0.0129
Jupiter	-71010-09-08 16:04 J	-24214728.93	-24214728.83	-24214728.71	0.0501	0.0435
Saturn	-71002-05-31 13:11 J	-24211907.13	-24211906.95	-24211906.76	0.0287	0.0177
Saturn	-71001-06-12 10:33 J	-24211529.29	-24211529.06	-24211528.82	0.0282	0.0009

71ST MILLENNIUM BCE

This is a list of transits of Earth in the 71st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-71000-06-24 21:21 J	-24211151.80	-24211151.61	-24211151.40	0.0277	0.0150		
Neptune	-70998-04-01 14:09 J	-24210505.98	-24210505.91	-24210505.80	0.0089	0.0083		
Neptune	-70997-04-03 00:28 J	-24210138.59	-24210138.48	-24210138.32	0.0089	0.0075		
Neptune	-70996-04-05 11:16 J	-24209771.19	-24209771.03	-24209770.86	0.0089	0.0066		
Neptune	-70995-04-07 21:21 J	-24209403.79	-24209403.61	-24209403.40	0.0089	0.0058		
Neptune	-70994-04-10 07:40 J	-24209036.39	-24209036.18	-24209035.97	0.0089	0.0049		
Neptune	-70993-04-11 17:45 J	-24208668.97	-24208668.76	-24208668.52	0.0089	0.0041		
Uranus	-70993-07-12 18:42 J	-24208576.91	-24208576.72	-24208576.51	0.0145	0.0086		
Jupiter	-70992-02-27 20:09 J	-24208346.84	-24208346.66	-24208346.48	0.0522	0.0327		
Neptune	-70992-04-14 03:49 J	-24208301.56	-24208301.34	-24208301.09	0.0089	0.0032		
Uranus	-70992-07-17 15:21 J	-24208207.11	-24208206.86	-24208206.61	0.0145	0.0014		
Neptune	-70991-04-16 13:54 J	-24207934.15	-24207933.92	-24207933.66	0.0089	0.0023		

Uranus -70991-07-22 12:42 J -24207837.19 -24207836.97 -24207836.73 0.0146 0.0060
 Neptune -70990-04-18 23:59 J -24207566.74 -24207566.50 -24207566.24 0.0089 0.0015
 Uranus -70990-07-27 11:01 J -24207467.12 -24207467.04 -24207466.92 0.0146 0.0134
 Neptune -70989-04-20 10:18 J -24207199.32 -24207199.07 -24207198.82 0.0089 0.0006
 Neptune -70988-04-22 20:09 J -24206831.91 -24206831.66 -24206831.40 0.0089 0.0003
 Neptune -70987-04-25 05:45 J -24206464.50 -24206464.26 -24206464.00 0.0089 0.0012
 Saturn -70987-11-21 03:21 J -24206254.38 -24206254.36 -24206254.32 0.0272 0.0270
 Neptune -70986-04-27 15:21 J -24206097.10 -24206096.86 -24206096.60 0.0089 0.0021
 Saturn -70986-12-04 09:06 J -24205876.34 -24205876.12 -24205875.89 0.0277 0.0120
 Neptune -70985-04-29 00:57 J -24205729.69 -24205729.46 -24205729.21 0.0089 0.0029
 Saturn -70985-12-17 01:40 J -24205497.67 -24205497.43 -24205497.18 0.0281 0.0048
 Neptune -70984-05-01 10:33 J -24205362.27 -24205362.06 -24205361.82 0.0089 0.0038
 Saturn -70984-12-31 05:01 J -24205118.43 -24205118.29 -24205118.12 0.0286 0.0225
 Neptune -70983-05-03 19:54 J -24204994.87 -24204994.67 -24204994.44 0.0089 0.0046
 Neptune -70982-05-06 05:16 J -24204627.45 -24204627.28 -24204627.06 0.0089 0.0055
 Neptune -70981-05-07 15:06 J -24204260.03 -24204259.87 -24204259.68 0.0089 0.0063
 Jupiter -70980-03-04 20:23 J -24203958.88 -24203958.65 -24203958.42 0.0523 0.0069
 Neptune -70980-05-10 00:42 J -24203892.61 -24203892.47 -24203892.31 0.0089 0.0071
 Neptune -70979-05-12 10:18 J -24203525.17 -24203525.07 -24203524.95 0.0089 0.0079
 Neptune -70978-05-14 19:11 J -24203157.71 -24203157.70 -24203157.62 0.0089 0.0088
 Jupiter -70975-08-20 17:59 J -24201963.83 -24201963.75 -24201963.66 0.0505 0.0468
 Saturn -70973-05-25 04:04 J -24201320.45 -24201320.33 -24201320.21 0.0290 0.0250
 Saturn -70972-06-07 06:42 J -24200942.45 -24200942.22 -24200941.99 0.0285 0.0077
 Saturn -70971-06-19 22:33 J -24200564.78 -24200564.56 -24200564.33 0.0280 0.0087
 Saturn -70970-07-02 04:33 J -24200187.42 -24200187.31 -24200187.18 0.0275 0.0236
 Jupiter -70968-03-09 20:37 J -24199570.86 -24199570.64 -24199570.43 0.0523 0.0187
 Jupiter -70963-08-25 06:28 J -24197576.43 -24197576.23 -24197576.03 0.0504 0.0247
 Saturn -70957-11-27 21:21 J -24195289.79 -24195289.61 -24195289.42 0.0275 0.0187
 Jupiter -70956-03-14 16:47 J -24195182.93 -24195182.80 -24195182.67 0.0524 0.0435
 Saturn -70956-12-11 08:37 J -24194911.39 -24194911.14 -24194910.89 0.0279 0.0026

Saturn -70955-12-25 06:42 J -24194532.42 -24194532.22 -24194532.00 0.0284 0.0149
 Uranus -70953-01-15 18:13 J -24194145.93 -24194145.74 -24194145.52 0.0134 0.0083
 Uranus -70952-01-19 06:28 J -24193776.49 -24193776.23 -24193775.97 0.0134 0.0023
 Uranus -70951-01-23 17:01 J -24193407.03 -24193406.79 -24193406.53 0.0133 0.0036
 Jupiter -70951-08-29 20:23 J -24193188.88 -24193188.65 -24193188.42 0.0503 0.0022
 Uranus -70950-01-28 02:52 J -24193037.54 -24193037.38 -24193037.18 0.0133 0.0094
 Pluto -70949-09-23 10:04 J -24192433.29 -24192433.08 -24192432.85 0.0064 0.0036
 Pluto -70948-09-24 22:18 J -24192066.67 -24192066.57 -24192066.40 0.0065 0.0055
 Saturn -70943-06-01 22:04 J -24190355.78 -24190355.58 -24190355.38 0.0287 0.0156
 Saturn -70942-06-14 18:42 J -24189977.96 -24189977.72 -24189977.48 0.0282 0.0013
 Saturn -70941-06-26 04:33 J -24189600.49 -24189600.31 -24189600.11 0.0277 0.0170
 Jupiter -70939-09-03 10:18 J -24188801.28 -24188801.07 -24188800.85 0.0502 0.0204
 Mars -70937-06-16 03:49 J -24188149.53 -24188149.34 -24188149.15 0.1881 0.0321
 Saturn -70928-11-22 05:59 J -24184703.32 -24184703.25 -24184703.15 0.0272 0.0254
 Jupiter -70927-09-07 23:16 J -24184413.65 -24184413.53 -24184413.40 0.0501 0.0423
 Saturn -70927-12-05 12:13 J -24184325.22 -24184324.99 -24184324.75 0.0277 0.0102
 Saturn -70926-12-19 05:16 J -24183946.52 -24183946.28 -24183946.03 0.0282 0.0067
 Saturn -70924-01-01 09:49 J -24183567.22 -24183567.09 -24183566.96 0.0287 0.0244
 Neptune -70917-09-24 12:28 J -24180744.03 -24180743.98 -24180743.88 0.0089 0.0085
 Neptune -70916-09-27 01:25 J -24180376.54 -24180376.44 -24180376.28 0.0089 0.0077
 Neptune -70915-09-29 14:23 J -24180009.04 -24180008.90 -24180008.71 0.0089 0.0068
 Saturn -70914-05-27 10:18 J -24179769.21 -24179769.07 -24179768.93 0.0289 0.0231
 Neptune -70914-10-02 03:21 J -24179641.52 -24179641.36 -24179641.14 0.0089 0.0060
 Saturn -70913-06-08 12:28 J -24179391.21 -24179390.98 -24179390.74 0.0285 0.0057
 Neptune -70913-10-03 16:33 J -24179274.00 -24179273.81 -24179273.58 0.0089 0.0051
 Saturn -70912-06-21 03:35 J -24179013.56 -24179013.35 -24179013.12 0.0280 0.0107
 Neptune -70912-10-06 05:59 J -24178906.47 -24178906.25 -24178906.01 0.0089 0.0042
 Mars -70912-12-13 23:45 J -24178837.67 -24178837.51 -24178837.36 0.1657 0.0990
 Saturn -70911-07-03 09:06 J -24178636.20 -24178636.12 -24178636.03 0.0275 0.0254
 Neptune -70911-10-08 18:57 J -24178538.93 -24178538.71 -24178538.45 0.0089 0.0034

Neptune -70910-10-11 08:09 J -24178171.40 -24178171.16 -24178170.89 0.0089 0.0025
 Jupiter -70909-02-28 03:49 J -24178031.52 -24178031.34 -24178031.16 0.0521 0.0339
 Uranus -70909-07-13 07:54 J -24177895.37 -24177895.17 -24177894.96 0.0145 0.0081
 Neptune -70909-10-12 21:35 J -24177803.85 -24177803.60 -24177803.33 0.0089 0.0016
 Uranus -70908-07-18 04:18 J -24177525.56 -24177525.32 -24177525.07 0.0145 0.0009
 Neptune -70908-10-15 11:01 J -24177436.30 -24177436.04 -24177435.78 0.0089 0.0007
 Uranus -70907-07-23 01:54 J -24177155.63 -24177155.42 -24177155.18 0.0146 0.0066
 Neptune -70907-10-18 00:28 J -24177068.74 -24177068.48 -24177068.22 0.0089 0.0002
 Uranus -70906-07-28 00:28 J -24176785.53 -24176785.48 -24176785.39 0.0146 0.0140
 Neptune -70906-10-20 13:54 J -24176701.18 -24176700.92 -24176700.66 0.0089 0.0011
 Neptune -70905-10-22 03:21 J -24176333.61 -24176333.36 -24176333.10 0.0089 0.0020
 Neptune -70904-10-24 16:47 J -24175966.04 -24175965.80 -24175965.54 0.0089 0.0029
 Neptune -70903-10-27 06:28 J -24175598.45 -24175598.23 -24175597.98 0.0089 0.0038
 Neptune -70902-10-29 20:09 J -24175230.87 -24175230.66 -24175230.42 0.0089 0.0047
 Neptune -70901-10-31 10:18 J -24174863.27 -24174863.07 -24174862.86 0.0089 0.0055
 Neptune -70900-11-02 23:59 J -24174495.66 -24174495.50 -24174495.30 0.0089 0.0064
 Neptune -70899-11-05 13:25 J -24174128.06 -24174127.94 -24174127.76 0.0089 0.0073
 Neptune -70898-11-08 03:35 J -24173760.43 -24173760.35 -24173760.22 0.0088 0.0081
 Saturn -70898-11-29 21:49 J -24173738.78 -24173738.59 -24173738.39 0.0275 0.0172
 Jupiter -70897-03-04 00:57 J -24173643.69 -24173643.46 -24173643.23 0.0522 0.0091
 Saturn -70897-12-12 09:35 J -24173360.35 -24173360.10 -24173359.85 0.0279 0.0009
 Saturn -70896-12-26 08:09 J -24172981.35 -24172981.16 -24172980.95 0.0284 0.0167
 Jupiter -70892-08-20 01:40 J -24171648.50 -24171648.43 -24171648.37 0.0506 0.0483
 Jupiter -70885-03-08 23:01 J -24169255.76 -24169255.54 -24169255.32 0.0523 0.0162
 Saturn -70884-06-03 02:23 J -24168804.61 -24168804.40 -24168804.19 0.0286 0.0137
 Saturn -70883-06-15 22:33 J -24168426.80 -24168426.56 -24168426.32 0.0281 0.0032
 Saturn -70882-06-28 08:09 J -24168049.33 -24168049.16 -24168048.98 0.0276 0.0188
 Jupiter -70880-08-24 16:47 J -24167261.00 -24167260.80 -24167260.60 0.0505 0.0255
 Jupiter -70873-03-13 21:49 J -24164867.73 -24164867.59 -24164867.45 0.0524 0.0418
 Uranus -70869-01-16 08:09 J -24163464.36 -24163464.16 -24163463.93 0.0134 0.0077

Saturn -70869-11-23 04:47 J -24163152.41 -24163152.30 -24163152.17 0.0272 0.0240
 Uranus -70868-01-19 20:09 J -24163094.91 -24163094.66 -24163094.40 0.0134 0.0018
 Jupiter -70868-08-29 06:13 J -24162873.47 -24162873.24 -24162873.01 0.0503 0.0030
 Saturn -70868-12-06 11:01 J -24162774.27 -24162774.04 -24162773.80 0.0277 0.0086
 Uranus -70867-01-24 06:57 J -24162725.45 -24162725.21 -24162724.96 0.0133 0.0041
 Saturn -70867-12-20 04:18 J -24162395.56 -24162395.32 -24162395.08 0.0282 0.0083
 Uranus -70866-01-28 16:47 J -24162355.97 -24162355.80 -24162355.62 0.0133 0.0099
 Saturn -70865-01-03 08:52 J -24162016.22 -24162016.13 -24162016.02 0.0287 0.0261
 Pluto -70860-03-31 16:47 J -24160102.05 -24160101.80 -24160101.55 0.0080 0.0018
 Jupiter -70856-09-02 14:52 J -24158486.10 -24158485.88 -24158485.67 0.0503 0.0185
 Saturn -70855-05-28 12:13 J -24158218.15 -24158217.99 -24158217.83 0.0289 0.0214
 Saturn -70854-06-10 14:23 J -24157840.13 -24157839.90 -24157839.66 0.0284 0.0040
 Saturn -70853-06-22 05:16 J -24157462.49 -24157462.28 -24157462.06 0.0279 0.0124
 Saturn -70852-07-04 10:04 J -24157085.11 -24157085.08 -24157085.03 0.0275 0.0271
 Jupiter -70844-09-07 03:49 J -24154098.47 -24154098.34 -24154098.20 0.0502 0.0406
 Saturn -70839-11-30 19:25 J -24152187.88 -24152187.69 -24152187.47 0.0275 0.0158
 Saturn -70838-12-14 07:25 J -24151809.44 -24151809.19 -24151808.94 0.0279 0.0006
 Saturn -70837-12-27 06:13 J -24151430.42 -24151430.24 -24151430.03 0.0285 0.0183
 Neptune -70834-03-31 21:35 J -24150605.68 -24150605.60 -24150605.49 0.0088 0.0082
 Neptune -70833-04-02 07:54 J -24150238.29 -24150238.17 -24150238.01 0.0089 0.0074
 Mars -70833-12-16 08:23 J -24149980.35 -24149980.15 -24149979.96 0.1662 0.0061
 Neptune -70832-04-04 18:28 J -24149870.88 -24149870.73 -24149870.54 0.0089 0.0066
 Neptune -70831-04-07 04:33 J -24149503.48 -24149503.31 -24149503.10 0.0089 0.0058
 Neptune -70830-04-09 14:52 J -24149136.07 -24149135.88 -24149135.65 0.0089 0.0050
 Neptune -70829-04-11 01:25 J -24148768.66 -24148768.44 -24148768.21 0.0089 0.0041
 Neptune -70828-04-13 11:16 J -24148401.25 -24148401.03 -24148400.77 0.0089 0.0033
 Neptune -70827-04-15 21:35 J -24148033.83 -24148033.60 -24148033.34 0.0089 0.0024
 Jupiter -70826-02-27 09:06 J -24147716.29 -24147716.12 -24147715.95 0.0521 0.0358
 Neptune -70826-04-18 07:40 J -24147666.42 -24147666.18 -24147665.92 0.0089 0.0016
 Neptune -70825-04-19 17:59 J -24147299.00 -24147298.75 -24147298.49 0.0089 0.0007

Saturn -70825-06-04 02:23 J -24147253.62 -24147253.40 -24147253.18 0.0286 0.0120
 Uranus -70825-07-13 16:33 J -24147214.00 -24147213.81 -24147213.59 0.0145 0.0080
 Neptune -70824-04-22 04:04 J -24146931.58 -24146931.33 -24146931.07 0.0089 0.0002
 Saturn -70824-06-16 22:18 J -24146875.80 -24146875.57 -24146875.33 0.0281 0.0049
 Uranus -70824-07-18 13:25 J -24146844.19 -24146843.94 -24146843.69 0.0145 0.0006
 Neptune -70823-04-24 13:54 J -24146564.16 -24146563.92 -24146563.66 0.0089 0.0011
 Saturn -70823-06-29 07:54 J -24146498.33 -24146498.17 -24146498.01 0.0276 0.0204
 Uranus -70823-07-23 11:16 J -24146474.25 -24146474.03 -24146473.80 0.0146 0.0068
 Neptune -70822-04-26 23:45 J -24146196.75 -24146196.51 -24146196.25 0.0089 0.0019
 Uranus -70822-07-28 09:49 J -24146104.12 -24146104.09 -24146104.02 0.0146 0.0143
 Neptune -70821-04-28 09:49 J -24145829.33 -24145829.09 -24145828.85 0.0089 0.0027
 Neptune -70820-04-30 18:57 J -24145461.92 -24145461.71 -24145461.46 0.0089 0.0036
 Neptune -70819-05-03 04:47 J -24145094.51 -24145094.30 -24145094.07 0.0089 0.0044
 Neptune -70818-05-05 14:23 J -24144727.09 -24144726.90 -24144726.68 0.0089 0.0052
 Neptune -70817-05-07 00:13 J -24144359.68 -24144359.49 -24144359.31 0.0089 0.0060
 Neptune -70816-05-09 09:06 J -24143992.25 -24143992.12 -24143991.93 0.0089 0.0069
 Neptune -70815-05-11 18:28 J -24143624.83 -24143624.73 -24143624.58 0.0089 0.0077
 Jupiter -70814-03-04 07:25 J -24143328.42 -24143328.19 -24143327.96 0.0522 0.0106
 Neptune -70814-05-14 04:33 J -24143257.38 -24143257.31 -24143257.22 0.0089 0.0084
 Saturn -70810-11-25 00:57 J -24141601.59 -24141601.46 -24141601.32 0.0272 0.0227
 Jupiter -70809-08-19 13:40 J -24141332.97 -24141332.93 -24141332.86 0.0506 0.0489
 Saturn -70809-12-07 06:57 J -24141223.46 -24141223.21 -24141222.97 0.0277 0.0072
 Saturn -70808-12-20 23:59 J -24140844.73 -24140844.50 -24140844.26 0.0282 0.0098
 Saturn -70806-01-04 04:33 J -24140465.36 -24140465.31 -24140465.23 0.0287 0.0276
 Jupiter -70802-03-09 09:35 J -24138940.32 -24138940.10 -24138939.88 0.0523 0.0157
 Jupiter -70797-08-23 22:33 J -24136945.75 -24136945.56 -24136945.36 0.0505 0.0274
 Saturn -70796-05-29 09:49 J -24136667.25 -24136667.09 -24136666.91 0.0289 0.0200
 Saturn -70795-06-11 12:13 J -24136289.23 -24136288.99 -24136288.75 0.0284 0.0024
 Saturn -70794-06-24 03:06 J -24135911.57 -24135911.37 -24135911.15 0.0279 0.0140
 Jupiter -70790-03-14 10:47 J -24134552.18 -24134552.05 -24134551.90 0.0524 0.0416

Uranus -70786-01-12 09:21 J -24133152.13 -24133152.11 -24133152.05 0.0135 0.0133
 Uranus -70785-01-16 21:49 J -24132782.79 -24132782.59 -24132782.35 0.0134 0.0073
 Jupiter -70785-08-28 11:45 J -24132558.24 -24132558.01 -24132557.78 0.0504 0.0049
 Uranus -70784-01-20 10:04 J -24132413.34 -24132413.08 -24132412.82 0.0134 0.0012
 Uranus -70783-01-24 20:23 J -24132043.88 -24132043.65 -24132043.40 0.0133 0.0047
 Uranus -70782-01-29 06:28 J -24131674.38 -24131674.23 -24131674.06 0.0133 0.0105
 Saturn -70780-12-01 14:37 J -24130637.10 -24130636.89 -24130636.67 0.0274 0.0145
 Saturn -70779-12-15 02:09 J -24130258.66 -24130258.41 -24130258.16 0.0279 0.0020
 Saturn -70778-12-29 01:11 J -24129879.63 -24129879.45 -24129879.27 0.0284 0.0196
 Jupiter -70773-09-02 02:23 J -24128170.62 -24128170.40 -24128170.18 0.0503 0.0178
 Saturn -70767-05-23 15:35 J -24126080.90 -24126080.85 -24126080.79 0.0292 0.0283
 Saturn -70766-06-05 23:16 J -24125702.75 -24125702.53 -24125702.30 0.0287 0.0106
 Saturn -70765-06-17 19:25 J -24125324.92 -24125324.69 -24125324.45 0.0281 0.0065
 Saturn -70764-06-30 05:01 J -24124947.43 -24124947.29 -24124947.14 0.0276 0.0218
 Jupiter -70761-09-06 17:30 J -24123782.90 -24123782.77 -24123782.63 0.0502 0.0406
 Mars -70754-12-19 18:28 J -24121122.87 -24121122.73 -24121122.59 0.1667 0.1162
 Neptune -70753-09-23 17:59 J -24120843.81 -24120843.75 -24120843.65 0.0089 0.0084
 Neptune -70752-09-26 06:28 J -24120476.34 -24120476.23 -24120476.07 0.0089 0.0076
 Neptune -70751-09-28 19:11 J -24120108.84 -24120108.70 -24120108.50 0.0089 0.0068
 Saturn -70751-11-25 20:09 J -24120050.81 -24120050.66 -24120050.51 0.0272 0.0214
 Neptune -70750-10-01 08:37 J -24119741.33 -24119741.14 -24119740.95 0.0089 0.0059
 Saturn -70750-12-09 01:40 J -24119672.68 -24119672.43 -24119672.18 0.0277 0.0059
 Neptune -70749-10-02 21:21 J -24119373.81 -24119373.61 -24119373.38 0.0089 0.0051
 Saturn -70749-12-21 18:42 J -24119293.94 -24119293.72 -24119293.48 0.0282 0.0112
 Neptune -70748-10-05 10:18 J -24119006.27 -24119006.07 -24119005.82 0.0089 0.0043
 Neptune -70747-10-07 23:45 J -24118638.75 -24118638.51 -24118638.26 0.0089 0.0034
 Neptune -70746-10-10 13:11 J -24118271.20 -24118270.95 -24118270.70 0.0089 0.0025
 Neptune -70745-10-12 02:09 J -24117903.66 -24117903.41 -24117903.15 0.0089 0.0017
 Neptune -70744-10-14 15:35 J -24117536.11 -24117535.85 -24117535.59 0.0089 0.0008
 Jupiter -70743-02-26 20:37 J -24117400.80 -24117400.64 -24117400.46 0.0521 0.0364

Neptune -70743-10-17 04:47 J -24117168.56 -24117168.30 -24117168.04 0.0089 0.0001
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 Uranus -70741-07-14 01:11 J -24116532.65 -24116532.45 -24116532.23 0.0145 0.0078
 Neptune -70741-10-21 07:25 J -24116433.44 -24116433.19 -24116432.93 0.0089 0.0018
 Uranus -70740-07-18 22:04 J -24116162.83 -24116162.58 -24116162.33 0.0145 0.0005
 Neptune -70740-10-23 20:37 J -24116065.88 -24116065.64 -24116065.38 0.0089 0.0027
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 Neptune -70737-10-30 13:11 J -24114963.14 -24114962.95 -24114962.71 0.0089 0.0053
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Jupiter -70702-08-29 02:09 J -24102242.64 -24102242.41 -24102242.17 0.0504 0.0049
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 Neptune -70662-04-17 14:37 J -24087766.14 -24087765.89 -24087765.64 0.0089 0.0016
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 Jupiter -70660-02-26 08:52 J -24087085.29 -24087085.13 -24087084.96 0.0520 0.0369
 Neptune -70660-04-21 10:33 J -24087031.31 -24087031.06 -24087030.80 0.0089 0.0001
 Saturn -70660-12-30 14:23 J -24086778.06 -24086777.90 -24086777.75 0.0284 0.0222

Neptune -70659-04-23 20:37 J -24086663.89 -24086663.64 -24086663.39 0.0089 0.0009
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 Uranus -70655-07-24 04:33 J -24085111.52 -24085111.31 -24085111.09 0.0146 0.0073
 Neptune -70654-05-04 21:35 J -24084826.80 -24084826.60 -24084826.38 0.0089 0.0050
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 Mars -70653-06-15 22:47 J -24084418.74 -24084418.55 -24084418.36 0.1892 0.0049
 Neptune -70652-05-08 16:33 J -24084091.96 -24084091.81 -24084091.62 0.0089 0.0066
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 Saturn -70648-06-07 11:45 J -24082601.23 -24082601.01 -24082600.77 0.0287 0.0081
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 Jupiter -70636-03-08 05:30 J -24078309.50 -24078309.27 -24078309.05 0.0522 0.0138
 Saturn -70633-11-27 11:59 J -24076949.18 -24076949.00 -24076948.82 0.0272 0.0191
 Saturn -70632-12-10 17:01 J -24076571.04 -24076570.79 -24076570.54 0.0277 0.0033
 Jupiter -70631-08-24 00:57 J -24076314.64 -24076314.46 -24076314.26 0.0505 0.0282
 Saturn -70631-12-24 09:21 J -24076192.32 -24076192.11 -24076191.89 0.0282 0.0140
 Mars -70628-12-14 20:52 J -24075105.80 -24075105.63 -24075105.45 0.1651 0.0721
 Jupiter -70624-03-13 07:25 J -24073921.33 -24073921.19 -24073921.03 0.0524 0.0400
 Saturn -70619-06-01 16:18 J -24072015.02 -24072014.82 -24072014.63 0.0290 0.0165
 Jupiter -70619-08-28 10:18 J -24071927.30 -24071927.07 -24071926.84 0.0504 0.0065
 Uranus -70618-01-13 08:52 J -24071789.21 -24071789.13 -24071789.02 0.0135 0.0125
 Saturn -70618-06-14 19:11 J -24071636.94 -24071636.70 -24071636.46 0.0285 0.0013

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 Saturn -70617-06-26 11:01 J -24071259.23 -24071259.04 -24071258.86 0.0280 0.0178
 Uranus -70616-01-21 10:04 J -24071050.33 -24071050.08 -24071049.81 0.0134 0.0004
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 Uranus -70614-01-30 07:11 J -24070311.31 -24070311.20 -24070311.06 0.0133 0.0116
 Pluto -70612-04-02 13:40 J -24069518.08 -24069517.93 -24069517.73 0.0079 0.0059
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 Saturn -70604-11-22 02:37 J -24066362.45 -24066362.39 -24066362.31 0.0270 0.0258
 Saturn -70603-12-05 02:09 J -24065984.63 -24065984.41 -24065984.17 0.0274 0.0108
 Saturn -70602-12-18 13:11 J -24065606.20 -24065605.95 -24065605.70 0.0279 0.0059
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 Jupiter -70595-09-06 12:57 J -24063152.10 -24063151.96 -24063151.80 0.0502 0.0387
 Saturn -70590-05-26 22:04 J -24061428.69 -24061428.58 -24061428.45 0.0292 0.0250
 Saturn -70589-06-08 06:13 J -24061050.46 -24061050.24 -24061050.00 0.0287 0.0069
 Neptune -70589-09-22 22:18 J -24060943.64 -24060943.57 -24060943.46 0.0089 0.0083
 Saturn -70588-06-21 03:06 J -24060672.59 -24060672.37 -24060672.14 0.0282 0.0103
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 Neptune -70583-10-07 03:21 J -24058738.60 -24058738.36 -24058738.12 0.0089 0.0034
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 Mars -70574-06-19 23:16 J -24055560.59 -24055560.53 -24055560.47 0.1884 0.1773
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 Neptune -70574-10-28 02:52 J -24055430.60 -24055430.38 -24055430.14 0.0089 0.0042
 Saturn -70574-11-29 10:47 J -24055398.23 -24055398.05 -24055397.85 0.0272 0.0178
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 Neptune -70573-10-29 16:04 J -24055063.02 -24055062.83 -24055062.59 0.0089 0.0051
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 Neptune -70507-03-27 21:21 J -24031172.63 -24031172.61 -24031172.57 0.0088 0.0088
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 Neptune -70498-04-16 20:23 J -24027865.89 -24027865.65 -24027865.39 0.0089 0.0017
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 Uranus -70490-07-11 20:37 J -24024857.71 -24024857.64 -24024857.55 0.0144 0.0135
 Neptune -70489-05-05 13:25 J -24024559.11 -24024558.94 -24024558.72 0.0089 0.0056
 Uranus -70489-07-15 16:04 J -24024488.05 -24024487.83 -24024487.60 0.0145 0.0063
 Neptune -70488-05-07 23:01 J -24024191.69 -24024191.54 -24024191.34 0.0089 0.0064
 Uranus -70488-07-20 12:42 J -24024118.22 -24024117.97 -24024117.72 0.0145 0.0012
 Neptune -70487-05-10 08:52 J -24023824.26 -24023824.13 -24023823.96 0.0089 0.0071
 Uranus -70487-07-25 09:49 J -24023748.27 -24023748.09 -24023747.87 0.0146 0.0088
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 Saturn -70486-11-25 07:11 J -24023260.31 -24023260.20 -24023260.06 0.0270 0.0232
 Neptune -70485-05-14 03:49 J -24023089.38 -24023089.34 -24023089.26 0.0089 0.0086
 Saturn -70485-12-07 07:40 J -24022882.41 -24022882.18 -24022881.93 0.0274 0.0079
 Saturn -70484-12-20 19:11 J -24022503.93 -24022503.70 -24022503.46 0.0279 0.0091
 Saturn -70482-01-03 17:45 J -24022124.83 -24022124.76 -24022124.67 0.0284 0.0268
 Jupiter -70482-03-03 00:13 J -24022066.71 -24022066.49 -24022066.26 0.0521 0.0141
 Saturn -70472-05-28 20:52 J -24018326.77 -24018326.63 -24018326.47 0.0292 0.0223
 Saturn -70471-06-11 04:47 J -24017948.54 -24017948.30 -24017948.07 0.0287 0.0040
 Jupiter -70470-03-07 22:18 J -24017678.80 -24017678.57 -24017678.35 0.0522 0.0113
 Saturn -70470-06-24 00:57 J -24017570.67 -24017570.46 -24017570.25 0.0282 0.0132
 Mars -70470-12-20 14:52 J -24017390.98 -24017390.88 -24017390.78 0.1661 0.1404
 Jupiter -70465-08-22 15:35 J -24015684.03 -24015683.85 -24015683.67 0.0506 0.0314
 Jupiter -70458-03-12 18:57 J -24013290.87 -24013290.71 -24013290.53 0.0523 0.0365
 Saturn -70456-12-01 21:06 J -24012295.83 -24012295.62 -24012295.41 0.0273 0.0147
 Saturn -70455-12-15 03:21 J -24011917.61 -24011917.36 -24011917.11 0.0277 0.0017
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Pluto -70453-09-27 01:25 J -24011265.67 -24011265.44 -24011265.17 0.0065 0.0018
 Uranus -70450-01-14 13:25 J -24010426.06 -24010425.94 -24010425.78 0.0135 0.0114
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 Uranus -70446-01-31 12:28 J -24008948.01 -24008947.98 -24008947.90 0.0133 0.0130
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 Saturn -70441-06-17 15:49 J -24006984.07 -24006983.84 -24006983.60 0.0284 0.0055
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 Saturn -70425-12-22 05:30 J -24000952.50 -24000952.27 -24000952.04 0.0280 0.0110
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 Neptune -70407-11-02 22:04 J -23994427.76 -23994427.58 -23994427.40 0.0088 0.0064
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 Neptune -70405-11-07 01:11 J -23993692.55 -23993692.45 -23993692.33 0.0088 0.0080
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 Saturn -70397-12-03 08:09 J -23990744.37 -23990744.16 -23990743.93 0.0273 0.0129
 Saturn -70396-12-16 15:35 J -23990366.10 -23990365.85 -23990365.60 0.0278 0.0037
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 Jupiter -70375-03-11 22:18 J -23982975.74 -23982975.57 -23982975.39 0.0524 0.0342
 Jupiter -70370-08-27 06:57 J -23980981.44 -23980981.21 -23980980.99 0.0504 0.0113
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 Uranus -70365-01-19 19:11 J -23979374.94 -23979374.70 -23979374.45 0.0134 0.0045
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 Mars -70344-12-15 18:42 J -23971373.90 -23971373.72 -23971373.53 0.1645 0.0449
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Saturn -70249-12-14 16:47 J -23936676.05 -23936675.80 -23936675.55 0.0277 0.0008
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 Saturn -70235-06-18 02:09 J -23931742.64 -23931742.41 -23931742.17 0.0285 0.0048
 Uranus -70235-07-27 04:18 J -23931703.47 -23931703.32 -23931703.13 0.0146 0.0108
 Saturn -70234-06-30 17:59 J -23931364.90 -23931364.75 -23931364.59 0.0280 0.0213
 Jupiter -70233-02-28 19:40 J -23931121.88 -23931121.68 -23931121.47 0.0520 0.0238
 Jupiter -70221-03-04 15:35 J -23926734.08 -23926733.85 -23926733.61 0.0521 0.0012
 Saturn -70221-11-26 08:23 J -23926467.29 -23926467.15 -23926467.00 0.0271 0.0220
 Saturn -70220-12-09 09:35 J -23926089.34 -23926089.10 -23926088.85 0.0275 0.0062
 Saturn -70219-12-22 21:06 J -23925710.84 -23925710.62 -23925710.38 0.0280 0.0110
 Jupiter -70216-08-20 20:23 J -23924738.79 -23924738.65 -23924738.50 0.0506 0.0394
 Jupiter -70209-03-09 13:25 J -23922346.14 -23922345.94 -23922345.74 0.0523 0.0266
 Saturn -70207-05-30 15:21 J -23921534.02 -23921533.86 -23921533.70 0.0291 0.0215
 Saturn -70206-06-12 22:04 J -23921155.81 -23921155.58 -23921155.34 0.0286 0.0032
 Pluto -70206-09-28 13:11 J -23921048.16 -23921047.95 -23921047.71 0.0064 0.0033
 Saturn -70205-06-24 17:59 J -23920777.94 -23920777.75 -23920777.53 0.0281 0.0142

Pluto -70205-09-29 01:25 J -23920681.52 -23920681.44 -23920681.28 0.0065 0.0058
 Jupiter -70204-08-25 09:06 J -23920351.34 -23920351.12 -23920350.90 0.0505 0.0165
 Uranus -70198-01-16 13:40 J -23918381.11 -23918380.93 -23918380.74 0.0135 0.0094
 Uranus -70197-01-21 02:23 J -23918011.64 -23918011.40 -23918011.14 0.0134 0.0032
 Jupiter -70197-03-14 11:16 J -23917958.03 -23917958.03 -23917958.01 0.0524 0.0523
 Uranus -70196-01-24 14:37 J -23917642.14 -23917641.89 -23917641.64 0.0134 0.0031
 Uranus -70195-01-29 01:11 J -23917272.61 -23917272.45 -23917272.24 0.0133 0.0093
 Jupiter -70192-08-29 20:37 J -23915963.87 -23915963.64 -23915963.41 0.0504 0.0059
 Saturn -70191-12-04 02:23 J -23915502.62 -23915502.40 -23915502.18 0.0273 0.0134
 Saturn -70190-12-17 09:49 J -23915124.34 -23915124.09 -23915123.84 0.0277 0.0032
 Saturn -70189-12-30 03:21 J -23914745.51 -23914745.36 -23914745.18 0.0282 0.0208
 Jupiter -70180-09-03 05:30 J -23911576.46 -23911576.27 -23911576.08 0.0503 0.0279
 Neptune -70179-03-26 04:47 J -23911372.34 -23911372.30 -23911372.21 0.0088 0.0086
 Neptune -70178-03-28 15:35 J -23911004.94 -23911004.85 -23911004.70 0.0088 0.0079
 Saturn -70178-05-25 06:13 J -23910947.26 -23910947.24 -23910947.21 0.0294 0.0292
 Neptune -70177-03-30 02:52 J -23910637.52 -23910637.38 -23910637.22 0.0089 0.0071
 Saturn -70177-06-06 18:28 J -23910568.95 -23910568.73 -23910568.51 0.0289 0.0106
 Neptune -70176-04-01 13:25 J -23910270.09 -23910269.94 -23910269.74 0.0089 0.0064
 Saturn -70176-06-19 19:25 J -23910190.92 -23910190.69 -23910190.46 0.0284 0.0073
 Neptune -70175-04-04 00:42 J -23909902.66 -23909902.47 -23909902.27 0.0089 0.0056
 Saturn -70175-07-02 09:49 J -23909813.22 -23909813.09 -23909812.96 0.0279 0.0235
 Neptune -70174-04-06 10:47 J -23909535.24 -23909535.05 -23909534.81 0.0089 0.0049
 Neptune -70173-04-07 21:49 J -23909167.80 -23909167.59 -23909167.35 0.0089 0.0041
 Neptune -70172-04-10 08:37 J -23908800.37 -23908800.14 -23908799.90 0.0089 0.0033
 Neptune -70171-04-12 18:57 J -23908432.94 -23908432.71 -23908432.45 0.0089 0.0026
 Neptune -70170-04-15 05:30 J -23908065.51 -23908065.27 -23908065.01 0.0089 0.0018
 Neptune -70169-04-16 15:49 J -23907698.09 -23907697.84 -23907697.58 0.0089 0.0010
 Neptune -70168-04-19 02:09 J -23907330.66 -23907330.41 -23907330.15 0.0089 0.0002
 Jupiter -70168-09-07 17:16 J -23907188.78 -23907188.78 -23907188.77 0.0502 0.0502
 Neptune -70167-04-21 12:13 J -23906963.24 -23906962.99 -23906962.73 0.0089 0.0006

Neptune -70166-04-23 22:04 J -23906595.82 -23906595.58 -23906595.32 0.0089 0.0014
 Neptune -70165-04-25 08:09 J -23906228.40 -23906228.16 -23906227.91 0.0089 0.0021
 Neptune -70164-04-27 18:13 J -23905860.98 -23905860.74 -23905860.50 0.0089 0.0029
 Neptune -70163-04-30 03:49 J -23905493.56 -23905493.34 -23905493.10 0.0089 0.0037
 Neptune -70162-05-02 13:54 J -23905126.13 -23905125.92 -23905125.69 0.0089 0.0044
 Saturn -70162-11-28 22:47 J -23904915.71 -23904915.55 -23904915.37 0.0271 0.0199
 Neptune -70161-05-03 23:30 J -23904758.71 -23904758.52 -23904758.30 0.0089 0.0052
 Saturn -70161-12-11 01:40 J -23904537.68 -23904537.43 -23904537.18 0.0276 0.0039
 Neptune -70160-05-06 09:49 J -23904391.27 -23904391.09 -23904390.90 0.0089 0.0059
 Saturn -70160-12-24 14:37 J -23904159.10 -23904158.89 -23904158.66 0.0280 0.0135
 Neptune -70159-05-08 19:11 J -23904023.84 -23904023.70 -23904023.50 0.0089 0.0067
 Neptune -70158-05-11 05:01 J -23903656.41 -23903656.29 -23903656.13 0.0089 0.0074
 Neptune -70157-05-12 14:52 J -23903288.96 -23903288.88 -23903288.76 0.0089 0.0081
 Neptune -70156-05-15 00:28 J -23902921.49 -23902921.48 -23902921.42 0.0089 0.0088
 Uranus -70154-07-14 00:57 J -23902131.60 -23902131.46 -23902131.31 0.0144 0.0116
 Uranus -70153-07-17 19:54 J -23901761.90 -23901761.67 -23901761.43 0.0144 0.0042
 Uranus -70152-07-22 16:04 J -23901392.07 -23901391.83 -23901391.59 0.0145 0.0033
 Uranus -70151-07-27 13:11 J -23901022.11 -23901021.95 -23901021.78 0.0146 0.0110
 Jupiter -70150-02-27 14:23 J -23900807.09 -23900806.90 -23900806.70 0.0520 0.0280
 Saturn -70148-06-01 10:04 J -23899982.25 -23899982.08 -23899981.89 0.0290 0.0189
 Saturn -70147-06-14 15:35 J -23899604.09 -23899603.85 -23899603.61 0.0285 0.0006
 Saturn -70146-06-27 09:49 J -23899226.27 -23899226.09 -23899225.88 0.0281 0.0166
 Mars -70139-12-14 11:30 J -23896499.15 -23896499.02 -23896498.88 0.1635 0.1153
 Jupiter -70138-03-04 11:45 J -23896419.24 -23896419.01 -23896418.77 0.0521 0.0025
 Jupiter -70133-08-19 23:01 J -23894423.67 -23894423.54 -23894423.41 0.0506 0.0418
 Saturn -70133-11-22 17:30 J -23894328.81 -23894328.77 -23894328.71 0.0269 0.0264
 Saturn -70132-12-05 15:35 J -23893951.07 -23893950.85 -23893950.61 0.0273 0.0113
 Saturn -70131-12-19 00:28 J -23893572.73 -23893572.48 -23893572.23 0.0278 0.0055
 Saturn -70129-01-01 19:40 J -23893193.82 -23893193.68 -23893193.54 0.0283 0.0232
 Jupiter -70126-03-09 11:16 J -23892031.23 -23892031.03 -23892030.82 0.0522 0.0237

Jupiter -70121-08-24 07:11 J -23890036.41 -23890036.20 -23890035.98 0.0505 0.0199
 Saturn -70119-05-26 23:30 J -23889395.61 -23889395.52 -23889395.41 0.0293 0.0266
 Saturn -70118-06-09 10:33 J -23889017.28 -23889017.06 -23889016.83 0.0288 0.0080
 Pluto -70117-04-04 19:40 J -23888716.92 -23888716.68 -23888716.43 0.0080 0.0024
 Saturn -70117-06-21 10:18 J -23888639.29 -23888639.07 -23888638.84 0.0283 0.0098
 Saturn -70116-07-03 23:16 J -23888261.61 -23888261.53 -23888261.43 0.0278 0.0258
 Uranus -70114-01-17 02:23 J -23887699.59 -23887699.40 -23887699.20 0.0135 0.0089
 Jupiter -70114-03-14 10:47 J -23887643.12 -23887643.05 -23887642.97 0.0523 0.0494
 Uranus -70113-01-21 15:21 J -23887330.11 -23887329.86 -23887329.60 0.0134 0.0026
 Uranus -70112-01-25 03:49 J -23886960.59 -23886960.34 -23886960.09 0.0134 0.0037
 Uranus -70111-01-29 14:37 J -23886591.05 -23886590.89 -23886590.70 0.0134 0.0099
 Jupiter -70109-08-28 18:57 J -23885648.94 -23885648.71 -23885648.47 0.0505 0.0028
 Saturn -70103-11-30 10:04 J -23883364.26 -23883364.08 -23883363.88 0.0272 0.0179
 Saturn -70102-12-13 13:40 J -23882986.18 -23882985.93 -23882985.67 0.0276 0.0018
 Saturn -70101-12-26 03:49 J -23882607.54 -23882607.34 -23882607.12 0.0281 0.0158
 Neptune -70098-09-18 22:18 J -23881610.61 -23881610.57 -23881610.49 0.0089 0.0086
 Jupiter -70097-09-02 08:09 J -23881261.36 -23881261.16 -23881260.96 0.0504 0.0255
 Neptune -70097-09-20 10:33 J -23881243.16 -23881243.06 -23881242.93 0.0089 0.0079
 Neptune -70096-09-22 22:47 J -23880875.68 -23880875.55 -23880875.38 0.0089 0.0072
 Neptune -70095-09-25 11:45 J -23880508.19 -23880508.01 -23880507.83 0.0089 0.0064
 Neptune -70094-09-27 23:45 J -23880140.69 -23880140.51 -23880140.29 0.0089 0.0057
 Neptune -70093-09-29 12:42 J -23879773.19 -23879772.97 -23879772.76 0.0089 0.0049
 Neptune -70092-10-02 00:42 J -23879405.68 -23879405.47 -23879405.22 0.0089 0.0042
 Neptune -70091-10-04 13:40 J -23879038.16 -23879037.93 -23879037.68 0.0089 0.0034
 Neptune -70090-10-07 02:23 J -23878670.65 -23878670.40 -23878670.15 0.0089 0.0026
 Saturn -70089-06-03 01:40 J -23878430.62 -23878430.43 -23878430.23 0.0290 0.0163
 Neptune -70089-10-08 14:52 J -23878303.12 -23878302.88 -23878302.61 0.0089 0.0019
 Saturn -70088-06-16 05:59 J -23878052.49 -23878052.25 -23878052.01 0.0285 0.0020
 Neptune -70088-10-11 03:49 J -23877935.60 -23877935.34 -23877935.08 0.0089 0.0010
 Saturn -70087-06-28 23:16 J -23877674.70 -23877674.53 -23877674.35 0.0280 0.0188

Neptune -70087-10-13 17:01 J -23877568.05 -23877567.79 -23877567.53 0.0089 0.0003
 Neptune -70086-10-16 05:45 J -23877200.51 -23877200.26 -23877199.99 0.0089 0.0006
 Mars -70085-06-15 05:01 J -23876957.45 -23876957.29 -23876957.13 0.1912 0.1069
 Jupiter -70085-09-06 21:21 J -23876873.66 -23876873.61 -23876873.54 0.0502 0.0484
 Neptune -70085-10-17 18:57 J -23876832.96 -23876832.71 -23876832.45 0.0089 0.0013
 Neptune -70084-10-20 07:54 J -23876465.41 -23876465.17 -23876464.90 0.0089 0.0022
 Neptune -70083-10-22 21:35 J -23876097.84 -23876097.60 -23876097.35 0.0089 0.0029
 Neptune -70082-10-25 10:47 J -23875730.28 -23875730.05 -23875729.80 0.0089 0.0037
 Neptune -70081-10-26 23:59 J -23875362.71 -23875362.50 -23875362.26 0.0088 0.0045
 Neptune -70080-10-29 13:11 J -23874995.14 -23874994.95 -23874994.71 0.0088 0.0053
 Neptune -70079-11-01 02:52 J -23874627.56 -23874627.38 -23874627.18 0.0088 0.0060
 Neptune -70078-11-03 16:04 J -23874259.97 -23874259.83 -23874259.63 0.0088 0.0068
 Neptune -70077-11-05 05:30 J -23873892.39 -23873892.27 -23873892.11 0.0088 0.0075
 Neptune -70076-11-07 18:57 J -23873524.78 -23873524.71 -23873524.58 0.0088 0.0083
 Saturn -70074-11-25 02:09 J -23872777.51 -23872777.41 -23872777.30 0.0270 0.0245
 Saturn -70073-12-07 01:11 J -23872399.68 -23872399.45 -23872399.21 0.0274 0.0091
 Saturn -70072-12-20 10:47 J -23872021.29 -23872021.05 -23872020.81 0.0278 0.0077
 Saturn -70070-01-03 06:57 J -23871642.30 -23871642.21 -23871642.09 0.0283 0.0256
 Uranus -70070-07-14 14:09 J -23871450.07 -23871449.91 -23871449.75 0.0144 0.0111
 Uranus -70069-07-18 08:37 J -23871080.37 -23871080.14 -23871079.89 0.0144 0.0038
 Uranus -70068-07-23 04:33 J -23870710.54 -23870710.31 -23870710.06 0.0145 0.0039
 Jupiter -70067-02-26 14:23 J -23870492.08 -23870491.90 -23870491.70 0.0520 0.0307
 Uranus -70067-07-28 01:40 J -23870340.57 -23870340.43 -23870340.27 0.0145 0.0116
 Saturn -70060-05-28 13:40 J -23867844.05 -23867843.93 -23867843.78 0.0293 0.0242
 Mars -70060-12-16 18:28 J -23867641.92 -23867641.73 -23867641.53 0.1639 0.0156
 Saturn -70059-06-10 23:45 J -23867465.74 -23867465.51 -23867465.27 0.0288 0.0055
 Saturn -70058-06-23 22:18 J -23867087.78 -23867087.57 -23867087.35 0.0283 0.0122
 Jupiter -70055-03-03 15:06 J -23866104.11 -23866103.87 -23866103.64 0.0521 0.0047
 Jupiter -70050-08-19 22:04 J -23864108.68 -23864108.58 -23864108.48 0.0507 0.0452
 Saturn -70044-12-01 17:30 J -23861812.97 -23861812.77 -23861812.57 0.0272 0.0160

Jupiter -70043-03-08 11:30 J -23861716.23 -23861716.02 -23861715.80 0.0521 0.0206
 Saturn -70043-12-14 21:49 J -23861434.84 -23861434.59 -23861434.33 0.0276 0.0006
 Saturn -70042-12-28 12:57 J -23861056.14 -23861055.96 -23861055.76 0.0281 0.0179
 Jupiter -70038-08-24 11:16 J -23859721.23 -23859721.03 -23859720.81 0.0506 0.0224
 Jupiter -70031-03-13 09:21 J -23857328.21 -23857328.11 -23857328.00 0.0523 0.0461
 Uranus -70030-01-17 14:52 J -23857018.07 -23857017.88 -23857017.66 0.0135 0.0084
 Saturn -70030-06-05 12:13 J -23856879.19 -23856878.99 -23856878.77 0.0290 0.0140
 Uranus -70029-01-22 04:18 J -23856648.57 -23856648.32 -23856648.06 0.0135 0.0020
 Saturn -70029-06-17 16:04 J -23856501.07 -23856500.83 -23856500.59 0.0285 0.0043
 Uranus -70028-01-25 16:33 J -23856279.05 -23856278.81 -23856278.56 0.0134 0.0043
 Saturn -70028-06-30 08:23 J -23856123.30 -23856123.15 -23856122.98 0.0279 0.0209
 Uranus -70027-01-30 03:35 J -23855909.50 -23855909.35 -23855909.18 0.0134 0.0105
 Jupiter -70026-08-29 01:54 J -23855333.65 -23855333.42 -23855333.19 0.0505 0.0012
 Neptune -70015-03-25 08:37 J -23851472.21 -23851472.14 -23851472.06 0.0088 0.0084
 Saturn -70015-11-26 06:42 J -23851226.35 -23851226.22 -23851226.08 0.0270 0.0228
 Neptune -70014-03-27 19:40 J -23851104.81 -23851104.68 -23851104.56 0.0088 0.0077
 Jupiter -70014-09-02 14:52 J -23850946.09 -23850945.88 -23850945.68 0.0504 0.0240
 Saturn -70014-12-09 05:59 J -23850848.49 -23850848.25 -23850848.00 0.0274 0.0073
 Neptune -70013-03-29 06:13 J -23850737.38 -23850737.24 -23850737.07 0.0089 0.0070
 Saturn -70013-12-21 16:04 J -23850470.06 -23850469.83 -23850469.59 0.0279 0.0098
 Neptune -70012-03-31 17:01 J -23850369.95 -23850369.79 -23850369.59 0.0089 0.0063
 Saturn -70011-01-04 13:25 J -23850090.99 -23850090.94 -23850090.87 0.0284 0.0276
 Neptune -70011-04-03 03:35 J -23850002.53 -23850002.35 -23850002.13 0.0089 0.0056
 Neptune -70010-04-05 14:52 J -23849635.09 -23849634.88 -23849634.67 0.0089 0.0048
 Neptune -70009-04-07 00:57 J -23849267.66 -23849267.46 -23849267.21 0.0089 0.0041
 Neptune -70008-04-09 11:59 J -23848900.23 -23848900.00 -23848899.75 0.0089 0.0033
 Neptune -70007-04-11 22:18 J -23848532.80 -23848532.57 -23848532.31 0.0089 0.0026
 Neptune -70006-04-14 09:06 J -23848165.36 -23848165.12 -23848164.86 0.0089 0.0018
 Mars -70006-06-19 10:18 J -23848099.24 -23848099.07 -23848098.91 0.1905 0.0985
 Neptune -70005-04-15 19:54 J -23847797.92 -23847797.67 -23847797.42 0.0089 0.0010

Neptune -70004-04-18 06:13 J -23847430.49 -23847430.24 -23847429.98 0.0089 0.0003

Neptune -70003-04-20 16:33 J -23847063.06 -23847062.81 -23847062.56 0.0089 0.0005

Neptune -70002-04-23 02:37 J -23846695.64 -23846695.39 -23846695.14 0.0089 0.0013

Jupiter -70002-09-06 23:01 J -23846558.63 -23846558.54 -23846558.44 0.0503 0.0459

Neptune -70001-04-24 12:57 J -23846328.21 -23846327.96 -23846327.71 0.0089 0.0020

Saturn -70001-05-29 22:04 J -23846292.73 -23846292.58 -23846292.41 0.0292 0.0220

70TH MILLENNIUM BCE

This is a list of transits of Earth in the 70th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Neptune	-70000-04-26 22:33 J	-23845960.79	-23845960.56	-23845960.31	0.0089	0.0028		
Saturn	-70000-06-12 07:25 J	-23845914.42	-23845914.19	-23845913.95	0.0287	0.0033		
Neptune	-69999-04-29 08:52 J	-23845593.36	-23845593.13	-23845592.90	0.0089	0.0035		
Saturn	-69999-06-25 05:16 J	-23845536.48	-23845536.28	-23845536.07	0.0282	0.0143		
Neptune	-69998-05-01 18:28 J	-23845225.94	-23845225.73	-23845225.49	0.0089	0.0043		
Neptune	-69997-05-03 04:33 J	-23844858.51	-23844858.31	-23844858.09	0.0089	0.0050		
Neptune	-69996-05-05 14:37 J	-23844491.08	-23844490.89	-23844490.69	0.0089	0.0057		
Neptune	-69995-05-07 23:45 J	-23844123.65	-23844123.51	-23844123.31	0.0089	0.0065		
Neptune	-69994-05-10 09:49 J	-23843756.21	-23843756.09	-23843755.91	0.0089	0.0072		
Neptune	-69993-05-11 19:40 J	-23843388.77	-23843388.68	-23843388.53	0.0089	0.0079		
Neptune	-69992-05-14 05:59 J	-23843021.31	-23843021.25	-23843021.17	0.0089	0.0085		
Uranus	-69986-07-15 05:01 J	-23840768.45	-23840768.29	-23840768.11	0.0144	0.0104		
Uranus	-69985-07-18 23:45 J	-23840398.75	-23840398.51	-23840398.26	0.0144	0.0030		

Saturn -69985-12-02 19:54 J -23840261.89 -23840261.67 -23840261.46 0.0272 0.0143
 Jupiter -69984-02-25 18:42 J -23840176.89 -23840176.72 -23840176.53 0.0519 0.0329
 Uranus -69984-07-23 19:11 J -23840028.92 -23840028.70 -23840028.45 0.0145 0.0047
 Saturn -69984-12-16 00:42 J -23839883.72 -23839883.47 -23839883.22 0.0277 0.0021
 Uranus -69983-07-28 16:04 J -23839658.94 -23839658.83 -23839658.68 0.0145 0.0124
 Saturn -69983-12-29 16:18 J -23839504.99 -23839504.82 -23839504.63 0.0282 0.0198
 Mars -69981-12-19 02:37 J -23838784.55 -23838784.39 -23838784.22 0.1644 0.0883
 Jupiter -69972-03-02 16:47 J -23835789.03 -23835788.80 -23835788.57 0.0520 0.0075
 Saturn -69971-06-06 18:28 J -23835327.94 -23835327.73 -23835327.50 0.0289 0.0119
 Saturn -69970-06-19 21:49 J -23834949.83 -23834949.59 -23834949.36 0.0284 0.0063
 Saturn -69969-07-01 13:54 J -23834572.06 -23834571.92 -23834571.79 0.0279 0.0229
 Jupiter -69967-08-19 06:57 J -23833793.29 -23833793.21 -23833793.12 0.0507 0.0465
 Jupiter -69960-03-07 14:37 J -23831401.11 -23831400.89 -23831400.67 0.0522 0.0183
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 Uranus -69946-01-18 04:33 J -23826336.51 -23826336.31 -23826336.09 0.0135 0.0078
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 Saturn -69865-12-31 10:18 J -23796403.20 -23796403.07 -23796402.91 0.0282 0.0228
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 Saturn -69705-06-17 14:37 J -23738160.13 -23738159.89 -23738159.66 0.0287 0.0039
 Saturn -69704-06-30 12:28 J -23737782.13 -23737781.98 -23737781.82 0.0282 0.0215
 Jupiter -69699-03-12 01:54 J -23736066.55 -23736066.42 -23736066.28 0.0522 0.0428
 Mars -69697-12-20 02:52 J -23735052.51 -23735052.38 -23735052.24 0.1638 0.1179
 Uranus -69695-01-15 11:45 J -23734661.09 -23734661.01 -23734660.88 0.0136 0.0125
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 Uranus -69610-01-20 14:23 J -23703610.13 -23703609.90 -23703609.66 0.0135 0.0053
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 Saturn -69542-12-18 14:23 J -23678441.15 -23678440.90 -23678440.66 0.0274 0.0042
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 Neptune -69441-09-17 05:45 J -23641642.38 -23641642.26 -23641642.08 0.0089 0.0072
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 Saturn -69308-11-30 03:35 J -23592990.52 -23592990.35 -23592990.18 0.0268 0.0199
 Saturn -69307-12-12 22:04 J -23592612.82 -23592612.58 -23592612.33 0.0272 0.0039
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 Jupiter -69279-08-24 16:04 J -23582496.05 -23582495.83 -23582495.61 0.0506 0.0144
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 Mars -69208-12-19 22:18 J -23556445.74 -23556445.57 -23556445.40 0.1623 0.0761
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 Neptune -69191-03-30 06:28 J -23550501.42 -23550501.23 -23550500.99 0.0088 0.0049
 Uranus -69190-01-22 23:16 J -23550202.77 -23550202.53 -23550202.27 0.0135 0.0032
 Neptune -69190-04-01 17:59 J -23550133.97 -23550133.75 -23550133.51 0.0088 0.0042
 Saturn -69190-12-04 05:01 J -23549887.48 -23549887.29 -23549887.08 0.0269 0.0156
 Uranus -69189-01-27 13:11 J -23549833.19 -23549832.95 -23549832.69 0.0135 0.0036
 Jupiter -69189-03-12 03:06 J -23549788.38 -23549788.37 -23549788.33 0.0521 0.0519
 Neptune -69189-04-03 05:01 J -23549766.52 -23549766.29 -23549766.05 0.0088 0.0035
 Saturn -69189-12-16 02:23 J -23549509.65 -23549509.40 -23549509.14 0.0273 0.0009
 Uranus -69188-01-31 01:54 J -23549463.57 -23549463.42 -23549463.24 0.0134 0.0102
 Neptune -69188-04-05 16:04 J -23549399.06 -23549398.83 -23549398.58 0.0088 0.0029
 Saturn -69188-12-29 10:04 J -23549131.27 -23549131.08 -23549130.89 0.0278 0.0183
 Neptune -69187-04-08 03:06 J -23549031.61 -23549031.37 -23549031.12 0.0088 0.0022
 Neptune -69186-04-10 13:54 J -23548664.17 -23548663.92 -23548663.66 0.0089 0.0015
 Neptune -69185-04-12 00:28 J -23548296.72 -23548296.48 -23548296.21 0.0089 0.0009
 Neptune -69184-04-14 11:16 J -23547929.28 -23547929.03 -23547928.77 0.0089 0.0002

Jupiter -69184-08-28 01:54 J -23547793.65 -23547793.42 -23547793.19 0.0506 0.0053
 Neptune -69183-04-16 21:49 J -23547561.84 -23547561.59 -23547561.33 0.0089 0.0006
 Neptune -69182-04-19 08:23 J -23547194.41 -23547194.15 -23547193.90 0.0089 0.0012
 Neptune -69181-04-20 18:42 J -23546826.97 -23546826.72 -23546826.47 0.0089 0.0019
 Neptune -69180-04-23 04:47 J -23546459.53 -23546459.30 -23546459.04 0.0089 0.0026
 Neptune -69179-04-25 15:35 J -23546092.09 -23546091.85 -23546091.61 0.0089 0.0032
 Neptune -69178-04-28 01:25 J -23545724.66 -23545724.44 -23545724.20 0.0089 0.0039
 Neptune -69177-04-29 11:30 J -23545357.22 -23545357.02 -23545356.78 0.0089 0.0046
 Neptune -69176-05-01 21:49 J -23544989.77 -23544989.59 -23544989.36 0.0089 0.0052
 Saturn -69176-06-06 04:04 J -23544954.53 -23544954.33 -23544954.12 0.0293 0.0156
 Neptune -69175-05-04 08:09 J -23544622.34 -23544622.16 -23544621.95 0.0089 0.0058
 Saturn -69175-06-19 15:35 J -23544576.09 -23544575.85 -23544575.61 0.0288 0.0040
 Neptune -69174-05-06 18:28 J -23544254.89 -23544254.73 -23544254.54 0.0089 0.0064
 Saturn -69174-07-02 15:35 J -23544197.99 -23544197.85 -23544197.69 0.0283 0.0220
 Neptune -69173-05-08 04:04 J -23543887.45 -23543887.33 -23543887.15 0.0089 0.0071
 Neptune -69172-05-10 14:09 J -23543520.01 -23543519.91 -23543519.76 0.0089 0.0077
 Jupiter -69172-09-01 15:21 J -23543406.05 -23543405.86 -23543405.67 0.0505 0.0291
 Neptune -69171-05-12 23:45 J -23543152.57 -23543152.51 -23543152.38 0.0089 0.0083
 Neptune -69170-05-15 09:49 J -23542785.10 -23542785.09 -23542785.04 0.0089 0.0088
 Saturn -69161-11-28 01:11 J -23539300.58 -23539300.45 -23539300.30 0.0268 0.0223
 Saturn -69160-12-10 17:59 J -23538922.99 -23538922.75 -23538922.50 0.0271 0.0066
 Saturn -69159-12-23 20:52 J -23538544.86 -23538544.63 -23538544.39 0.0276 0.0104
 Mars -69154-06-17 20:37 J -23536907.81 -23536907.64 -23536907.46 0.1934 0.0925
 Saturn -69147-05-31 13:40 J -23534368.06 -23534367.93 -23534367.78 0.0295 0.0241
 Uranus -69147-07-16 04:47 J -23534322.41 -23534322.30 -23534322.17 0.0143 0.0124
 Saturn -69146-06-14 06:42 J -23533989.45 -23533989.22 -23533988.98 0.0291 0.0040
 Uranus -69146-07-20 22:04 J -23533952.81 -23533952.58 -23533952.34 0.0143 0.0048
 Saturn -69145-06-26 12:13 J -23533611.19 -23533610.99 -23533610.78 0.0286 0.0149
 Uranus -69145-07-24 16:18 J -23533583.06 -23533582.82 -23533582.57 0.0144 0.0030
 Uranus -69144-07-29 11:30 J -23533213.17 -23533213.02 -23533212.85 0.0144 0.0110

Jupiter -69142-02-25 10:04 J -23532637.27 -23532637.08 -23532636.88 0.0518 0.0296
 Saturn -69131-12-05 13:11 J -23528336.16 -23528335.95 -23528335.73 0.0269 0.0136
 Jupiter -69130-03-02 06:57 J -23528249.44 -23528249.21 -23528248.97 0.0519 0.0038
 Saturn -69130-12-18 11:16 J -23527958.28 -23527958.03 -23527957.78 0.0274 0.0029
 Saturn -69129-12-30 19:40 J -23527579.85 -23527579.68 -23527579.51 0.0278 0.0206
 Pluto -69128-04-10 18:57 J -23527478.95 -23527478.71 -23527478.45 0.0080 0.0020
 Jupiter -69125-08-18 04:04 J -23526253.44 -23526253.33 -23526253.22 0.0509 0.0447
 Jupiter -69118-03-07 04:33 J -23523861.52 -23523861.31 -23523861.10 0.0520 0.0223
 Saturn -69117-06-07 17:59 J -23523402.96 -23523402.75 -23523402.53 0.0293 0.0130
 Saturn -69116-06-21 04:47 J -23523024.53 -23523024.30 -23523024.07 0.0288 0.0066
 Neptune -69116-09-09 08:09 J -23522944.21 -23522944.16 -23522944.06 0.0089 0.0085
 Saturn -69115-07-04 03:49 J -23522646.45 -23522646.34 -23522646.21 0.0282 0.0244
 Neptune -69115-09-11 19:54 J -23522576.76 -23522576.67 -23522576.53 0.0089 0.0079
 Neptune -69114-09-14 07:40 J -23522209.30 -23522209.18 -23522209.01 0.0089 0.0073
 Jupiter -69113-08-22 18:42 J -23521865.93 -23521865.72 -23521865.51 0.0507 0.0204
 Neptune -69113-09-15 19:40 J -23521841.83 -23521841.68 -23521841.49 0.0089 0.0067
 Neptune -69112-09-18 08:09 J -23521474.34 -23521474.16 -23521473.97 0.0089 0.0060
 Neptune -69111-09-20 20:09 J -23521106.85 -23521106.66 -23521106.44 0.0089 0.0054
 Neptune -69110-09-23 08:23 J -23520739.36 -23520739.15 -23520738.93 0.0089 0.0047
 Neptune -69109-09-24 20:23 J -23520371.86 -23520371.65 -23520371.40 0.0089 0.0041
 Neptune -69108-09-27 08:52 J -23520004.36 -23520004.13 -23520003.89 0.0089 0.0034
 Uranus -69107-01-18 19:11 J -23519890.87 -23519890.70 -23519890.51 0.0136 0.0096
 Neptune -69107-09-29 20:52 J -23519636.86 -23519636.63 -23519636.36 0.0089 0.0028
 Uranus -69106-01-23 10:04 J -23519521.33 -23519521.08 -23519520.82 0.0135 0.0028
 Jupiter -69106-03-12 01:40 J -23519473.51 -23519473.43 -23519473.34 0.0521 0.0485
 Neptune -69106-10-02 09:35 J -23519269.34 -23519269.10 -23519268.84 0.0089 0.0021
 Uranus -69105-01-27 23:45 J -23519151.74 -23519151.51 -23519151.25 0.0135 0.0041
 Neptune -69105-10-03 22:04 J -23518901.84 -23518901.58 -23518901.32 0.0089 0.0014
 Uranus -69104-01-31 12:42 J -23518782.12 -23518781.97 -23518781.80 0.0134 0.0107
 Neptune -69104-10-06 10:33 J -23518534.31 -23518534.06 -23518533.80 0.0089 0.0008

Neptune -69103-10-08 23:16 J -23518166.79 -23518166.53 -23518166.27 0.0089 0.0001
 Neptune -69102-10-11 11:45 J -23517799.26 -23517799.01 -23517798.74 0.0089 0.0007
 Saturn -69102-11-30 06:42 J -23517749.37 -23517749.22 -23517749.04 0.0268 0.0205
 Jupiter -69101-08-27 07:40 J -23517478.41 -23517478.18 -23517477.95 0.0506 0.0033
 Neptune -69101-10-13 00:28 J -23517431.73 -23517431.48 -23517431.21 0.0089 0.0014
 Saturn -69101-12-12 00:13 J -23517371.74 -23517371.49 -23517371.24 0.0272 0.0046
 Neptune -69100-10-15 13:40 J -23517064.18 -23517063.93 -23517063.67 0.0089 0.0020
 Saturn -69100-12-25 03:49 J -23516993.56 -23516993.34 -23516993.12 0.0276 0.0125
 Neptune -69099-10-18 02:37 J -23516696.63 -23516696.39 -23516696.14 0.0089 0.0027
 Neptune -69098-10-20 15:35 J -23516329.08 -23516328.85 -23516328.60 0.0089 0.0034
 Neptune -69097-10-22 04:18 J -23515961.53 -23515961.32 -23515961.07 0.0089 0.0041
 Neptune -69096-10-24 17:45 J -23515593.97 -23515593.76 -23515593.53 0.0089 0.0047
 Neptune -69095-10-27 06:42 J -23515226.41 -23515226.22 -23515225.99 0.0089 0.0054
 Neptune -69094-10-29 19:54 J -23514858.85 -23514858.67 -23514858.47 0.0089 0.0060
 Neptune -69093-10-31 08:52 J -23514491.28 -23514491.13 -23514490.93 0.0089 0.0067
 Neptune -69092-11-02 22:04 J -23514123.71 -23514123.58 -23514123.41 0.0089 0.0073
 Neptune -69091-11-05 11:45 J -23513756.12 -23513756.01 -23513755.88 0.0089 0.0079
 Neptune -69090-11-08 01:11 J -23513388.52 -23513388.45 -23513388.37 0.0089 0.0085
 Jupiter -69089-08-31 15:35 J -23513091.05 -23513090.85 -23513090.65 0.0505 0.0259
 Saturn -69088-06-02 01:40 J -23512816.58 -23512816.43 -23512816.25 0.0295 0.0217
 Saturn -69087-06-15 18:13 J -23512437.98 -23512437.74 -23512437.50 0.0290 0.0015
 Saturn -69086-06-28 22:47 J -23512059.73 -23512059.55 -23512059.35 0.0285 0.0173
 Mars -69082-12-16 14:09 J -23510428.08 -23510427.91 -23510427.75 0.1611 0.0852
 Jupiter -69077-09-05 03:49 J -23508703.39 -23508703.34 -23508703.29 0.0504 0.0491
 Mars -69075-06-21 07:11 J -23508049.33 -23508049.20 -23508049.07 0.1927 0.1405
 Saturn -69072-12-06 17:59 J -23506784.97 -23506784.75 -23506784.52 0.0269 0.0118
 Saturn -69071-12-19 16:18 J -23506407.06 -23506406.82 -23506406.57 0.0274 0.0049
 Saturn -69069-01-02 01:11 J -23506028.59 -23506028.45 -23506028.30 0.0279 0.0226
 Uranus -69063-07-16 12:57 J -23503641.08 -23503640.96 -23503640.83 0.0143 0.0123
 Uranus -69062-07-21 05:59 J -23503271.48 -23503271.25 -23503271.01 0.0143 0.0047

Uranus -69061-07-24 23:59 J -23502901.73 -23502901.50 -23502901.25 0.0144 0.0032
 Uranus -69060-07-29 18:57 J -23502531.85 -23502531.71 -23502531.54 0.0144 0.0112
 Jupiter -69059-02-24 10:47 J -23502322.22 -23502322.05 -23502321.86 0.0517 0.0328
 Saturn -69058-06-10 03:21 J -23501851.58 -23501851.36 -23501851.13 0.0292 0.0106
 Saturn -69057-06-22 13:11 J -23501473.17 -23501472.95 -23501472.71 0.0287 0.0090
 Saturn -69056-07-05 11:45 J -23501095.08 -23501095.01 -23501094.92 0.0282 0.0265
 Jupiter -69047-03-01 07:54 J -23497934.40 -23497934.17 -23497933.93 0.0519 0.0068
 Saturn -69043-12-01 09:06 J -23496198.29 -23496198.12 -23496197.93 0.0268 0.0188
 Jupiter -69042-08-18 12:28 J -23495938.06 -23495937.98 -23495937.88 0.0509 0.0464
 Saturn -69042-12-14 02:37 J -23495820.64 -23495820.39 -23495820.14 0.0272 0.0028
 Saturn -69041-12-26 06:13 J -23495442.44 -23495442.24 -23495442.01 0.0276 0.0145
 Jupiter -69035-03-06 09:06 J -23493546.33 -23493546.12 -23493545.90 0.0520 0.0203
 Neptune -69033-03-15 19:25 J -23492805.77 -23492805.69 -23492805.60 0.0088 0.0083
 Neptune -69032-03-18 07:11 J -23492438.32 -23492438.20 -23492438.07 0.0088 0.0077
 Neptune -69031-03-20 18:28 J -23492070.87 -23492070.73 -23492070.57 0.0088 0.0071
 Neptune -69030-03-23 05:45 J -23491703.42 -23491703.26 -23491703.07 0.0088 0.0065
 Jupiter -69030-08-22 21:06 J -23491550.82 -23491550.62 -23491550.41 0.0508 0.0235
 Neptune -69029-03-24 17:01 J -23491335.97 -23491335.79 -23491335.58 0.0088 0.0059
 Saturn -69029-06-03 07:54 J -23491265.34 -23491265.17 -23491264.98 0.0295 0.0196
 Neptune -69028-03-27 04:04 J -23490968.52 -23490968.33 -23490968.10 0.0088 0.0053
 Saturn -69028-06-16 23:59 J -23490886.73 -23490886.50 -23490886.26 0.0290 0.0008
 Neptune -69027-03-29 15:49 J -23490601.06 -23490600.84 -23490600.62 0.0088 0.0046
 Saturn -69027-06-30 04:18 J -23490508.49 -23490508.32 -23490508.14 0.0285 0.0193
 Neptune -69026-04-01 02:23 J -23490233.61 -23490233.40 -23490233.16 0.0088 0.0040
 Neptune -69025-04-02 13:25 J -23489866.16 -23489865.94 -23489865.68 0.0088 0.0034
 Neptune -69024-04-05 00:42 J -23489498.70 -23489498.47 -23489498.21 0.0088 0.0027
 Uranus -69023-01-19 05:01 J -23489209.46 -23489209.29 -23489209.08 0.0136 0.0093
 Jupiter -69023-03-11 10:47 J -23489158.14 -23489158.05 -23489157.95 0.0521 0.0472
 Neptune -69023-04-07 11:45 J -23489131.26 -23489131.01 -23489130.76 0.0088 0.0020
 Uranus -69022-01-23 20:23 J -23488839.91 -23488839.65 -23488839.40 0.0135 0.0024

Neptune -69022-04-09 22:33 J -23488763.80 -23488763.56 -23488763.30 0.0088 0.0014
 Uranus -69021-01-28 10:04 J -23488470.32 -23488470.08 -23488469.83 0.0135 0.0044
 Neptune -69021-04-11 09:35 J -23488396.35 -23488396.10 -23488395.84 0.0089 0.0007
 Uranus -69020-01-31 22:33 J -23488100.68 -23488100.56 -23488100.39 0.0134 0.0112
 Neptune -69020-04-13 20:23 J -23488028.90 -23488028.65 -23488028.39 0.0089 0.0002
 Neptune -69019-04-16 06:57 J -23487661.46 -23487661.21 -23487660.95 0.0089 0.0007
 Neptune -69018-04-18 17:30 J -23487294.02 -23487293.77 -23487293.51 0.0089 0.0013
 Jupiter -69018-08-27 09:35 J -23487163.33 -23487163.10 -23487162.87 0.0507 0.0003
 Neptune -69017-04-20 03:49 J -23486926.58 -23486926.34 -23486926.08 0.0089 0.0020
 Neptune -69016-04-22 14:23 J -23486559.14 -23486558.90 -23486558.65 0.0089 0.0026
 Neptune -69015-04-25 00:13 J -23486191.71 -23486191.49 -23486191.24 0.0089 0.0033
 Neptune -69014-04-27 10:33 J -23485824.28 -23485824.06 -23485823.82 0.0089 0.0039
 Saturn -69014-11-26 05:45 J -23485611.32 -23485611.26 -23485611.18 0.0266 0.0255
 Neptune -69013-04-28 21:06 J -23485456.84 -23485456.62 -23485456.40 0.0089 0.0045
 Saturn -69013-12-07 18:13 J -23485233.97 -23485233.74 -23485233.50 0.0269 0.0102
 Neptune -69012-05-01 06:42 J -23485089.41 -23485089.22 -23485088.99 0.0089 0.0052
 Saturn -69012-12-20 16:47 J -23484856.04 -23484855.80 -23484855.55 0.0274 0.0065
 Neptune -69011-05-03 17:01 J -23484721.97 -23484721.79 -23484721.58 0.0089 0.0058
 Saturn -69010-01-03 01:54 J -23484477.54 -23484477.42 -23484477.29 0.0279 0.0243
 Neptune -69010-05-06 03:06 J -23484354.53 -23484354.37 -23484354.18 0.0089 0.0064
 Neptune -69009-05-07 13:25 J -23483987.08 -23483986.94 -23483986.77 0.0089 0.0070
 Neptune -69008-05-09 23:16 J -23483619.63 -23483619.53 -23483619.37 0.0089 0.0076
 Neptune -69007-05-12 09:06 J -23483252.19 -23483252.12 -23483251.99 0.0089 0.0082
 Neptune -69006-05-14 19:25 J -23482884.72 -23482884.69 -23482884.63 0.0089 0.0087
 Jupiter -69006-08-31 23:16 J -23482775.74 -23482775.53 -23482775.33 0.0506 0.0242
 Mars -69003-12-18 19:11 J -23481570.89 -23481570.70 -23481570.50 0.1615 0.0104

69TH MILLENNIUM BCE

This is a list of transits of Earth in the 69th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-69000-05-28 09:35 J		-23480679.14	-23480679.10	-23480679.05	0.0297	0.0290	
Saturn	-68999-06-11 07:11 J		-23480300.43	-23480300.20	-23480299.97	0.0292	0.0086	
Saturn	-68998-06-24 16:47 J		-23479922.01	-23479921.80	-23479921.57	0.0287	0.0110	
Jupiter	-68994-09-05 13:54 J		-23478387.98	-23478387.92	-23478387.85	0.0505	0.0483	
Saturn	-68984-12-02 08:09 J		-23474647.34	-23474647.16	-23474646.96	0.0268	0.0174	
Saturn	-68983-12-15 01:40 J		-23474269.68	-23474269.43	-23474269.18	0.0272	0.0012	
Saturn	-68982-12-28 05:01 J		-23473891.48	-23473891.29	-23473891.07	0.0276	0.0162	
Uranus	-68979-07-16 21:06 J		-23472959.74	-23472959.62	-23472959.49	0.0143	0.0121	
Uranus	-68978-07-21 14:09 J		-23472590.15	-23472589.91	-23472589.67	0.0143	0.0045	
Uranus	-68977-07-25 07:40 J		-23472220.41	-23472220.18	-23472219.93	0.0144	0.0034	
Jupiter	-68976-02-23 17:59 J		-23472006.92	-23472006.75	-23472006.57	0.0517	0.0345	
Uranus	-68976-07-30 02:23 J		-23471850.53	-23471850.40	-23471850.23	0.0144	0.0114	
Saturn	-68970-06-05 09:35 J		-23469714.29	-23469714.10	-23469713.91	0.0295	0.0178	
Pluto	-68970-10-05 23:59 J		-23469591.75	-23469591.50	-23469591.25	0.0064	0.0021	
Saturn	-68969-06-18 01:40 J		-23469335.67	-23469335.43	-23469335.19	0.0290	0.0024	
Saturn	-68968-07-01 05:30 J		-23468957.42	-23468957.27	-23468957.10	0.0285	0.0211	
Jupiter	-68964-02-28 19:54 J		-23467618.90	-23467618.67	-23467618.43	0.0519	0.0075	
Jupiter	-68959-08-17 16:33 J		-23465622.85	-23465622.81	-23465622.74	0.0509	0.0492	
Saturn	-68955-11-27 03:21 J		-23464060.45	-23464060.36	-23464060.25	0.0265	0.0242	
Saturn	-68954-12-09 15:49 J		-23463683.08	-23463682.84	-23463682.60	0.0269	0.0089	
Neptune	-68953-09-06 05:45 J		-23463411.29	-23463411.26	-23463411.20	0.0089	0.0087	
Saturn	-68953-12-21 14:09 J		-23463305.15	-23463304.91	-23463304.67	0.0274	0.0080	

Jupiter -68952-03-05 18:42 J -23463230.94 -23463230.72 -23463230.50 0.0519 0.0191
 Neptune -68952-09-08 17:01 J -23463043.86 -23463043.79 -23463043.66 0.0089 0.0082
 Saturn -68951-01-03 23:16 J -23462926.61 -23462926.53 -23462926.43 0.0279 0.0258
 Neptune -68951-09-11 04:33 J -23462676.41 -23462676.31 -23462676.15 0.0089 0.0077
 Neptune -68950-09-13 16:18 J -23462308.95 -23462308.82 -23462308.64 0.0089 0.0070
 Neptune -68949-09-15 04:04 J -23461941.49 -23461941.33 -23461941.13 0.0089 0.0064
 Neptune -68948-09-17 16:04 J -23461574.00 -23461573.83 -23461573.61 0.0089 0.0058
 Jupiter -68947-08-22 06:28 J -23461235.43 -23461235.23 -23461235.03 0.0508 0.0250
 Neptune -68947-09-20 04:18 J -23461206.52 -23461206.32 -23461206.10 0.0089 0.0051
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 Neptune -68945-09-24 04:47 J -23460471.53 -23460471.30 -23460471.06 0.0089 0.0038
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 Saturn -68941-05-29 08:09 J -23459128.25 -23459128.16 -23459128.07 0.0297 0.0275
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 Jupiter -68940-03-10 17:01 J -23458842.90 -23458842.79 -23458842.67 0.0520 0.0454
 Saturn -68940-06-12 05:45 J -23458749.49 -23458749.26 -23458749.03 0.0292 0.0070
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 Uranus -68939-01-19 11:16 J -23458528.20 -23458528.03 -23458527.82 0.0136 0.0092
 Saturn -68939-06-25 15:21 J -23458371.07 -23458370.86 -23458370.64 0.0287 0.0126
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 Saturn -68924-12-15 21:35 J -23452718.85 -23452718.60 -23452718.35 0.0272 0.0004
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Saturn -68881-06-13 01:11 J -23437198.69 -23437198.45 -23437198.22 0.0293 0.0056
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 Saturn -68864-12-29 18:57 J -23430789.88 -23430789.71 -23430789.51 0.0276 0.0189
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 Saturn -68806-12-18 10:04 J -23409617.33 -23409617.08 -23409616.82 0.0271 0.0026
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 Saturn -68792-06-21 07:40 J -23404683.41 -23404683.18 -23404682.95 0.0290 0.0062
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 Neptune -68703-03-19 13:11 J -23372270.10 -23372269.95 -23372269.75 0.0088 0.0065
 Saturn -68703-06-29 14:23 J -23372168.08 -23372167.90 -23372167.70 0.0288 0.0176
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 Neptune -68700-03-25 23:59 J -23371167.70 -23371167.50 -23371167.26 0.0088 0.0047
 Neptune -68699-03-28 11:30 J -23370800.24 -23370800.02 -23370799.78 0.0088 0.0040
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 Jupiter -68698-08-21 17:30 J -23370288.96 -23370288.77 -23370288.57 0.0508 0.0279
 Neptune -68697-04-01 10:04 J -23370065.32 -23370065.08 -23370064.84 0.0088 0.0028
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Neptune -68694-04-08 18:57 J -23368962.96 -23368962.71 -23368962.45 0.0088 0.0009
 Neptune -68693-04-10 05:45 J -23368595.51 -23368595.26 -23368595.00 0.0088 0.0003
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Saturn -68599-12-28 23:30 J -23333999.72 -23333999.52 -23333999.31 0.0274 0.0161
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 Neptune -68461-09-04 12:28 J -23283710.08 -23283709.98 -23283709.82 0.0089 0.0076
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 Neptune -68458-09-11 23:30 J -23282607.70 -23282607.52 -23282607.32 0.0089 0.0059
 Neptune -68457-09-13 11:30 J -23282240.22 -23282240.02 -23282239.81 0.0089 0.0053
 Neptune -68456-09-15 22:33 J -23281872.75 -23281872.56 -23281872.32 0.0089 0.0048
 Neptune -68455-09-18 10:33 J -23281505.27 -23281505.06 -23281504.82 0.0089 0.0042
 Jupiter -68454-03-03 09:21 J -23281339.34 -23281339.11 -23281338.88 0.0519 0.0085
 Neptune -68454-09-20 22:18 J -23281137.79 -23281137.57 -23281137.32 0.0089 0.0036
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 Neptune -68449-10-01 11:01 J -23279300.29 -23279300.04 -23279299.78 0.0089 0.0006
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 Jupiter -68442-03-08 07:25 J -23276951.35 -23276951.19 -23276951.01 0.0520 0.0351
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Saturn -68439-06-16 10:18 J -23275755.30 -23275755.07 -23275754.83 0.0293 0.0037
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 Saturn -68438-06-29 22:18 J -23275376.76 -23275376.57 -23275376.37 0.0288 0.0164
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 Jupiter -68437-08-23 22:47 J -23274955.77 -23274955.55 -23274955.32 0.0507 0.0100
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 Uranus -68435-01-21 15:35 J -23274440.05 -23274439.85 -23274439.62 0.0136 0.0077
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 Mars -68435-12-21 01:40 J -23274106.60 -23274106.43 -23274106.26 0.1606 0.0740
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 Jupiter -68425-08-28 10:33 J -23270568.28 -23270568.06 -23270567.84 0.0506 0.0139
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 Jupiter -68413-09-01 19:11 J -23266180.85 -23266180.70 -23266180.54 0.0505 0.0373
 Saturn -68410-06-10 22:18 J -23265168.78 -23265168.57 -23265168.35 0.0296 0.0124
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 Saturn -68394-12-16 13:25 J -23259136.19 -23259135.94 -23259135.69 0.0270 0.0017
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 Uranus -68391-07-19 17:59 J -23258189.91 -23258189.75 -23258189.56 0.0142 0.0102
 Uranus -68390-07-24 11:01 J -23257820.29 -23257820.04 -23257819.80 0.0143 0.0023
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 Pluto -68388-04-14 06:42 J -23257190.40 -23257190.22 -23257190.00 0.0080 0.0052

Uranus -68388-08-01 23:01 J -23257080.58 -23257080.54 -23257080.46 0.0144 0.0139
 Jupiter -68383-02-25 07:25 J -23255412.40 -23255412.19 -23255411.97 0.0517 0.0223
 Saturn -68381-06-04 07:40 J -23254582.34 -23254582.18 -23254582.01 0.0297 0.0218
 Neptune -68380-03-06 23:16 J -23254306.57 -23254306.53 -23254306.42 0.0088 0.0085
 Saturn -68380-06-18 05:30 J -23254203.51 -23254203.27 -23254203.03 0.0292 0.0009
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 Neptune -68378-03-11 23:45 J -23253571.63 -23253571.51 -23253571.35 0.0088 0.0074
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 Jupiter -68371-03-02 03:49 J -23251024.58 -23251024.34 -23251024.11 0.0519 0.0042
 Neptune -68371-03-27 09:35 J -23250999.33 -23250999.10 -23250998.85 0.0088 0.0034
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 Jupiter -68366-08-19 12:13 J -23249028.14 -23249027.99 -23249027.83 0.0509 0.0374
 Saturn -68366-11-29 04:33 J -23248926.41 -23248926.31 -23248926.22 0.0265 0.0243
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 Neptune -68359-04-22 21:06 J -23246589.83 -23246589.62 -23246589.37 0.0089 0.0038
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 Neptune -68357-04-26 18:28 J -23245854.93 -23245854.73 -23245854.51 0.0089 0.0049
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 Uranus -68351-01-21 21:21 J -23243758.82 -23243758.61 -23243758.39 0.0136 0.0077
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 Saturn -68351-06-12 18:13 J -23243616.96 -23243616.74 -23243616.51 0.0295 0.0093
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 Neptune -68350-05-12 17:45 J -23243282.80 -23243282.76 -23243282.67 0.0089 0.0086
 Saturn -68350-06-26 09:35 J -23243238.32 -23243238.10 -23243237.87 0.0290 0.0113
 Uranus -68349-01-31 02:52 J -23243019.59 -23243019.38 -23243019.14 0.0135 0.0066
 Jupiter -68342-08-28 07:25 J -23240253.41 -23240253.19 -23240252.96 0.0507 0.0100
 Saturn -68336-12-05 15:35 J -23237962.05 -23237961.85 -23237961.64 0.0266 0.0156
 Saturn -68335-12-18 05:30 J -23237584.52 -23237584.27 -23237584.02 0.0270 0.0009
 Saturn -68334-12-31 04:18 J -23237206.49 -23237206.32 -23237206.12 0.0274 0.0183
 Jupiter -68330-09-01 19:54 J -23235865.84 -23235865.67 -23235865.50 0.0506 0.0341
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 Mars -68309-12-16 22:33 J -23228088.73 -23228088.56 -23228088.39 0.1597 0.0787
 Uranus -68307-07-20 03:21 J -23227508.53 -23227508.36 -23227508.17 0.0142 0.0099
 Saturn -68307-11-30 17:16 J -23227374.91 -23227374.78 -23227374.64 0.0265 0.0222

Uranus -68306-07-24 20:09 J -23227138.90 -23227138.66 -23227138.41 0.0143 0.0020
 Saturn -68306-12-13 03:06 J -23226997.61 -23226997.37 -23226997.12 0.0268 0.0065
 Uranus -68305-07-28 13:40 J -23226769.15 -23226768.93 -23226768.70 0.0143 0.0061
 Saturn -68305-12-24 22:18 J -23226619.79 -23226619.57 -23226619.33 0.0272 0.0105
 Uranus -68304-08-02 08:09 J -23226399.18 -23226399.16 -23226399.12 0.0144 0.0142
 Jupiter -68300-02-24 02:52 J -23225097.58 -23225097.38 -23225097.17 0.0517 0.0263
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 Neptune -68295-09-08 23:01 J -23223074.70 -23223074.54 -23223074.33 0.0089 0.0061
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 Neptune -68293-09-12 22:18 J -23222339.76 -23222339.57 -23222339.34 0.0089 0.0050
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 Neptune -68292-09-15 10:04 J -23221972.29 -23221972.08 -23221971.84 0.0089 0.0044
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 Neptune -68291-09-17 21:49 J -23221604.81 -23221604.59 -23221604.34 0.0089 0.0038
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 Neptune -68289-09-21 21:49 J -23220869.83 -23220869.59 -23220869.34 0.0089 0.0026
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 Neptune -68288-09-24 09:21 J -23220502.35 -23220502.11 -23220501.85 0.0089 0.0021
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 Jupiter -68276-03-05 23:59 J -23216321.70 -23216321.50 -23216321.30 0.0519 0.0272
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 Saturn -68276-12-19 19:25 J -23216032.94 -23216032.69 -23216032.44 0.0271 0.0032
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 Neptune -68273-10-28 05:59 J -23214989.40 -23214989.25 -23214989.07 0.0089 0.0068
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 Uranus -68267-01-22 03:06 J -23213077.58 -23213077.37 -23213077.15 0.0136 0.0076
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 Jupiter -68259-08-27 10:47 J -23209938.28 -23209938.05 -23209937.82 0.0507 0.0073
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 Jupiter -68247-08-31 22:47 J -23205550.73 -23205550.55 -23205550.36 0.0506 0.0315
 Saturn -68247-12-14 14:52 J -23205446.12 -23205445.88 -23205445.62 0.0269 0.0042
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 Saturn -68233-06-16 07:54 J -23200513.41 -23200513.17 -23200512.93 0.0294 0.0032

Saturn -68232-06-29 20:37 J -23200134.83 -23200134.64 -23200134.44 0.0289 0.0170
 Pluto -68230-10-10 05:59 J -23199302.46 -23199302.25 -23199301.99 0.0064 0.0028
 Mars -68230-12-20 02:37 J -23199231.59 -23199231.39 -23199231.20 0.1600 0.0137
 Pluto -68229-10-10 18:28 J -23198935.78 -23198935.73 -23198935.63 0.0065 0.0062
 Mars -68223-06-18 23:45 J -23196858.67 -23196858.51 -23196858.36 0.1952 0.1207
 Uranus -68223-07-20 14:37 J -23196827.07 -23196826.89 -23196826.70 0.0142 0.0096
 Uranus -68222-07-25 07:11 J -23196457.45 -23196457.20 -23196456.95 0.0143 0.0016
 Uranus -68221-07-29 00:28 J -23196087.69 -23196087.48 -23196087.24 0.0143 0.0066
 Saturn -68218-12-09 13:25 J -23194859.15 -23194858.94 -23194858.70 0.0267 0.0114
 Jupiter -68217-02-24 02:23 J -23194782.59 -23194782.40 -23194782.20 0.0516 0.0298
 Neptune -68217-03-03 22:18 J -23194773.63 -23194773.57 -23194773.49 0.0088 0.0085
 Saturn -68217-12-21 05:30 J -23194481.51 -23194481.27 -23194481.02 0.0271 0.0055
 Neptune -68216-03-06 10:33 J -23194406.15 -23194406.06 -23194405.93 0.0088 0.0080
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 Neptune -68214-03-11 10:47 J -23193671.19 -23193671.05 -23193670.87 0.0088 0.0069
 Neptune -68213-03-12 23:16 J -23193303.71 -23193303.53 -23193303.35 0.0088 0.0064
 Neptune -68212-03-15 10:47 J -23192936.22 -23192936.05 -23192935.83 0.0088 0.0059
 Neptune -68211-03-17 23:01 J -23192568.75 -23192568.54 -23192568.33 0.0088 0.0053
 Neptune -68210-03-20 10:18 J -23192201.27 -23192201.07 -23192200.83 0.0088 0.0048
 Neptune -68209-03-21 22:04 J -23191833.80 -23191833.58 -23191833.34 0.0088 0.0042
 Neptune -68208-03-24 10:04 J -23191466.32 -23191466.08 -23191465.85 0.0088 0.0036
 Neptune -68207-03-26 21:21 J -23191098.84 -23191098.61 -23191098.36 0.0088 0.0030
 Neptune -68206-03-29 08:37 J -23190731.38 -23190731.14 -23190730.88 0.0088 0.0025
 Jupiter -68205-02-28 23:45 J -23190394.74 -23190394.51 -23190394.27 0.0518 0.0036
 Neptune -68205-03-30 20:23 J -23190363.90 -23190363.65 -23190363.39 0.0088 0.0019
 Neptune -68204-04-02 07:54 J -23189996.43 -23189996.17 -23189995.92 0.0088 0.0013
 Saturn -68204-06-10 16:47 J -23189927.01 -23189926.80 -23189926.58 0.0295 0.0127
 Neptune -68203-04-04 19:11 J -23189628.95 -23189628.70 -23189628.44 0.0088 0.0007
 Saturn -68203-06-24 10:33 J -23189548.28 -23189548.06 -23189547.82 0.0291 0.0082

Neptune -68202-04-07 06:28 J -23189261.49 -23189261.23 -23189260.97 0.0088 0.0001
 Saturn -68202-07-07 17:01 J -23189169.86 -23189169.79 -23189169.71 0.0286 0.0271
 Neptune -68201-04-08 17:30 J -23188894.02 -23188893.77 -23188893.51 0.0088 0.0005
 Neptune -68200-04-11 04:33 J -23188526.56 -23188526.31 -23188526.05 0.0088 0.0011
 Jupiter -68200-08-17 12:42 J -23188398.08 -23188397.97 -23188397.86 0.0510 0.0446
 Neptune -68199-04-13 15:21 J -23188159.11 -23188158.86 -23188158.60 0.0088 0.0016
 Neptune -68198-04-16 01:54 J -23187791.66 -23187791.42 -23187791.16 0.0089 0.0022
 Neptune -68197-04-17 12:42 J -23187424.21 -23187423.97 -23187423.72 0.0089 0.0028
 Neptune -68196-04-19 23:16 J -23187056.75 -23187056.53 -23187056.28 0.0089 0.0034
 Neptune -68195-04-22 09:35 J -23186689.31 -23186689.10 -23186688.85 0.0089 0.0040
 Neptune -68194-04-24 20:23 J -23186321.86 -23186321.65 -23186321.42 0.0089 0.0045
 Jupiter -68193-03-04 20:09 J -23186006.87 -23186006.66 -23186006.45 0.0519 0.0232
 Neptune -68193-04-26 06:28 J -23185954.41 -23185954.23 -23185953.99 0.0089 0.0051
 Neptune -68192-04-28 17:30 J -23185586.96 -23185586.77 -23185586.57 0.0089 0.0056
 Neptune -68191-05-01 04:04 J -23185219.51 -23185219.33 -23185219.14 0.0089 0.0061
 Neptune -68190-05-03 13:54 J -23184852.06 -23184851.92 -23184851.73 0.0089 0.0067
 Neptune -68189-05-05 00:13 J -23184484.61 -23184484.49 -23184484.31 0.0089 0.0072
 Saturn -68189-12-03 11:16 J -23184272.21 -23184272.03 -23184271.84 0.0266 0.0181
 Neptune -68188-05-07 10:33 J -23184117.16 -23184117.06 -23184116.91 0.0089 0.0077
 Jupiter -68188-08-22 02:09 J -23184010.62 -23184010.41 -23184010.20 0.0509 0.0201
 Saturn -68188-12-15 23:01 J -23183894.79 -23183894.54 -23183894.29 0.0269 0.0020
 Neptune -68187-05-09 20:23 J -23183749.72 -23183749.65 -23183749.52 0.0089 0.0082
 Saturn -68187-12-28 19:54 J -23183516.87 -23183516.67 -23183516.46 0.0273 0.0152
 Neptune -68186-05-12 06:57 J -23183382.26 -23183382.21 -23183382.14 0.0089 0.0086
 Uranus -68183-01-22 11:30 J -23182396.24 -23182396.02 -23182395.80 0.0136 0.0074
 Uranus -68182-01-27 03:06 J -23182026.63 -23182026.37 -23182026.11 0.0136 0.0002
 Uranus -68181-01-31 17:30 J -23181656.98 -23181656.77 -23181656.54 0.0135 0.0070
 Jupiter -68181-03-09 20:52 J -23181618.67 -23181618.63 -23181618.58 0.0520 0.0507
 Jupiter -68176-08-26 09:49 J -23179623.32 -23179623.09 -23179622.85 0.0507 0.0036
 Saturn -68175-06-04 21:49 J -23179340.74 -23179340.59 -23179340.42 0.0298 0.0220

Saturn -68174-06-18 21:21 J -23178961.85 -23178961.61 -23178961.37 0.0293 0.0005
 Saturn -68173-07-01 09:06 J -23178583.29 -23178583.12 -23178582.94 0.0288 0.0195
 Jupiter -68164-08-30 21:35 J -23175235.79 -23175235.60 -23175235.40 0.0507 0.0277
 Saturn -68160-11-28 11:59 J -23173685.07 -23173685.00 -23173684.90 0.0264 0.0248
 Saturn -68159-12-10 19:25 J -23173307.92 -23173307.69 -23173307.45 0.0267 0.0093
 Saturn -68158-12-23 11:45 J -23172930.25 -23172930.01 -23172929.77 0.0271 0.0075
 Saturn -68156-01-04 13:54 J -23172552.01 -23172551.92 -23172551.81 0.0276 0.0252
 Mars -68151-12-22 05:45 J -23170374.40 -23170374.26 -23170374.11 0.1602 0.1071
 Saturn -68145-06-12 03:49 J -23168375.56 -23168375.34 -23168375.11 0.0295 0.0102
 Mars -68144-06-22 11:59 J -23168000.14 -23168000.00 -23167999.85 0.1947 0.1326
 Saturn -68144-06-25 20:52 J -23167996.85 -23167996.63 -23167996.40 0.0290 0.0106
 Pluto -68141-04-16 06:42 J -23166971.46 -23166971.22 -23166970.96 0.0080 0.0019
 Uranus -68139-07-21 01:11 J -23166145.62 -23166145.45 -23166145.24 0.0142 0.0093
 Uranus -68138-07-25 18:13 J -23165775.99 -23165775.74 -23165775.49 0.0143 0.0012
 Uranus -68137-07-29 11:45 J -23165406.22 -23165406.01 -23165405.78 0.0143 0.0070
 Neptune -68137-08-25 16:47 J -23165378.83 -23165378.80 -23165378.74 0.0089 0.0087
 Neptune -68136-08-28 03:49 J -23165011.43 -23165011.34 -23165011.24 0.0089 0.0083
 Neptune -68135-08-30 14:23 J -23164644.00 -23164643.90 -23164643.75 0.0089 0.0078
 Jupiter -68134-02-23 01:40 J -23164467.61 -23164467.43 -23164467.25 0.0516 0.0335
 Neptune -68134-09-02 01:25 J -23164276.56 -23164276.44 -23164276.27 0.0089 0.0073
 Neptune -68133-09-03 13:11 J -23163909.11 -23163908.95 -23163908.78 0.0089 0.0068
 Neptune -68132-09-06 00:13 J -23163541.66 -23163541.49 -23163541.30 0.0089 0.0062
 Neptune -68131-09-08 11:16 J -23163174.21 -23163174.03 -23163173.81 0.0089 0.0057
 Neptune -68130-09-10 23:01 J -23162806.74 -23162806.54 -23162806.32 0.0089 0.0052
 Saturn -68130-12-05 14:23 J -23162721.09 -23162720.90 -23162720.70 0.0266 0.0164
 Neptune -68129-09-12 10:18 J -23162439.27 -23162439.07 -23162438.83 0.0089 0.0046
 Saturn -68129-12-17 02:09 J -23162343.66 -23162343.41 -23162343.15 0.0269 0.0005
 Neptune -68128-09-14 22:18 J -23162071.79 -23162071.57 -23162071.34 0.0089 0.0040
 Saturn -68128-12-29 23:30 J -23161965.71 -23161965.52 -23161965.32 0.0274 0.0172
 Neptune -68127-09-17 09:35 J -23161704.31 -23161704.10 -23161703.84 0.0089 0.0035

Neptune -68126-09-19 21:49 J -23161336.82 -23161336.59 -23161336.34 0.0089 0.0029
 Neptune -68125-09-21 09:35 J -23160969.34 -23160969.10 -23160968.85 0.0089 0.0023
 Neptune -68124-09-23 21:35 J -23160601.85 -23160601.60 -23160601.34 0.0089 0.0017
 Neptune -68123-09-26 09:35 J -23160234.36 -23160234.10 -23160233.85 0.0089 0.0011
 Jupiter -68122-02-28 02:09 J -23160079.64 -23160079.41 -23160079.17 0.0517 0.0063
 Neptune -68122-09-28 21:21 J -23159866.86 -23159866.61 -23159866.35 0.0089 0.0006
 Neptune -68121-09-30 09:35 J -23159499.36 -23159499.10 -23159498.84 0.0089 0.0000
 Neptune -68120-10-02 21:35 J -23159131.86 -23159131.60 -23159131.34 0.0089 0.0006
 Neptune -68119-10-05 09:49 J -23158764.34 -23158764.09 -23158763.83 0.0089 0.0012
 Neptune -68118-10-07 22:04 J -23158396.83 -23158396.58 -23158396.32 0.0089 0.0018
 Jupiter -68117-08-16 14:23 J -23158082.96 -23158082.90 -23158082.82 0.0510 0.0482
 Neptune -68117-10-09 10:33 J -23158029.30 -23158029.06 -23158028.81 0.0089 0.0024
 Saturn -68116-06-06 06:42 J -23157789.39 -23157789.22 -23157789.03 0.0298 0.0197
 Neptune -68116-10-11 23:01 J -23157661.78 -23157661.54 -23157661.29 0.0089 0.0030
 Saturn -68115-06-20 05:45 J -23157410.50 -23157410.26 -23157410.02 0.0293 0.0018
 Neptune -68115-10-14 11:30 J -23157294.24 -23157294.02 -23157293.76 0.0089 0.0036
 Saturn -68114-07-03 17:01 J -23157031.94 -23157031.79 -23157031.63 0.0288 0.0218
 Neptune -68114-10-17 00:13 J -23156926.70 -23156926.49 -23156926.24 0.0089 0.0042
 Neptune -68113-10-18 13:11 J -23156559.16 -23156558.95 -23156558.72 0.0089 0.0047
 Neptune -68112-10-21 01:54 J -23156191.61 -23156191.42 -23156191.20 0.0089 0.0053
 Neptune -68111-10-23 15:06 J -23155824.07 -23155823.87 -23155823.67 0.0089 0.0058
 Jupiter -68110-03-05 03:49 J -23155691.55 -23155691.34 -23155691.12 0.0519 0.0214
 Neptune -68110-10-26 03:35 J -23155456.51 -23155456.35 -23155456.15 0.0089 0.0064
 Neptune -68109-10-27 16:33 J -23155088.96 -23155088.81 -23155088.63 0.0089 0.0069
 Neptune -68108-10-30 05:59 J -23154721.39 -23154721.25 -23154721.10 0.0089 0.0074
 Neptune -68107-11-01 18:28 J -23154353.82 -23154353.73 -23154353.59 0.0089 0.0080
 Neptune -68106-11-04 07:25 J -23153986.23 -23153986.19 -23153986.08 0.0089 0.0085
 Jupiter -68105-08-21 02:52 J -23153695.58 -23153695.38 -23153695.18 0.0509 0.0238
 Mars -68104-12-16 00:28 J -23153213.57 -23153213.48 -23153213.38 0.1591 0.1358
 Saturn -68101-11-29 13:25 J -23152134.05 -23152133.94 -23152133.82 0.0264 0.0233

Saturn -68100-12-11 20:52 J -23151756.87 -23151756.63 -23151756.39 0.0267 0.0077
 Uranus -68099-01-22 20:37 J -23151714.86 -23151714.64 -23151714.41 0.0136 0.0071
 Saturn -68099-12-24 13:25 J -23151379.17 -23151378.94 -23151378.70 0.0271 0.0092
 Uranus -68098-01-27 12:13 J -23151345.25 -23151344.99 -23151344.73 0.0136 0.0002
 Jupiter -68098-03-10 02:09 J -23151303.48 -23151303.41 -23151303.32 0.0519 0.0485
 Saturn -68097-01-06 15:49 J -23151000.87 -23151000.84 -23151000.77 0.0276 0.0270
 Uranus -68097-02-01 02:09 J -23150975.61 -23150975.41 -23150975.17 0.0135 0.0074
 Jupiter -68093-08-25 15:49 J -23149308.07 -23149307.84 -23149307.61 0.0508 0.0012
 Saturn -68087-05-31 05:30 J -23147203.29 -23147203.27 -23147203.24 0.0299 0.0297
 Saturn -68086-06-14 09:49 J -23146824.32 -23146824.09 -23146823.85 0.0295 0.0080
 Saturn -68085-06-27 02:37 J -23146445.60 -23146445.39 -23146445.17 0.0290 0.0128
 Jupiter -68081-08-30 06:42 J -23144920.42 -23144920.22 -23144920.02 0.0507 0.0263
 Saturn -68071-12-06 14:23 J -23141170.10 -23141169.90 -23141169.69 0.0266 0.0149
 Saturn -68070-12-19 02:09 J -23140792.66 -23140792.41 -23140792.16 0.0269 0.0015
 Saturn -68069-12-30 23:30 J -23140414.70 -23140414.52 -23140414.33 0.0274 0.0189
 Saturn -68057-06-07 09:35 J -23136238.28 -23136238.10 -23136237.90 0.0297 0.0179
 Saturn -68056-06-21 08:23 J -23135859.39 -23135859.15 -23135858.91 0.0293 0.0037
 Saturn -68055-07-04 19:25 J -23135480.82 -23135480.69 -23135480.55 0.0288 0.0236
 Uranus -68055-07-21 11:01 J -23135464.22 -23135464.04 -23135463.83 0.0142 0.0090
 Neptune -68054-03-01 20:52 J -23135240.67 -23135240.63 -23135240.54 0.0088 0.0085
 Uranus -68054-07-26 04:04 J -23135094.58 -23135094.33 -23135094.08 0.0143 0.0009
 Neptune -68053-03-03 09:21 J -23134873.19 -23134873.11 -23134872.98 0.0088 0.0081
 Uranus -68053-07-29 21:21 J -23134724.81 -23134724.61 -23134724.38 0.0144 0.0073
 Neptune -68052-03-05 21:35 J -23134505.71 -23134505.60 -23134505.44 0.0088 0.0076
 Jupiter -68051-02-22 11:59 J -23134152.17 -23134152.00 -23134151.82 0.0516 0.0348
 Neptune -68051-03-08 09:49 J -23134138.22 -23134138.09 -23134137.91 0.0088 0.0071
 Neptune -68050-03-10 22:04 J -23133770.73 -23133770.58 -23133770.38 0.0088 0.0065
 Neptune -68049-03-12 10:33 J -23133403.24 -23133403.06 -23133402.86 0.0088 0.0060
 Neptune -68048-03-14 22:18 J -23133035.75 -23133035.57 -23133035.34 0.0088 0.0055
 Neptune -68047-03-17 10:47 J -23132668.27 -23132668.05 -23132667.83 0.0088 0.0049

Neptune -68046-03-19 22:04 J -23132300.79 -23132300.58 -23132300.34 0.0088 0.0044
 Neptune -68045-03-21 10:04 J -23131933.31 -23131933.08 -23131932.84 0.0088 0.0038
 Neptune -68044-03-23 21:35 J -23131565.83 -23131565.60 -23131565.35 0.0088 0.0032
 Neptune -68043-03-26 09:06 J -23131198.36 -23131198.12 -23131197.87 0.0088 0.0027
 Neptune -68042-03-28 20:23 J -23130830.88 -23130830.65 -23130830.38 0.0088 0.0022
 Saturn -68042-12-01 11:30 J -23130583.14 -23130583.02 -23130582.87 0.0264 0.0220
 Neptune -68041-03-30 07:54 J -23130463.41 -23130463.17 -23130462.90 0.0088 0.0016
 Saturn -68041-12-12 18:57 J -23130205.95 -23130205.71 -23130205.46 0.0267 0.0063
 Neptune -68040-04-01 19:25 J -23130095.94 -23130095.69 -23130095.43 0.0088 0.0010
 Saturn -68040-12-25 11:16 J -23129828.25 -23129828.03 -23129827.79 0.0271 0.0107
 Jupiter -68039-02-27 11:16 J -23129764.26 -23129764.03 -23129763.79 0.0517 0.0077
 Neptune -68039-04-04 06:57 J -23129728.47 -23129728.21 -23129727.95 0.0088 0.0004
 Neptune -68038-04-06 18:13 J -23129361.00 -23129360.74 -23129360.49 0.0088 0.0002
 Neptune -68037-04-08 05:30 J -23128993.53 -23128993.27 -23128993.01 0.0088 0.0008
 Neptune -68036-04-10 16:33 J -23128626.06 -23128625.81 -23128625.55 0.0088 0.0014
 Neptune -68035-04-13 03:21 J -23128258.60 -23128258.36 -23128258.10 0.0088 0.0020
 Neptune -68034-04-15 14:23 J -23127891.14 -23127890.90 -23127890.65 0.0088 0.0025
 Jupiter -68034-08-16 22:18 J -23127767.60 -23127767.57 -23127767.53 0.0510 0.0502
 Neptune -68033-04-17 00:57 J -23127523.68 -23127523.46 -23127523.20 0.0089 0.0031
 Neptune -68032-04-19 11:45 J -23127156.23 -23127156.01 -23127155.77 0.0089 0.0036
 Neptune -68031-04-21 22:18 J -23126788.78 -23126788.57 -23126788.33 0.0089 0.0042
 Neptune -68030-04-24 08:52 J -23126421.33 -23126421.13 -23126420.90 0.0089 0.0047
 Neptune -68029-04-25 19:54 J -23126053.88 -23126053.67 -23126053.46 0.0089 0.0052
 Neptune -68028-04-28 05:59 J -23125686.42 -23125686.25 -23125686.04 0.0089 0.0058
 Saturn -68028-06-01 06:28 J -23125652.31 -23125652.23 -23125652.15 0.0299 0.0281
 Jupiter -68027-03-04 09:35 J -23125376.32 -23125376.10 -23125375.88 0.0518 0.0193
 Neptune -68027-04-30 16:18 J -23125318.98 -23125318.82 -23125318.62 0.0089 0.0063
 Saturn -68027-06-15 10:33 J -23125273.29 -23125273.06 -23125272.82 0.0295 0.0062
 Neptune -68026-05-03 02:52 J -23124951.52 -23124951.38 -23124951.20 0.0089 0.0068
 Saturn -68026-06-29 03:21 J -23124894.56 -23124894.36 -23124894.15 0.0290 0.0146

Neptune -68025-05-04 13:11 J -23124584.07 -23124583.95 -23124583.78 0.0089 0.0073

Mars -68025-12-18 04:18 J -23124356.50 -23124356.32 -23124356.13 0.1593 0.0440

Neptune -68024-05-06 23:30 J -23124216.61 -23124216.52 -23124216.37 0.0089 0.0078

Neptune -68023-05-09 10:18 J -23123849.16 -23123849.07 -23123848.97 0.0089 0.0082

Neptune -68022-05-11 20:09 J -23123481.69 -23123481.66 -23123481.59 0.0089 0.0087

Jupiter -68022-08-21 13:25 J -23123380.13 -23123379.94 -23123379.73 0.0509 0.0251

Uranus -68015-01-23 06:42 J -23121033.45 -23121033.22 -23121033.00 0.0136 0.0067

Jupiter -68015-03-09 07:25 J -23120988.30 -23120988.19 -23120988.09 0.0519 0.0463

Uranus -68014-01-27 21:49 J -23120663.85 -23120663.59 -23120663.33 0.0136 0.0006

Uranus -68013-02-01 11:59 J -23120294.20 -23120294.00 -23120293.78 0.0135 0.0077

Saturn -68012-12-07 11:01 J -23119619.25 -23119619.04 -23119618.81 0.0266 0.0136

Saturn -68011-12-19 22:33 J -23119241.80 -23119241.56 -23119241.30 0.0269 0.0029

Jupiter -68010-08-26 04:04 J -23118992.56 -23118992.33 -23118992.10 0.0508 0.0002

Saturn -68009-01-01 19:40 J -23118863.83 -23118863.68 -23118863.50 0.0274 0.0204

68TH MILLENNIUM BCE

This is a list of transits of Earth in the 68th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-67998-06-09 08:09 J	-23114687.36	-23114687.16	-23114686.96	0.0297	0.0164		
Jupiter	-67998-08-30 12:57 J	-23114605.16	-23114604.96	-23114604.75	0.0507	0.0240		
Saturn	-67997-06-22 07:11 J	-23114308.44	-23114308.20	-23114307.97	0.0293	0.0053		
Saturn	-67996-07-05 17:59 J	-23113929.85	-23113929.75	-23113929.62	0.0288	0.0252		
Jupiter	-67986-09-04 01:54 J	-23110217.49	-23110217.42	-23110217.35	0.0506	0.0483		

Pluto -67983-10-12 01:54 J -23109083.66 -23109083.42 -23109083.16 0.0064 0.0015
 Saturn -67983-12-02 08:09 J -23109032.31 -23109032.16 -23109032.01 0.0263 0.0208
 Saturn -67982-12-14 15:06 J -23108655.12 -23108654.87 -23108654.63 0.0267 0.0050
 Saturn -67981-12-26 06:57 J -23108277.43 -23108277.21 -23108276.98 0.0271 0.0120
 Neptune -67974-08-23 18:42 J -23105845.76 -23105845.72 -23105845.67 0.0089 0.0088
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 Neptune -67972-08-27 16:04 J -23105110.93 -23105110.83 -23105110.69 0.0089 0.0079
 Uranus -67971-07-21 18:13 J -23104782.93 -23104782.74 -23104782.55 0.0142 0.0089
 Neptune -67971-08-30 03:06 J -23104743.50 -23104743.37 -23104743.21 0.0089 0.0074
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 Neptune -67970-09-01 14:09 J -23104376.06 -23104375.91 -23104375.73 0.0089 0.0069
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 Uranus -67969-07-30 04:04 J -23104043.53 -23104043.33 -23104043.10 0.0144 0.0075
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 Jupiter -67968-02-21 20:52 J -23103836.80 -23103836.63 -23103836.46 0.0516 0.0363
 Saturn -67968-06-16 07:11 J -23103722.43 -23103722.20 -23103721.96 0.0295 0.0047
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 Saturn -67967-06-29 23:59 J -23103343.70 -23103343.50 -23103343.30 0.0290 0.0161
 Neptune -67967-09-07 23:30 J -23103273.71 -23103273.52 -23103273.30 0.0089 0.0053
 Neptune -67966-09-10 11:01 J -23102906.25 -23102906.04 -23102905.82 0.0089 0.0048
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 Neptune -67944-10-29 16:18 J -23094820.92 -23094820.82 -23094820.65 0.0089 0.0076
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Saturn -67923-12-15 09:35 J -23087104.35 -23087104.10 -23087103.85 0.0267 0.0039
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 Saturn -67849-07-01 11:01 J -23060242.22 -23060242.04 -23060241.85 0.0291 0.0186
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 Uranus -67846-01-28 12:42 J -23059301.23 -23059300.97 -23059300.71 0.0136 0.0010
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 Saturn -67832-01-04 04:18 J -23054211.44 -23054211.32 -23054211.20 0.0273 0.0240
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 Jupiter -67737-09-02 12:13 J -23019271.07 -23019270.99 -23019270.88 0.0506 0.0459
 Pluto -67737-10-12 08:52 J -23019231.34 -23019231.13 -23019230.88 0.0064 0.0029
 Pluto -67736-10-13 21:35 J -23018864.69 -23018864.60 -23018864.48 0.0065 0.0059
 Saturn -67733-06-06 02:37 J -23017898.54 -23017898.39 -23017898.22 0.0300 0.0222
 Saturn -67732-06-20 07:25 J -23017519.43 -23017519.19 -23017518.95 0.0296 0.0003
 Saturn -67731-07-04 00:42 J -23017140.63 -23017140.47 -23017140.31 0.0291 0.0211
 Neptune -67728-02-23 18:13 J -23016174.79 -23016174.74 -23016174.67 0.0088 0.0086
 Neptune -67727-02-26 06:28 J -23015807.30 -23015807.23 -23015807.10 0.0088 0.0081
 Neptune -67726-02-28 19:11 J -23015439.81 -23015439.70 -23015439.55 0.0088 0.0076

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 Neptune -67723-03-07 08:23 J -23014337.33 -23014337.15 -23014336.95 0.0088 0.0062
 Neptune -67722-03-09 20:37 J -23013969.83 -23013969.64 -23013969.43 0.0088 0.0057
 Neptune -67721-03-11 08:37 J -23013602.33 -23013602.14 -23013601.91 0.0088 0.0052
 Neptune -67720-03-13 20:37 J -23013234.84 -23013234.64 -23013234.40 0.0088 0.0047
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 Neptune -67719-03-16 09:06 J -23012867.35 -23012867.12 -23012866.88 0.0088 0.0041
 Uranus -67719-07-22 12:57 J -23012739.14 -23012738.96 -23012738.75 0.0142 0.0087
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 Uranus -67718-07-27 05:30 J -23012369.52 -23012369.27 -23012369.02 0.0143 0.0006
 Saturn -67718-12-01 17:16 J -23012241.88 -23012241.78 -23012241.64 0.0262 0.0232
 Neptune -67717-03-20 09:21 J -23012132.36 -23012132.11 -23012131.87 0.0088 0.0030
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 Neptune -67695-05-08 11:30 J -23004048.09 -23004048.02 -23004047.93 0.0089 0.0084
 Neptune -67694-05-10 21:35 J -23003680.60 -23003680.60 -23003680.56 0.0089 0.0089
 Jupiter -67690-08-20 09:06 J -23002118.30 -23002118.12 -23002117.93 0.0509 0.0299
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 Uranus -67679-01-24 08:37 J -22998308.36 -22998308.14 -22998307.89 0.0136 0.0062
 Uranus -67678-01-29 00:28 J -22997938.74 -22997938.48 -22997938.22 0.0136 0.0013
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 Saturn -67673-06-21 07:25 J -22995968.43 -22995968.19 -22995967.95 0.0295 0.0019
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 Jupiter -67666-08-29 08:52 J -22993343.34 -22993343.13 -22993342.92 0.0507 0.0198
 Mars -67662-12-22 13:54 J -22991767.09 -22991766.92 -22991766.76 0.1593 0.0825
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 Saturn -67658-12-15 00:57 J -22990313.70 -22990313.46 -22990313.21 0.0266 0.0059

Saturn -67657-12-26 12:42 J -22989936.20 -22989935.97 -22989935.74 0.0269 0.0110
 Jupiter -67654-09-02 22:18 J -22988955.68 -22988955.57 -22988955.47 0.0506 0.0446
 Pluto -67648-04-19 06:13 J -22986900.50 -22986900.24 -22986899.99 0.0080 0.0008
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 Saturn -67644-06-15 08:09 J -22985382.39 -22985382.16 -22985381.93 0.0297 0.0085
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 Neptune -67642-08-31 14:23 J -22984575.07 -22984574.90 -22984574.69 0.0089 0.0060
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 Jupiter -67636-02-20 05:01 J -22982575.42 -22982575.29 -22982575.15 0.0516 0.0426
 Neptune -67636-09-13 09:49 J -22982370.32 -22982370.09 -22982369.83 0.0089 0.0029
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 Neptune -67635-09-15 21:35 J -22982002.84 -22982002.60 -22982002.35 0.0089 0.0023
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 Neptune -67634-09-18 08:52 J -22981635.37 -22981635.13 -22981634.87 0.0089 0.0018
 Uranus -67633-07-31 09:21 J -22981318.31 -22981318.11 -22981317.90 0.0143 0.0082
 Neptune -67633-09-19 20:37 J -22981267.89 -22981267.64 -22981267.38 0.0089 0.0012
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 Saturn -67629-12-09 02:09 J -22979726.63 -22979726.41 -22979726.20 0.0264 0.0131

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 Saturn -67628-12-21 10:04 J -22979349.33 -22979349.08 -22979348.83 0.0267 0.0032
 Neptune -67627-10-03 20:23 J -22979062.90 -22979062.65 -22979062.40 0.0089 0.0021
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 Neptune -67624-10-10 08:52 J -22977960.35 -22977960.13 -22977959.88 0.0089 0.0037
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 Neptune -67621-10-16 22:04 J -22976857.77 -22976857.58 -22976857.36 0.0089 0.0053
 Neptune -67620-10-19 10:33 J -22976490.24 -22976490.06 -22976489.85 0.0089 0.0058
 Neptune -67619-10-21 23:30 J -22976122.70 -22976122.52 -22976122.34 0.0089 0.0063
 Neptune -67618-10-24 12:13 J -22975755.15 -22975754.99 -22975754.82 0.0089 0.0068
 Neptune -67617-10-26 01:11 J -22975387.59 -22975387.45 -22975387.30 0.0089 0.0073
 Neptune -67616-10-28 13:54 J -22975020.03 -22975019.92 -22975019.78 0.0089 0.0078
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 Neptune -67615-10-31 02:37 J -22974652.46 -22974652.39 -22974652.27 0.0089 0.0083
 Mars -67615-12-16 11:45 J -22974606.06 -22974606.01 -22974605.97 0.1583 0.1535
 Saturn -67614-06-23 12:42 J -22974417.20 -22974416.97 -22974416.73 0.0295 0.0040
 Neptune -67614-11-02 16:04 J -22974284.87 -22974284.83 -22974284.77 0.0089 0.0087
 Saturn -67613-07-06 04:18 J -22974038.44 -22974038.32 -22974038.19 0.0290 0.0245
 Jupiter -67612-03-02 04:47 J -22973799.53 -22973799.30 -22973799.07 0.0518 0.0127
 Jupiter -67607-08-19 13:54 J -22971803.09 -22971802.92 -22971802.74 0.0510 0.0325
 Jupiter -67600-03-07 01:54 J -22969411.57 -22969411.42 -22969411.27 0.0519 0.0397
 Saturn -67600-12-04 04:33 J -22969139.47 -22969139.31 -22969139.14 0.0263 0.0199
 Saturn -67599-12-16 09:06 J -22968762.36 -22968762.12 -22968761.87 0.0266 0.0040
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 Uranus -67596-01-20 00:57 J -22967996.48 -22967996.46 -22967996.40 0.0137 0.0135
 Uranus -67595-01-24 17:16 J -22967627.00 -22967626.78 -22967626.53 0.0136 0.0059

Jupiter -67595-08-24 03:06 J -22967415.59 -22967415.37 -22967415.14 0.0509 0.0073
 Uranus -67594-01-29 09:06 J -22967257.38 -22967257.12 -22967256.86 0.0136 0.0016
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 Saturn -67586-06-03 09:21 J -22964210.17 -22964210.11 -22964210.04 0.0300 0.0287
 Saturn -67585-06-16 16:47 J -22963831.03 -22963830.80 -22963830.56 0.0296 0.0062
 Saturn -67584-06-30 13:11 J -22963452.14 -22963451.95 -22963451.74 0.0292 0.0153
 Jupiter -67583-08-28 15:35 J -22963028.07 -22963027.85 -22963027.64 0.0507 0.0179
 Mars -67576-06-20 16:33 J -22960539.99 -22960539.81 -22960539.63 0.1961 0.0719
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 Saturn -67570-12-11 11:01 J -22958175.26 -22958175.04 -22958174.81 0.0265 0.0112
 Saturn -67569-12-22 20:23 J -22957797.90 -22957797.65 -22957797.40 0.0268 0.0053
 Saturn -67567-01-04 14:23 J -22957420.02 -22957419.90 -22957419.75 0.0272 0.0227
 Neptune -67565-02-21 15:35 J -22956641.90 -22956641.85 -22956641.78 0.0088 0.0086
 Neptune -67564-02-23 04:04 J -22956274.40 -22956274.33 -22956274.20 0.0088 0.0082
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 Neptune -67562-02-28 06:13 J -22955539.39 -22955539.24 -22955539.08 0.0088 0.0072
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Saturn -67527-06-05 01:11 J -22942658.57 -22942658.45 -22942658.33 0.0300 0.0260
 Saturn -67526-06-19 07:11 J -22942279.44 -22942279.20 -22942278.96 0.0296 0.0035
 Saturn -67525-07-02 02:09 J -22941900.60 -22941900.41 -22941900.22 0.0291 0.0178
 Jupiter -67524-08-18 19:11 J -22941487.86 -22941487.70 -22941487.53 0.0510 0.0348
 Jupiter -67517-03-05 22:47 J -22939096.71 -22939096.55 -22939096.37 0.0519 0.0360
 Uranus -67512-01-20 11:45 J -22937315.08 -22937315.01 -22937314.94 0.0137 0.0131
 Jupiter -67512-08-23 07:11 J -22937100.42 -22937100.20 -22937099.97 0.0508 0.0098
 Saturn -67512-11-30 20:09 J -22937000.74 -22937000.66 -22937000.57 0.0262 0.0245
 Uranus -67511-01-25 03:49 J -22936945.57 -22936945.34 -22936945.10 0.0136 0.0055
 Saturn -67511-12-12 22:47 J -22936623.78 -22936623.55 -22936623.31 0.0265 0.0090
 Uranus -67510-01-29 19:25 J -22936575.95 -22936575.69 -22936575.43 0.0136 0.0019
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 Saturn -67496-06-26 14:37 J -22931314.11 -22931313.89 -22931313.66 0.0294 0.0092
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Mars -67457-12-20 16:33 J -22916892.00 -22916891.81 -22916891.62 0.1587 0.0259
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 Uranus -67428-01-20 22:04 J -22906633.65 -22906633.58 -22906633.46 0.0137 0.0128
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Pluto -67402-04-20 07:11 J -22897048.30 -22897048.20 -22897048.04 0.0080 0.0069
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 Neptune -67378-04-13 13:54 J -22888289.15 -22888288.92 -22888288.68 0.0088 0.0036
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 Jupiter -67061-09-02 07:54 J -22772362.21 -22772362.17 -22772362.12 0.0507 0.0496
 Neptune -67060-03-20 13:40 J -22772163.19 -22772162.93 -22772162.67 0.0088 0.0009
 Neptune -67059-03-23 01:40 J -22771795.69 -22771795.43 -22771795.17 0.0088 0.0004
 Neptune -67058-03-25 13:11 J -22771428.20 -22771427.95 -22771427.68 0.0088 0.0003

Neptune -67057-03-27 01:11 J -22771060.70 -22771060.45 -22771060.18 0.0088 0.0007
 Neptune -67056-03-29 12:57 J -22770693.21 -22770692.96 -22770692.70 0.0088 0.0012
 Saturn -67056-06-04 23:59 J -22770625.59 -22770625.50 -22770625.40 0.0302 0.0277
 Neptune -67055-04-01 00:28 J -22770325.72 -22770325.48 -22770325.21 0.0088 0.0017
 Saturn -67055-06-19 10:33 J -22770246.30 -22770246.06 -22770245.82 0.0298 0.0044
 Neptune -67054-04-03 12:13 J -22769958.23 -22769957.99 -22769957.73 0.0088 0.0022
 Saturn -67054-07-03 10:04 J -22769867.27 -22769867.08 -22769866.89 0.0293 0.0177
 Neptune -67053-04-04 23:45 J -22769590.74 -22769590.51 -22769590.25 0.0088 0.0028
 Neptune -67052-04-07 11:16 J -22769223.25 -22769223.03 -22769222.77 0.0088 0.0033
 Neptune -67051-04-09 22:33 J -22768855.77 -22768855.56 -22768855.30 0.0088 0.0038
 Neptune -67050-04-12 09:49 J -22768488.29 -22768488.09 -22768487.84 0.0088 0.0043
 Neptune -67049-04-13 21:21 J -22768120.82 -22768120.61 -22768120.38 0.0088 0.0047
 Neptune -67048-04-16 08:23 J -22767753.35 -22767753.15 -22767752.93 0.0088 0.0052
 Neptune -67047-04-18 18:57 J -22767385.89 -22767385.71 -22767385.49 0.0088 0.0056
 Uranus -67047-07-25 14:52 J -22767288.09 -22767287.88 -22767287.65 0.0142 0.0067
 Mars -67047-12-19 02:09 J -22767141.57 -22767141.41 -22767141.25 0.1578 0.0825
 Neptune -67046-04-21 05:59 J -22767018.42 -22767018.25 -22767018.04 0.0088 0.0061
 Uranus -67046-07-30 07:40 J -22766918.43 -22766918.18 -22766917.94 0.0143 0.0018
 Neptune -67045-04-22 16:47 J -22766650.95 -22766650.80 -22766650.60 0.0088 0.0066
 Uranus -67045-08-03 00:42 J -22766548.63 -22766548.47 -22766548.29 0.0143 0.0104
 Neptune -67044-04-25 03:35 J -22766283.48 -22766283.35 -22766283.17 0.0089 0.0070
 Jupiter -67043-02-20 09:06 J -22765982.27 -22765982.12 -22765981.96 0.0514 0.0392
 Neptune -67043-04-27 14:37 J -22765916.02 -22765915.89 -22765915.74 0.0089 0.0074
 Neptune -67042-04-30 01:25 J -22765548.55 -22765548.44 -22765548.31 0.0089 0.0078
 Neptune -67041-05-01 12:13 J -22765181.07 -22765180.99 -22765180.89 0.0089 0.0082
 Saturn -67041-11-30 21:21 J -22764967.66 -22764967.61 -22764967.54 0.0261 0.0253
 Neptune -67040-05-03 22:47 J -22764813.60 -22764813.55 -22764813.48 0.0089 0.0086
 Saturn -67040-12-12 19:54 J -22764590.90 -22764590.67 -22764590.43 0.0264 0.0098
 Saturn -67039-12-25 01:54 J -22764213.66 -22764213.42 -22764213.17 0.0267 0.0069
 Saturn -67037-01-06 16:47 J -22763835.90 -22763835.80 -22763835.68 0.0271 0.0243

Jupiter -67031-02-25 09:49 J -22761594.32 -22761594.09 -22761593.86 0.0516 0.0111
 Saturn -67026-06-13 03:21 J -22759660.55 -22759660.36 -22759660.14 0.0300 0.0156
 Saturn -67025-06-26 09:06 J -22759281.35 -22759281.12 -22759280.88 0.0296 0.0076
 Saturn -67024-07-10 03:06 J -22758902.40 -22758902.37 -22758902.32 0.0291 0.0287
 Jupiter -67019-03-02 11:30 J -22757206.24 -22757206.02 -22757205.80 0.0517 0.0177
 Jupiter -67014-08-20 04:47 J -22755209.49 -22755209.30 -22755209.11 0.0510 0.0285
 Saturn -67011-12-07 18:13 J -22754003.92 -22754003.74 -22754003.55 0.0262 0.0173
 Saturn -67010-12-19 20:09 J -22753626.91 -22753626.66 -22753626.40 0.0265 0.0013
 Saturn -67009-12-31 06:28 J -22753249.42 -22753249.23 -22753249.02 0.0269 0.0159
 Uranus -67008-01-22 20:37 J -22753226.76 -22753226.64 -22753226.47 0.0137 0.0113
 Uranus -67007-01-27 13:40 J -22752857.18 -22752856.93 -22752856.67 0.0136 0.0035
 Jupiter -67007-03-07 11:59 J -22752818.11 -22752818.00 -22752817.90 0.0518 0.0462
 Uranus -67006-02-01 05:30 J -22752487.51 -22752487.27 -22752487.02 0.0136 0.0042
 Uranus -67005-02-05 19:54 J -22752117.79 -22752117.67 -22752117.54 0.0135 0.0118
 Jupiter -67002-08-24 17:30 J -22750822.00 -22750821.77 -22750821.54 0.0509 0.0028

67TH MILLENNIUM BCE

This is a list of transits of Earth in the 67th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Pluto -66998-10-17 17:45 J -22749307.01 -22749306.76 -22749306.49 0.0064 0.0012
 Saturn -66997-06-05 17:59 J -22749074.86 -22749074.75 -22749074.64 0.0302 0.0265
 Saturn -66996-06-20 04:33 J -22748695.55 -22748695.31 -22748695.07 0.0298 0.0031
 Neptune -66996-08-07 01:54 J -22748647.44 -22748647.42 -22748647.34 0.0089 0.0087

Saturn -66995-07-04 04:04 J -22748316.50 -22748316.33 -22748316.14 0.0293 0.0191
 Neptune -66995-08-09 11:59 J -22748280.06 -22748280.00 -22748279.89 0.0089 0.0084
 Neptune -66994-08-11 22:18 J -22747912.66 -22747912.57 -22747912.43 0.0089 0.0080
 Neptune -66993-08-13 08:23 J -22747545.26 -22747545.15 -22747544.99 0.0089 0.0075
 Neptune -66992-08-15 18:42 J -22747177.85 -22747177.72 -22747177.54 0.0089 0.0071
 Neptune -66991-08-18 05:30 J -22746810.42 -22746810.27 -22746810.09 0.0089 0.0066
 Neptune -66990-08-20 15:49 J -22746443.00 -22746442.84 -22746442.64 0.0089 0.0062
 Jupiter -66990-08-29 07:54 J -22746434.37 -22746434.17 -22746433.96 0.0509 0.0234
 Neptune -66989-08-22 02:37 J -22746075.57 -22746075.39 -22746075.18 0.0089 0.0057
 Neptune -66988-08-24 12:42 J -22745708.15 -22745707.97 -22745707.74 0.0089 0.0054
 Neptune -66987-08-26 23:30 J -22745340.71 -22745340.52 -22745340.28 0.0089 0.0049
 Neptune -66986-08-29 10:18 J -22744973.27 -22744973.07 -22744972.83 0.0089 0.0043
 Neptune -66985-08-30 21:06 J -22744605.84 -22744605.62 -22744605.38 0.0089 0.0038
 Neptune -66984-09-02 07:54 J -22744238.40 -22744238.17 -22744237.92 0.0089 0.0033
 Neptune -66983-09-04 18:57 J -22743870.95 -22743870.71 -22743870.47 0.0089 0.0028
 Neptune -66982-09-07 05:45 J -22743503.50 -22743503.26 -22743503.01 0.0089 0.0023
 Saturn -66982-12-02 16:04 J -22743416.91 -22743416.83 -22743416.73 0.0261 0.0243
 Neptune -66981-09-08 16:33 J -22743136.05 -22743135.81 -22743135.55 0.0089 0.0019
 Saturn -66981-12-13 14:23 J -22743040.14 -22743039.90 -22743039.66 0.0264 0.0087
 Neptune -66980-09-11 03:49 J -22742768.59 -22742768.34 -22742768.08 0.0089 0.0013
 Saturn -66980-12-25 20:09 J -22742662.90 -22742662.66 -22742662.42 0.0267 0.0080
 Neptune -66979-09-13 14:52 J -22742401.13 -22742400.88 -22742400.62 0.0089 0.0008
 Saturn -66978-01-07 10:33 J -22742285.13 -22742285.06 -22742284.96 0.0271 0.0255
 Jupiter -66978-09-02 22:18 J -22742046.61 -22742046.57 -22742046.51 0.0507 0.0492
 Neptune -66978-09-16 02:23 J -22742033.65 -22742033.40 -22742033.14 0.0089 0.0003
 Neptune -66977-09-17 13:40 J -22741666.18 -22741665.93 -22741665.67 0.0089 0.0003
 Neptune -66976-09-20 01:11 J -22741298.70 -22741298.45 -22741298.19 0.0089 0.0008
 Neptune -66975-09-22 12:42 J -22740931.22 -22740930.97 -22740930.71 0.0089 0.0013
 Neptune -66974-09-24 23:59 J -22740563.74 -22740563.50 -22740563.24 0.0089 0.0018
 Neptune -66973-09-26 11:45 J -22740196.25 -22740196.01 -22740195.76 0.0089 0.0023

Neptune -66972-09-28 23:16 J -22739828.77 -22739828.53 -22739828.28 0.0089 0.0028
 Neptune -66971-10-01 11:01 J -22739461.27 -22739461.04 -22739460.79 0.0089 0.0033
 Neptune -66970-10-03 22:47 J -22739093.78 -22739093.55 -22739093.31 0.0089 0.0038
 Neptune -66969-10-05 10:33 J -22738726.27 -22738726.06 -22738725.82 0.0089 0.0043
 Neptune -66968-10-07 22:33 J -22738358.77 -22738358.56 -22738358.34 0.0089 0.0048
 Mars -66968-12-21 04:18 J -22738284.51 -22738284.32 -22738284.13 0.1580 0.0063
 Saturn -66967-06-13 19:40 J -22738109.88 -22738109.68 -22738109.46 0.0300 0.0145
 Neptune -66967-10-10 10:33 J -22737991.25 -22737991.06 -22737990.84 0.0089 0.0053
 Saturn -66966-06-28 01:25 J -22737730.66 -22737730.44 -22737730.21 0.0296 0.0087
 Neptune -66966-10-12 22:33 J -22737623.73 -22737623.56 -22737623.34 0.0089 0.0058
 Neptune -66965-10-14 10:47 J -22737256.21 -22737256.05 -22737255.84 0.0089 0.0063
 Neptune -66964-10-16 23:45 J -22736888.67 -22736888.51 -22736888.33 0.0089 0.0067
 Uranus -66963-07-26 03:49 J -22736606.55 -22736606.34 -22736606.10 0.0142 0.0061
 Neptune -66963-10-19 11:45 J -22736521.14 -22736521.01 -22736520.84 0.0089 0.0072
 Uranus -66962-07-30 20:23 J -22736236.89 -22736236.65 -22736236.40 0.0143 0.0024
 Neptune -66962-10-22 00:28 J -22736153.59 -22736153.48 -22736153.33 0.0089 0.0076
 Uranus -66961-08-03 13:54 J -22735867.08 -22735866.92 -22735866.76 0.0143 0.0110
 Neptune -66961-10-23 12:42 J -22735786.05 -22735785.97 -22735785.84 0.0089 0.0081
 Jupiter -66960-02-19 21:49 J -22735666.73 -22735666.59 -22735666.44 0.0515 0.0399
 Neptune -66960-10-26 01:25 J -22735418.49 -22735418.44 -22735418.34 0.0089 0.0085
 Neptune -66959-10-28 14:23 J -22735050.90 -22735050.90 -22735050.87 0.0089 0.0089
 Saturn -66952-12-08 12:28 J -22732453.17 -22732452.98 -22732452.78 0.0262 0.0163
 Saturn -66951-12-20 14:09 J -22732076.16 -22732075.91 -22732075.65 0.0265 0.0005
 Saturn -66949-01-02 00:13 J -22731698.68 -22731698.49 -22731698.30 0.0268 0.0170
 Jupiter -66948-02-24 22:47 J -22731278.78 -22731278.55 -22731278.32 0.0516 0.0114
 Saturn -66938-06-07 09:35 J -22727524.22 -22727524.10 -22727523.96 0.0302 0.0255
 Saturn -66937-06-20 20:37 J -22727144.88 -22727144.64 -22727144.40 0.0298 0.0020
 Jupiter -66936-03-01 22:33 J -22726890.78 -22726890.56 -22726890.33 0.0517 0.0168
 Saturn -66936-07-04 20:23 J -22726765.81 -22726765.65 -22726765.47 0.0293 0.0202
 Jupiter -66931-08-19 17:30 J -22724893.95 -22724893.77 -22724893.58 0.0511 0.0294

Mars -66929-06-22 06:42 J -22724221.41 -22724221.22 -22724221.02 0.1969 0.0295
 Uranus -66924-01-23 10:18 J -22722545.21 -22722545.07 -22722544.89 0.0137 0.0107
 Jupiter -66924-03-06 20:37 J -22722502.75 -22722502.64 -22722502.52 0.0518 0.0446
 Uranus -66923-01-28 03:06 J -22722175.62 -22722175.37 -22722175.11 0.0136 0.0029
 Saturn -66923-12-03 10:33 J -22721866.16 -22721866.06 -22721865.94 0.0261 0.0233
 Uranus -66922-02-01 18:28 J -22721805.96 -22721805.73 -22721805.48 0.0136 0.0049
 Saturn -66922-12-15 08:37 J -22721489.38 -22721489.14 -22721488.90 0.0263 0.0076
 Uranus -66921-02-06 08:37 J -22721436.22 -22721436.14 -22721436.02 0.0135 0.0124
 Saturn -66921-12-26 14:09 J -22721112.14 -22721111.91 -22721111.67 0.0267 0.0091
 Saturn -66919-01-08 04:33 J -22720734.34 -22720734.31 -22720734.25 0.0271 0.0266
 Jupiter -66919-08-24 08:23 J -22720506.38 -22720506.15 -22720505.92 0.0510 0.0033
 Neptune -66913-02-09 20:37 J -22718510.68 -22718510.64 -22718510.55 0.0088 0.0086
 Neptune -66912-02-11 10:04 J -22718143.16 -22718143.08 -22718142.96 0.0088 0.0082
 Neptune -66911-02-13 23:01 J -22717775.64 -22717775.54 -22717775.39 0.0088 0.0078
 Neptune -66910-02-16 12:57 J -22717408.11 -22717407.96 -22717407.81 0.0088 0.0073
 Neptune -66909-02-19 01:40 J -22717040.58 -22717040.43 -22717040.25 0.0088 0.0068
 Pluto -66909-04-23 11:16 J -22716976.27 -22716976.03 -22716975.77 0.0080 0.0020
 Neptune -66908-02-20 14:52 J -22716673.06 -22716672.88 -22716672.70 0.0088 0.0064
 Saturn -66908-06-14 11:30 J -22716559.23 -22716559.02 -22716558.80 0.0300 0.0134
 Neptune -66907-02-23 03:21 J -22716305.53 -22716305.36 -22716305.15 0.0088 0.0060
 Saturn -66907-06-28 17:16 J -22716180.00 -22716179.78 -22716179.55 0.0296 0.0098
 Jupiter -66907-08-28 19:40 J -22716118.89 -22716118.68 -22716118.47 0.0508 0.0224
 Neptune -66906-02-25 16:18 J -22715938.02 -22715937.82 -22715937.61 0.0088 0.0055
 Neptune -66905-02-28 04:47 J -22715570.49 -22715570.30 -22715570.06 0.0088 0.0050
 Neptune -66904-03-01 17:30 J -22715202.97 -22715202.77 -22715202.52 0.0088 0.0045
 Neptune -66903-03-04 06:13 J -22714835.46 -22714835.24 -22714834.99 0.0088 0.0040
 Neptune -66902-03-06 18:42 J -22714467.94 -22714467.72 -22714467.46 0.0088 0.0036
 Neptune -66901-03-08 07:40 J -22714100.42 -22714100.18 -22714099.93 0.0088 0.0030
 Neptune -66900-03-10 19:54 J -22713732.90 -22713732.67 -22713732.40 0.0088 0.0026
 Neptune -66899-03-13 08:23 J -22713365.39 -22713365.15 -22713364.88 0.0088 0.0021

Neptune -66898-03-15 20:52 J -22712997.88 -22712997.63 -22712997.36 0.0088 0.0015
 Neptune -66897-03-17 09:21 J -22712630.37 -22712630.11 -22712629.85 0.0088 0.0010
 Neptune -66896-03-19 21:35 J -22712262.86 -22712262.60 -22712262.34 0.0088 0.0005
 Neptune -66895-03-22 09:21 J -22711895.37 -22711895.11 -22711894.85 0.0088 0.0000
 Jupiter -66895-09-02 08:23 J -22711731.21 -22711731.15 -22711731.07 0.0507 0.0479
 Neptune -66894-03-24 21:21 J -22711527.87 -22711527.61 -22711527.35 0.0088 0.0006
 Neptune -66893-03-26 09:06 J -22711160.37 -22711160.12 -22711159.86 0.0088 0.0011
 Saturn -66893-12-09 07:25 J -22710902.38 -22710902.19 -22710901.98 0.0262 0.0153
 Neptune -66892-03-28 20:52 J -22710792.88 -22710792.63 -22710792.37 0.0088 0.0016
 Saturn -66892-12-21 09:21 J -22710525.36 -22710525.11 -22710524.86 0.0265 0.0010
 Neptune -66891-03-31 08:37 J -22710425.39 -22710425.14 -22710424.88 0.0088 0.0021
 Saturn -66890-01-02 18:57 J -22710147.88 -22710147.71 -22710147.52 0.0268 0.0181
 Neptune -66890-04-02 20:23 J -22710057.90 -22710057.65 -22710057.40 0.0088 0.0026
 Neptune -66889-04-04 07:54 J -22709690.40 -22709690.17 -22709689.92 0.0088 0.0031
 Mars -66889-12-23 06:28 J -22709427.38 -22709427.23 -22709427.08 0.1582 0.0966
 Neptune -66888-04-06 19:25 J -22709322.91 -22709322.69 -22709322.44 0.0088 0.0036
 Neptune -66887-04-09 06:57 J -22708955.43 -22708955.21 -22708954.97 0.0088 0.0041
 Neptune -66886-04-11 18:13 J -22708587.94 -22708587.74 -22708587.50 0.0088 0.0046
 Neptune -66885-04-13 06:13 J -22708220.45 -22708220.24 -22708220.03 0.0088 0.0050
 Neptune -66884-04-15 17:01 J -22707852.98 -22707852.79 -22707852.58 0.0088 0.0055
 Neptune -66883-04-18 04:18 J -22707485.50 -22707485.32 -22707485.12 0.0088 0.0059
 Neptune -66882-04-20 15:06 J -22707118.03 -22707117.87 -22707117.68 0.0088 0.0064
 Neptune -66881-04-22 02:09 J -22706750.56 -22706750.41 -22706750.23 0.0088 0.0068
 Neptune -66880-04-24 13:11 J -22706383.09 -22706382.95 -22706382.80 0.0088 0.0072
 Uranus -66880-07-21 22:33 J -22706294.57 -22706294.56 -22706294.52 0.0142 0.0141
 Neptune -66879-04-26 23:59 J -22706015.63 -22706015.50 -22706015.37 0.0089 0.0076
 Saturn -66879-06-08 01:40 J -22705973.56 -22705973.43 -22705973.28 0.0302 0.0245
 Uranus -66879-07-26 14:23 J -22705925.12 -22705924.90 -22705924.67 0.0142 0.0058
 Neptune -66878-04-29 10:18 J -22705648.15 -22705648.07 -22705647.93 0.0089 0.0081
 Saturn -66878-06-22 12:42 J -22705594.21 -22705593.97 -22705593.73 0.0298 0.0008

Uranus -66878-07-31 06:42 J -22705555.45 -22705555.22 -22705554.97 0.0143 0.0028
 Jupiter -66877-02-20 09:35 J -22705351.24 -22705351.10 -22705350.95 0.0515 0.0406
 Neptune -66877-04-30 21:21 J -22705280.67 -22705280.61 -22705280.52 0.0089 0.0084
 Saturn -66877-07-05 12:28 J -22705215.13 -22705214.98 -22705214.81 0.0294 0.0214
 Uranus -66877-08-04 00:28 J -22705185.63 -22705185.48 -22705185.33 0.0144 0.0114
 Neptune -66876-05-03 07:54 J -22704913.18 -22704913.17 -22704913.12 0.0089 0.0088
 Jupiter -66865-02-25 07:40 J -22700963.41 -22700963.18 -22700962.95 0.0516 0.0130
 Saturn -66864-12-04 05:59 J -22700315.36 -22700315.25 -22700315.11 0.0261 0.0223
 Saturn -66863-12-16 04:18 J -22699938.56 -22699938.32 -22699938.07 0.0263 0.0065
 Saturn -66862-12-28 09:49 J -22699561.31 -22699561.09 -22699560.85 0.0267 0.0103
 Jupiter -66853-03-01 08:09 J -22696575.39 -22696575.16 -22696574.93 0.0517 0.0153
 Saturn -66849-06-15 04:33 J -22695008.52 -22695008.31 -22695008.08 0.0300 0.0123
 Saturn -66848-06-29 10:18 J -22694629.29 -22694629.07 -22694628.84 0.0296 0.0109
 Jupiter -66848-08-19 06:13 J -22694578.42 -22694578.24 -22694578.05 0.0510 0.0302
 Mars -66842-12-18 08:09 J -22692266.26 -22692266.16 -22692266.06 0.1575 0.1343
 Jupiter -66841-03-06 08:23 J -22692187.27 -22692187.15 -22692187.03 0.0519 0.0442
 Uranus -66840-01-24 00:28 J -22691863.64 -22691863.48 -22691863.29 0.0137 0.0101
 Uranus -66839-01-28 16:47 J -22691494.05 -22691493.80 -22691493.53 0.0136 0.0023
 Uranus -66838-02-02 08:23 J -22691124.38 -22691124.15 -22691123.91 0.0136 0.0055
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 Neptune -66633-10-22 01:54 J -22615985.47 -22615985.42 -22615985.32 0.0089 0.0085
 Neptune -66632-10-24 14:37 J -22615617.89 -22615617.89 -22615617.86 0.0089 0.0089
 Jupiter -66628-02-17 22:33 J -22614405.63 -22614405.56 -22614405.47 0.0514 0.0481
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 Saturn -66628-12-09 20:52 J -22614110.82 -22614110.63 -22614110.43 0.0262 0.0160
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 Uranus -66626-08-01 09:06 J -22613511.35 -22613511.12 -22613510.87 0.0143 0.0036
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 Saturn -66507-01-06 11:45 J -22570253.14 -22570253.01 -22570252.87 0.0269 0.0224
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 Neptune -66394-04-09 12:42 J -22528887.14 -22528886.97 -22528886.74 0.0088 0.0056
 Neptune -66393-04-11 00:28 J -22528519.66 -22528519.48 -22528519.28 0.0088 0.0060
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Neptune -66392-04-13 11:59 J -22528152.17 -22528152.00 -22528151.81 0.0088 0.0064
 Saturn -66392-12-16 20:52 J -22527904.87 -22527904.63 -22527904.39 0.0263 0.0069
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 Uranus -66375-07-29 09:49 J -22521836.33 -22521836.09 -22521835.84 0.0142 0.0031
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 Uranus -66336-01-27 03:21 J -22507774.57 -22507774.36 -22507774.12 0.0137 0.0067
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 Neptune -66333-08-19 11:59 J -22506474.22 -22506474.00 -22506473.77 0.0089 0.0042
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 Neptune -66332-08-21 22:04 J -22506106.80 -22506106.58 -22506106.34 0.0089 0.0037
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 Neptune -66327-09-02 01:54 J -22504269.66 -22504269.42 -22504269.15 0.0089 0.0013
 Jupiter -66326-08-25 02:09 J -22503912.64 -22503912.41 -22503912.18 0.0510 0.0027
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 Neptune -66325-09-05 23:45 J -22503534.76 -22503534.51 -22503534.25 0.0089 0.0003
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 Neptune -66322-09-13 08:09 J -22502432.41 -22502432.16 -22502431.90 0.0089 0.0013
 Neptune -66321-09-14 18:57 J -22502064.95 -22502064.71 -22502064.44 0.0089 0.0018
 Neptune -66320-09-17 05:45 J -22501697.49 -22501697.26 -22501697.00 0.0089 0.0023
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Neptune -66319-09-19 17:16 J -22501330.02 -22501329.78 -22501329.54 0.0089 0.0027
 Saturn -66318-07-01 20:37 J -22501044.85 -22501044.64 -22501044.42 0.0296 0.0121
 Neptune -66318-09-22 04:18 J -22500962.55 -22500962.32 -22500962.08 0.0089 0.0032
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 Neptune -66315-09-28 13:54 J -22499860.12 -22499859.92 -22499859.69 0.0089 0.0047
 Jupiter -66314-08-29 16:04 J -22499525.02 -22499524.83 -22499524.64 0.0509 0.0292
 Neptune -66314-10-01 01:25 J -22499492.63 -22499492.44 -22499492.21 0.0089 0.0052
 Neptune -66313-10-02 13:25 J -22499125.13 -22499124.94 -22499124.74 0.0089 0.0056
 Neptune -66312-10-05 00:42 J -22498757.63 -22498757.47 -22498757.26 0.0089 0.0061
 Neptune -66311-10-07 12:42 J -22498390.13 -22498389.97 -22498389.78 0.0089 0.0065
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 Neptune -66307-10-16 12:13 J -22496920.07 -22496919.99 -22496919.87 0.0089 0.0082
 Neptune -66306-10-19 00:13 J -22496552.53 -22496552.49 -22496552.40 0.0089 0.0086
 Saturn -66304-12-13 07:40 J -22495766.40 -22495766.18 -22495765.95 0.0262 0.0119
 Saturn -66303-12-25 09:49 J -22495389.33 -22495389.09 -22495388.84 0.0265 0.0048
 Saturn -66301-01-06 19:54 J -22495011.80 -22495011.67 -22495011.52 0.0269 0.0221
 Uranus -66292-07-25 08:09 J -22491524.30 -22491524.16 -22491523.99 0.0142 0.0110
 Uranus -66291-07-29 23:45 J -22491154.76 -22491154.51 -22491154.27 0.0142 0.0024
 Saturn -66290-06-11 13:40 J -22490838.09 -22490837.93 -22490837.76 0.0302 0.0220
 Uranus -66290-08-03 16:18 J -22490785.04 -22490784.82 -22490784.59 0.0143 0.0063
 Saturn -66289-06-25 01:25 J -22490458.68 -22490458.44 -22490458.20 0.0298 0.0021
 Saturn -66288-07-09 02:23 J -22490079.53 -22490079.40 -22490079.27 0.0294 0.0246
 Jupiter -66284-02-19 11:45 J -22488758.17 -22488758.01 -22488757.85 0.0514 0.0378
 Mars -66282-06-24 15:06 J -22487903.07 -22487902.87 -22487902.67 0.1975 0.0061
 Saturn -66275-12-08 11:45 J -22485179.17 -22485179.01 -22485178.83 0.0261 0.0191
 Saturn -66274-12-20 10:18 J -22484802.32 -22484802.07 -22484801.82 0.0263 0.0030
 Mars -66274-12-20 23:59 J -22484801.67 -22484801.50 -22484801.32 0.1571 0.0630

Saturn -66273-12-31 16:18 J -22484425.03 -22484424.82 -22484424.61 0.0267 0.0141
 Jupiter -66272-02-24 10:47 J -22484370.29 -22484370.05 -22484369.82 0.0515 0.0092
 Neptune -66261-01-28 06:42 J -22480380.23 -22480380.22 -22480380.15 0.0088 0.0088
 Neptune -66260-01-29 20:23 J -22480012.71 -22480012.65 -22480012.54 0.0088 0.0084
 Jupiter -66260-03-01 08:37 J -22479982.35 -22479982.14 -22479981.91 0.0516 0.0193
 Saturn -66260-06-19 01:54 J -22479872.65 -22479872.42 -22479872.19 0.0300 0.0087
 Pluto -66260-10-21 15:35 J -22479748.10 -22479747.85 -22479747.59 0.0064 0.0012
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 Saturn -66259-07-03 07:54 J -22479493.38 -22479493.17 -22479492.97 0.0296 0.0147
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 Neptune -66257-02-06 13:25 J -22478910.10 -22478909.94 -22478909.79 0.0088 0.0071
 Neptune -66256-02-08 02:23 J -22478542.56 -22478542.40 -22478542.22 0.0088 0.0067
 Neptune -66255-02-10 15:35 J -22478175.02 -22478174.85 -22478174.65 0.0088 0.0062
 Jupiter -66255-08-19 19:25 J -22477984.88 -22477984.69 -22477984.49 0.0511 0.0269
 Neptune -66254-02-13 04:47 J -22477807.49 -22477807.30 -22477807.09 0.0088 0.0058
 Neptune -66253-02-15 17:45 J -22477439.95 -22477439.76 -22477439.53 0.0088 0.0054
 Uranus -66252-01-27 19:11 J -22477092.92 -22477092.70 -22477092.45 0.0137 0.0059
 Neptune -66252-02-17 06:57 J -22477072.41 -22477072.21 -22477071.97 0.0088 0.0049
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 Neptune -66251-02-19 20:23 J -22476704.87 -22476704.65 -22476704.42 0.0088 0.0044
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 Neptune -66250-02-22 09:06 J -22476337.34 -22476337.12 -22476336.87 0.0088 0.0039
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 Jupiter -66248-03-06 05:01 J -22475594.37 -22475594.29 -22475594.19 0.0517 0.0475
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 Neptune -66246-03-03 13:25 J -22474867.19 -22474866.94 -22474866.68 0.0088 0.0019
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 Neptune -66245-03-05 02:09 J -22474499.66 -22474499.41 -22474499.14 0.0088 0.0014
 Saturn -66245-12-14 11:01 J -22474215.26 -22474215.04 -22474214.80 0.0262 0.0102

Neptune -66244-03-07 15:06 J -22474132.13 -22474131.87 -22474131.61 0.0088 0.0009
 Saturn -66244-12-26 13:25 J -22473838.18 -22473837.94 -22473837.70 0.0265 0.0066
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 Jupiter -66243-08-24 09:35 J -22473597.33 -22473597.10 -22473596.87 0.0510 0.0008
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 Neptune -66242-03-12 16:18 J -22473397.08 -22473396.82 -22473396.56 0.0088 0.0002
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 Saturn -66231-06-12 23:01 J -22469286.72 -22469286.54 -22469286.36 0.0302 0.0197
 Jupiter -66231-08-28 18:13 J -22469209.93 -22469209.74 -22469209.53 0.0509 0.0256
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 Neptune -66226-04-17 15:06 J -22467516.98 -22467516.87 -22467516.71 0.0088 0.0076
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 Neptune -66223-04-24 01:11 J -22466414.48 -22466414.45 -22466414.39 0.0088 0.0087
 Saturn -66216-12-09 14:09 J -22463628.09 -22463627.91 -22463627.72 0.0261 0.0175

Saturn -66215-12-21 12:28 J -22463251.23 -22463250.98 -22463250.73 0.0263 0.0014
 Saturn -66213-01-02 18:28 J -22462873.93 -22462873.73 -22462873.52 0.0267 0.0158
 Uranus -66208-07-25 17:59 J -22460842.91 -22460842.75 -22460842.59 0.0141 0.0107
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 Jupiter -66201-02-19 16:04 J -22458442.97 -22458442.83 -22458442.68 0.0514 0.0405
 Saturn -66201-06-20 07:54 J -22458321.40 -22458321.17 -22458320.93 0.0300 0.0065
 Saturn -66200-07-04 13:40 J -22457942.12 -22457941.93 -22457941.73 0.0296 0.0170
 Mars -66195-12-23 01:25 J -22455944.63 -22455944.44 -22455944.25 0.1573 0.0256
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 Saturn -66186-12-16 11:45 J -22452664.25 -22452664.01 -22452663.78 0.0262 0.0087
 Saturn -66185-12-27 13:25 J -22452287.17 -22452286.94 -22452286.70 0.0265 0.0081
 Saturn -66183-01-08 23:30 J -22451909.59 -22451909.52 -22451909.44 0.0269 0.0255
 Neptune -66181-07-23 18:57 J -22450982.73 -22450982.71 -22450982.68 0.0089 0.0089
 Neptune -66180-07-26 04:18 J -22450615.37 -22450615.32 -22450615.23 0.0089 0.0085
 Neptune -66179-07-28 14:09 J -22450248.00 -22450247.91 -22450247.79 0.0089 0.0081
 Neptune -66178-07-31 00:13 J -22449880.61 -22449880.49 -22449880.36 0.0089 0.0077
 Jupiter -66177-02-29 13:11 J -22449667.17 -22449666.95 -22449666.72 0.0516 0.0165
 Neptune -66177-08-01 09:49 J -22449513.22 -22449513.09 -22449512.94 0.0089 0.0074
 Neptune -66176-08-03 19:40 J -22449145.82 -22449145.68 -22449145.51 0.0089 0.0070
 Neptune -66175-08-06 05:30 J -22448778.43 -22448778.27 -22448778.09 0.0089 0.0065
 Neptune -66174-08-08 15:21 J -22448411.02 -22448410.86 -22448410.65 0.0089 0.0061
 Neptune -66173-08-10 01:40 J -22448043.61 -22448043.43 -22448043.22 0.0089 0.0056
 Saturn -66172-06-14 01:40 J -22447735.62 -22447735.43 -22447735.23 0.0302 0.0179
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 Jupiter -66172-08-19 01:25 J -22447669.62 -22447669.44 -22447669.25 0.0511 0.0297
 Pluto -66171-04-28 06:57 J -22447417.45 -22447417.21 -22447416.95 0.0080 0.0019
 Saturn -66171-06-28 12:57 J -22447356.19 -22447355.96 -22447355.72 0.0298 0.0064
 Neptune -66171-08-14 22:04 J -22447308.79 -22447308.58 -22447308.36 0.0089 0.0047

Saturn -66170-07-12 13:25 J -22446976.97 -22446976.94 -22446976.89 0.0294 0.0288
 Neptune -66170-08-17 07:54 J -22446941.37 -22446941.17 -22446940.92 0.0089 0.0043
 Uranus -66169-01-24 15:06 J -22446780.91 -22446780.87 -22446780.78 0.0138 0.0134
 Neptune -66169-08-18 18:28 J -22446573.95 -22446573.73 -22446573.49 0.0089 0.0038
 Uranus -66168-01-28 09:21 J -22446411.34 -22446411.11 -22446410.86 0.0137 0.0051
 Neptune -66168-08-21 04:33 J -22446206.53 -22446206.31 -22446206.06 0.0089 0.0033
 Uranus -66167-02-02 02:23 J -22446041.66 -22446041.40 -22446041.15 0.0136 0.0030
 Neptune -66167-08-23 15:06 J -22445839.11 -22445838.87 -22445838.63 0.0089 0.0028
 Uranus -66166-02-06 17:30 J -22445671.91 -22445671.77 -22445671.60 0.0136 0.0109
 Neptune -66166-08-26 01:11 J -22445471.68 -22445471.45 -22445471.19 0.0089 0.0024
 Jupiter -66165-03-05 15:06 J -22445278.97 -22445278.87 -22445278.76 0.0517 0.0461
 Neptune -66165-08-27 11:30 J -22445104.25 -22445104.02 -22445103.76 0.0089 0.0019
 Neptune -66164-08-29 22:04 J -22444736.83 -22444736.58 -22444736.32 0.0089 0.0014
 Neptune -66163-09-01 08:37 J -22444369.39 -22444369.14 -22444368.88 0.0089 0.0009
 Neptune -66162-09-03 19:11 J -22444001.95 -22444001.70 -22444001.44 0.0089 0.0004
 Neptune -66161-09-05 05:59 J -22443634.51 -22443634.25 -22443634.00 0.0089 0.0001
 Jupiter -66160-08-23 14:09 J -22443282.14 -22443281.91 -22443281.68 0.0510 0.0032
 Neptune -66160-09-07 16:47 J -22443267.06 -22443266.80 -22443266.55 0.0089 0.0006
 Neptune -66159-09-10 03:35 J -22442899.60 -22442899.35 -22442899.10 0.0089 0.0011
 Neptune -66158-09-12 14:37 J -22442532.14 -22442531.89 -22442531.64 0.0089 0.0016
 Neptune -66157-09-14 01:25 J -22442164.69 -22442164.44 -22442164.19 0.0089 0.0021
 Saturn -66157-12-10 13:25 J -22442077.14 -22442076.94 -22442076.75 0.0260 0.0162
 Neptune -66156-09-16 12:13 J -22441797.22 -22441796.99 -22441796.74 0.0089 0.0026
 Saturn -66156-12-22 11:30 J -22441700.27 -22441700.02 -22441699.76 0.0263 0.0005
 Neptune -66155-09-18 23:16 J -22441429.76 -22441429.53 -22441429.29 0.0089 0.0031
 Saturn -66154-01-03 17:01 J -22441322.97 -22441322.79 -22441322.59 0.0266 0.0173
 Neptune -66154-09-21 10:04 J -22441062.30 -22441062.08 -22441061.83 0.0089 0.0036
 Neptune -66153-09-22 21:06 J -22440694.83 -22440694.62 -22440694.37 0.0089 0.0041
 Neptune -66152-09-25 08:09 J -22440327.36 -22440327.16 -22440326.92 0.0089 0.0046
 Neptune -66151-09-27 19:54 J -22439959.88 -22439959.67 -22439959.46 0.0089 0.0050

Neptune -66150-09-30 06:57 J -22439592.40 -22439592.21 -22439591.99 0.0089 0.0055
 Neptune -66149-10-01 18:13 J -22439224.91 -22439224.74 -22439224.53 0.0089 0.0060
 Jupiter -66148-08-28 02:23 J -22438894.60 -22438894.40 -22438894.19 0.0509 0.0235
 Neptune -66148-10-04 05:45 J -22438857.41 -22438857.26 -22438857.06 0.0089 0.0064
 Neptune -66147-10-06 17:30 J -22438489.91 -22438489.77 -22438489.58 0.0089 0.0069
 Neptune -66146-10-09 05:16 J -22438122.40 -22438122.28 -22438122.11 0.0089 0.0073
 Neptune -66145-10-10 17:16 J -22437754.89 -22437754.78 -22437754.64 0.0089 0.0077
 Neptune -66144-10-13 05:01 J -22437387.37 -22437387.29 -22437387.17 0.0089 0.0081
 Saturn -66143-06-07 16:33 J -22437149.87 -22437149.81 -22437149.75 0.0303 0.0291
 Neptune -66143-10-15 17:01 J -22437019.85 -22437019.79 -22437019.70 0.0089 0.0085
 Saturn -66142-06-22 08:37 J -22436770.38 -22436770.14 -22436769.90 0.0300 0.0047
 Neptune -66142-10-18 05:01 J -22436652.29 -22436652.29 -22436652.26 0.0089 0.0089
 Saturn -66141-07-05 14:37 J -22436391.08 -22436390.89 -22436390.71 0.0296 0.0187
 Jupiter -66136-09-01 16:18 J -22434506.84 -22434506.82 -22434506.77 0.0508 0.0502
 Saturn -66128-12-05 14:37 J -22431489.99 -22431489.89 -22431489.77 0.0260 0.0232
 Saturn -66127-12-17 09:21 J -22431113.34 -22431113.11 -22431112.86 0.0262 0.0074
 Saturn -66126-12-29 11:16 J -22430736.27 -22430736.03 -22430735.80 0.0265 0.0094
 Saturn -66124-01-09 21:06 J -22430358.62 -22430358.62 -22430358.61 0.0269 0.0269
 Uranus -66124-07-26 05:01 J -22430161.45 -22430161.29 -22430161.11 0.0141 0.0102
 Uranus -66123-07-30 20:09 J -22429791.90 -22429791.66 -22429791.41 0.0142 0.0017
 Uranus -66122-08-04 12:28 J -22429422.19 -22429421.98 -22429421.76 0.0143 0.0071
 Jupiter -66118-02-18 23:16 J -22428127.65 -22428127.53 -22428127.39 0.0514 0.0429
 Mars -66116-12-25 02:52 J -22427087.51 -22427087.38 -22427087.25 0.1574 0.1142
 Saturn -66113-06-14 23:59 J -22426184.69 -22426184.50 -22426184.29 0.0302 0.0164
 Saturn -66112-06-29 11:30 J -22425805.25 -22425805.02 -22425804.79 0.0298 0.0079
 Jupiter -66106-02-23 23:45 J -22423739.73 -22423739.51 -22423739.28 0.0515 0.0138
 Neptune -66098-01-24 19:11 J -22420847.70 -22420847.70 -22420847.69 0.0088 0.0088
 Saturn -66098-12-12 10:18 J -22420526.26 -22420526.07 -22420525.85 0.0260 0.0151
 Neptune -66097-01-27 08:23 J -22420480.20 -22420480.15 -22420480.06 0.0088 0.0085
 Saturn -66097-12-23 08:37 J -22420149.39 -22420149.14 -22420148.89 0.0263 0.0013

Neptune -66096-01-28 22:04 J -22420112.67 -22420112.58 -22420112.46 0.0088 0.0080
 Saturn -66095-01-04 13:54 J -22419772.10 -22419771.92 -22419771.74 0.0266 0.0185
 Neptune -66095-01-31 11:30 J -22419745.13 -22419745.02 -22419744.87 0.0088 0.0077
 Neptune -66094-02-03 00:57 J -22419377.58 -22419377.46 -22419377.28 0.0088 0.0072
 Jupiter -66094-03-01 00:42 J -22419351.69 -22419351.47 -22419351.24 0.0516 0.0157
 Neptune -66093-02-05 15:06 J -22419010.04 -22419009.87 -22419009.70 0.0088 0.0068
 Neptune -66092-02-07 04:18 J -22418642.49 -22418642.32 -22418642.12 0.0088 0.0063
 Neptune -66091-02-09 17:16 J -22418274.95 -22418274.78 -22418274.56 0.0088 0.0059
 Neptune -66090-02-12 06:42 J -22417907.40 -22417907.22 -22417906.99 0.0088 0.0055
 Neptune -66089-02-14 20:09 J -22417539.87 -22417539.66 -22417539.43 0.0088 0.0050
 Jupiter -66089-08-18 11:16 J -22417354.20 -22417354.03 -22417353.84 0.0511 0.0315
 Neptune -66088-02-16 09:06 J -22417172.32 -22417172.12 -22417171.87 0.0088 0.0045
 Neptune -66087-02-18 22:18 J -22416804.78 -22416804.57 -22416804.32 0.0088 0.0041
 Neptune -66086-02-21 11:30 J -22416437.25 -22416437.02 -22416436.77 0.0088 0.0035
 Uranus -66085-01-25 02:37 J -22416099.46 -22416099.39 -22416099.28 0.0138 0.0129
 Neptune -66085-02-24 00:42 J -22416069.71 -22416069.47 -22416069.22 0.0088 0.0031
 Uranus -66084-01-28 20:52 J -22415729.87 -22415729.63 -22415729.38 0.0137 0.0046
 Neptune -66084-02-25 13:40 J -22415702.17 -22415701.93 -22415701.67 0.0088 0.0026
 Saturn -66084-06-08 11:45 J -22415599.09 -22415599.01 -22415598.91 0.0303 0.0279
 Uranus -66083-02-02 13:54 J -22415360.17 -22415359.92 -22415359.66 0.0137 0.0035
 Neptune -66083-02-28 02:52 J -22415334.63 -22415334.38 -22415334.12 0.0088 0.0020
 Saturn -66083-06-23 04:04 J -22415219.57 -22415219.33 -22415219.09 0.0300 0.0033
 Uranus -66082-02-07 05:45 J -22414990.39 -22414990.26 -22414990.11 0.0136 0.0115
 Neptune -66082-03-02 15:35 J -22414967.10 -22414966.85 -22414966.58 0.0088 0.0016
 Jupiter -66082-03-06 00:28 J -22414963.60 -22414963.48 -22414963.36 0.0517 0.0447
 Saturn -66082-07-07 10:04 J -22414840.25 -22414840.08 -22414839.90 0.0296 0.0201
 Neptune -66081-03-04 04:47 J -22414599.56 -22414599.30 -22414599.04 0.0088 0.0010
 Neptune -66080-03-06 17:30 J -22414232.03 -22414231.77 -22414231.50 0.0088 0.0006
 Neptune -66079-03-09 06:28 J -22413864.49 -22413864.23 -22413863.97 0.0088 0.0001
 Neptune -66078-03-11 18:42 J -22413496.98 -22413496.72 -22413496.45 0.0088 0.0005

Neptune -66077-03-13 07:25 J -22413129.45 -22413129.19 -22413128.93 0.0088 0.0010
 Jupiter -66077-08-23 01:40 J -22412966.66 -22412966.43 -22412966.20 0.0511 0.0044
 Neptune -66076-03-15 19:54 J -22412761.93 -22412761.67 -22412761.41 0.0088 0.0015
 Neptune -66075-03-18 07:54 J -22412394.42 -22412394.17 -22412393.91 0.0088 0.0020
 Neptune -66074-03-20 20:09 J -22412026.90 -22412026.66 -22412026.40 0.0088 0.0025
 Neptune -66073-03-22 08:23 J -22411659.39 -22411659.15 -22411658.90 0.0088 0.0029
 Neptune -66072-03-24 20:37 J -22411291.87 -22411291.64 -22411291.39 0.0088 0.0035
 Neptune -66071-03-27 08:37 J -22410924.36 -22410924.14 -22410923.89 0.0088 0.0039
 Neptune -66070-03-29 20:37 J -22410556.84 -22410556.64 -22410556.39 0.0088 0.0044
 Neptune -66069-03-31 08:52 J -22410189.33 -22410189.13 -22410188.90 0.0088 0.0049
 Saturn -66069-12-06 11:01 J -22409939.16 -22409939.04 -22409938.90 0.0260 0.0221
 Mars -66069-12-19 07:25 J -22409926.32 -22409926.19 -22409926.06 0.1569 0.1134
 Neptune -66068-04-02 20:52 J -22409821.82 -22409821.63 -22409821.40 0.0088 0.0053
 Saturn -66068-12-18 05:45 J -22409562.50 -22409562.26 -22409562.02 0.0262 0.0062
 Neptune -66067-04-05 08:52 J -22409454.31 -22409454.13 -22409453.92 0.0088 0.0058
 Saturn -66067-12-30 07:11 J -22409185.43 -22409185.20 -22409184.97 0.0265 0.0106
 Neptune -66066-04-07 20:09 J -22409086.81 -22409086.66 -22409086.45 0.0088 0.0063
 Neptune -66065-04-09 08:09 J -22408719.31 -22408719.16 -22408718.97 0.0088 0.0067
 Jupiter -66065-08-27 16:04 J -22408579.03 -22408578.83 -22408578.62 0.0510 0.0227
 Neptune -66064-04-11 19:40 J -22408351.82 -22408351.68 -22408351.51 0.0088 0.0071
 Neptune -66063-04-14 07:11 J -22407984.32 -22407984.20 -22407984.04 0.0088 0.0075
 Neptune -66062-04-16 18:28 J -22407616.83 -22407616.73 -22407616.59 0.0088 0.0079
 Neptune -66061-04-18 05:45 J -22407249.32 -22407249.26 -22407249.14 0.0088 0.0083
 Neptune -66060-04-20 17:01 J -22406881.81 -22406881.79 -22406881.70 0.0088 0.0087
 Saturn -66054-06-16 17:45 J -22404633.96 -22404633.76 -22404633.55 0.0302 0.0152
 Saturn -66053-06-30 05:30 J -22404254.50 -22404254.27 -22404254.04 0.0298 0.0091
 Jupiter -66053-09-01 02:37 J -22404191.44 -22404191.39 -22404191.32 0.0508 0.0487
 Uranus -66040-07-26 17:16 J -22399479.95 -22399479.78 -22399479.59 0.0141 0.0096
 Uranus -66039-07-31 08:09 J -22399110.40 -22399110.16 -22399109.91 0.0142 0.0011
 Saturn -66039-12-13 06:13 J -22398975.45 -22398975.24 -22398975.02 0.0260 0.0139

Uranus -66038-08-04 23:59 J -22398740.70 -22398740.50 -22398740.28 0.0143 0.0078
 Saturn -66038-12-25 04:04 J -22398598.58 -22398598.33 -22398598.08 0.0263 0.0025
 Saturn -66036-01-05 08:52 J -22398221.29 -22398221.13 -22398220.95 0.0266 0.0196
 Jupiter -66035-02-18 11:16 J -22397812.15 -22397812.03 -22397811.90 0.0514 0.0436
 Saturn -66025-06-09 05:01 J -22394048.39 -22394048.29 -22394048.16 0.0303 0.0268
 Saturn -66024-06-23 21:21 J -22393668.85 -22393668.61 -22393668.37 0.0300 0.0021
 Jupiter -66023-02-23 11:30 J -22393424.25 -22393424.02 -22393423.80 0.0515 0.0147
 Saturn -66023-07-08 03:21 J -22393289.51 -22393289.36 -22393289.18 0.0296 0.0215
 Neptune -66017-07-23 01:11 J -22391082.49 -22391082.45 -22391082.37 0.0089 0.0086
 Neptune -66016-07-25 11:01 J -22390715.12 -22390715.04 -22390714.94 0.0089 0.0082
 Neptune -66015-07-27 21:06 J -22390347.74 -22390347.62 -22390347.50 0.0089 0.0079
 Neptune -66014-07-30 06:13 J -22389980.35 -22389980.24 -22389980.08 0.0089 0.0075
 Pluto -66014-10-23 20:09 J -22389894.92 -22389894.66 -22389894.39 0.0064 0.0003
 Neptune -66013-07-31 16:47 J -22389612.96 -22389612.80 -22389612.65 0.0089 0.0071
 Neptune -66012-08-03 02:23 J -22389245.56 -22389245.40 -22389245.23 0.0089 0.0066
 Jupiter -66011-02-28 09:21 J -22389036.34 -22389036.11 -22389035.88 0.0516 0.0140
 Neptune -66011-08-05 11:59 J -22388878.16 -22388878.00 -22388877.80 0.0089 0.0063
 Neptune -66010-08-07 21:49 J -22388510.76 -22388510.59 -22388510.38 0.0089 0.0058
 Saturn -66010-12-08 06:28 J -22388388.37 -22388388.23 -22388388.08 0.0260 0.0211
 Neptune -66009-08-09 08:09 J -22388143.36 -22388143.16 -22388142.95 0.0089 0.0053
 Saturn -66009-12-19 01:11 J -22388011.70 -22388011.45 -22388011.20 0.0262 0.0051
 Neptune -66008-08-11 17:45 J -22387775.95 -22387775.76 -22387775.53 0.0089 0.0049
 Saturn -66008-12-31 02:23 J -22387634.62 -22387634.40 -22387634.17 0.0265 0.0118
 Neptune -66007-08-14 04:04 J -22387408.54 -22387408.33 -22387408.10 0.0089 0.0044
 Neptune -66006-08-16 14:37 J -22387041.11 -22387040.89 -22387040.66 0.0089 0.0039
 Jupiter -66006-08-19 01:40 J -22387038.61 -22387038.43 -22387038.25 0.0512 0.0323
 Neptune -66005-08-18 00:13 J -22386673.70 -22386673.49 -22386673.24 0.0089 0.0035
 Neptune -66004-08-20 10:47 J -22386306.28 -22386306.05 -22386305.80 0.0089 0.0030
 Neptune -66003-08-22 21:06 J -22385938.86 -22385938.62 -22385938.37 0.0089 0.0025
 Neptune -66002-08-25 07:25 J -22385571.43 -22385571.19 -22385570.94 0.0089 0.0020

Uranus -66001-01-25 14:23 J -22385418.01 -22385417.90 -22385417.78 0.0138 0.0123
 Neptune -66001-08-26 17:45 J -22385204.01 -22385203.76 -22385203.51 0.0089 0.0015

66TH MILLENNIUM BCE

This is a list of transits of Earth in the 66th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-66000-01-29 08:37 J	-22385048.38	-22385048.14	-22385047.89	0.0137	0.0040		
Neptune	-66000-08-29 04:04 J	-22384836.58	-22384836.33	-22384836.07	0.0089	0.0010		
Uranus	-65999-02-03 01:54 J	-22384678.66	-22384678.42	-22384678.17	0.0137	0.0042		
Jupiter	-65999-03-05 10:18 J	-22384648.19	-22384648.07	-22384647.94	0.0517	0.0433		
Neptune	-65999-08-31 14:37 J	-22384469.15	-22384468.89	-22384468.64	0.0089	0.0005		
Uranus	-65998-02-07 17:30 J	-22384308.86	-22384308.77	-22384308.64	0.0136	0.0122		
Mars	-65998-06-23 09:49 J	-22384173.22	-22384173.09	-22384172.95	0.1978	0.1450		
Neptune	-65998-09-03 00:57 J	-22384101.71	-22384101.46	-22384101.20	0.0089	0.0001		
Neptune	-65997-09-04 11:30 J	-22383734.28	-22383734.02	-22383733.77	0.0089	0.0005		
Neptune	-65996-09-06 21:49 J	-22383366.83	-22383366.59	-22383366.33	0.0089	0.0010		
Saturn	-65995-06-17 09:35 J	-22383083.30	-22383083.10	-22383082.88	0.0302	0.0142		
Neptune	-65995-09-09 08:52 J	-22382999.38	-22382999.13	-22382998.88	0.0089	0.0015		
Saturn	-65994-07-01 21:35 J	-22382703.83	-22382703.60	-22382703.38	0.0298	0.0102		
Jupiter	-65994-08-23 14:09 J	-22382651.14	-22382650.91	-22382650.68	0.0510	0.0053		
Neptune	-65994-09-11 19:25 J	-22382631.93	-22382631.69	-22382631.43	0.0089	0.0020		
Neptune	-65993-09-13 06:28 J	-22382264.46	-22382264.23	-22382263.98	0.0089	0.0025		
Neptune	-65992-09-15 17:16 J	-22381897.00	-22381896.78	-22381896.52	0.0089	0.0030		

Neptune -65991-09-18 04:18 J -22381529.54 -22381529.32 -22381529.07 0.0089 0.0035
 Neptune -65990-09-20 15:21 J -22381162.07 -22381161.86 -22381161.61 0.0089 0.0040
 Mars -65990-12-22 08:37 J -22381069.33 -22381069.14 -22381068.95 0.1570 0.0261
 Neptune -65989-09-22 02:09 J -22380794.61 -22380794.41 -22380794.16 0.0089 0.0045
 Neptune -65988-09-24 13:40 J -22380427.13 -22380426.93 -22380426.70 0.0089 0.0049
 Neptune -65987-09-27 00:42 J -22380059.65 -22380059.47 -22380059.25 0.0089 0.0054
 Neptune -65986-09-29 12:28 J -22379692.17 -22379691.98 -22379691.79 0.0089 0.0058
 Neptune -65985-09-30 23:16 J -22379324.69 -22379324.53 -22379324.33 0.0089 0.0063
 Neptune -65984-10-03 11:16 J -22378957.19 -22378957.03 -22378956.86 0.0089 0.0067
 Neptune -65983-10-05 22:18 J -22378589.70 -22378589.57 -22378589.40 0.0089 0.0072
 Jupiter -65982-08-28 03:21 J -22378263.57 -22378263.36 -22378263.15 0.0509 0.0215
 Neptune -65982-10-08 10:04 J -22378222.19 -22378222.08 -22378221.93 0.0089 0.0076
 Neptune -65981-10-09 21:49 J -22377854.68 -22377854.59 -22377854.46 0.0089 0.0080
 Neptune -65980-10-12 09:49 J -22377487.16 -22377487.09 -22377487.00 0.0089 0.0084
 Saturn -65980-12-14 01:25 J -22377424.64 -22377424.44 -22377424.21 0.0260 0.0129
 Neptune -65979-10-14 21:35 J -22377119.61 -22377119.60 -22377119.54 0.0089 0.0088
 Saturn -65979-12-25 23:30 J -22377047.77 -22377047.52 -22377047.27 0.0263 0.0036
 Saturn -65977-01-07 04:18 J -22376670.47 -22376670.32 -22376670.16 0.0266 0.0208
 Jupiter -65970-09-01 15:06 J -22373875.94 -22373875.87 -22373875.79 0.0508 0.0478
 Saturn -65966-06-10 20:52 J -22372497.75 -22372497.63 -22372497.50 0.0303 0.0257
 Saturn -65965-06-24 13:11 J -22372118.19 -22372117.95 -22372117.71 0.0300 0.0011
 Saturn -65964-07-08 19:11 J -22371738.84 -22371738.70 -22371738.54 0.0296 0.0225
 Uranus -65956-07-27 09:06 J -22368798.29 -22368798.12 -22368797.90 0.0141 0.0089
 Uranus -65955-08-01 00:28 J -22368428.73 -22368428.48 -22368428.23 0.0142 0.0002
 Uranus -65954-08-05 16:04 J -22368059.01 -22368058.83 -22368058.62 0.0143 0.0087
 Jupiter -65952-02-17 20:52 J -22367496.73 -22367496.63 -22367496.51 0.0513 0.0451
 Saturn -65951-12-09 01:54 J -22366837.57 -22366837.42 -22366837.25 0.0260 0.0200
 Saturn -65950-12-20 20:37 J -22366460.88 -22366460.64 -22366460.39 0.0262 0.0040
 Saturn -65949-12-31 21:35 J -22366083.80 -22366083.60 -22366083.37 0.0265 0.0130
 Jupiter -65940-02-22 20:52 J -22363108.85 -22363108.63 -22363108.40 0.0515 0.0163

Saturn -65936-06-18 02:23 J -22361532.61 -22361532.40 -22361532.18 0.0302 0.0130
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Saturn -65889-01-02 19:11 J -22344532.90 -22344532.70 -22344532.48 0.0265 0.0143
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 Jupiter -65745-08-21 22:33 J -22291704.78 -22291704.56 -22291704.33 0.0510 0.0096
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Saturn -65274-12-09 10:04 J -22119563.19 -22119563.08 -22119562.94 0.0259 0.0225
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 Saturn -65066-12-30 13:11 J -22043570.19 -22043569.95 -22043569.71 0.0261 0.0061
 Saturn -65064-01-10 14:09 J -22043193.03 -22043192.91 -22043192.79 0.0264 0.0233
 Jupiter -65057-08-26 10:47 J -22040408.26 -22040408.05 -22040407.83 0.0510 0.0192
 Saturn -65053-06-12 12:13 J -22039022.08 -22039021.99 -22039021.87 0.0304 0.0274
 Saturn -65052-06-27 08:52 J -22038642.37 -22038642.13 -22038641.89 0.0302 0.0017
 Saturn -65051-07-11 20:52 J -22038262.78 -22038262.63 -22038262.48 0.0299 0.0230
 Jupiter -65045-08-30 23:59 J -22036020.58 -22036020.50 -22036020.41 0.0509 0.0468
 Saturn -65038-12-13 20:09 J -22033359.82 -22033359.66 -22033359.46 0.0259 0.0179
 Saturn -65037-12-24 12:13 J -22032983.24 -22032982.99 -22032982.74 0.0261 0.0016
 Neptune -65036-07-12 06:57 J -22032783.22 -22032783.21 -22032783.17 0.0089 0.0089
 Saturn -65035-01-05 09:35 J -22032606.29 -22032606.10 -22032605.89 0.0263 0.0155
 Neptune -65035-07-14 17:01 J -22032415.86 -22032415.79 -22032415.70 0.0089 0.0084
 Neptune -65034-07-17 02:52 J -22032048.47 -22032048.38 -22032048.25 0.0089 0.0080
 Neptune -65033-07-18 12:28 J -22031681.08 -22031680.98 -22031680.82 0.0089 0.0077
 Uranus -65033-07-29 05:01 J -22031670.45 -22031670.29 -22031670.10 0.0140 0.0099
 Neptune -65032-07-20 22:47 J -22031313.69 -22031313.55 -22031313.39 0.0089 0.0071
 Uranus -65032-08-02 18:42 J -22031300.97 -22031300.72 -22031300.47 0.0141 0.0012
 Neptune -65031-07-23 08:23 J -22030946.29 -22030946.15 -22030945.96 0.0089 0.0067
 Uranus -65031-08-07 08:52 J -22030931.33 -22030931.13 -22030930.91 0.0141 0.0078
 Pluto -65031-10-29 12:57 J -22030848.21 -22030847.96 -22030847.69 0.0064 0.0007
 Neptune -65030-07-25 18:28 J -22030578.89 -22030578.73 -22030578.53 0.0089 0.0062
 Neptune -65029-07-27 04:18 J -22030211.50 -22030211.32 -22030211.11 0.0089 0.0058
 Neptune -65028-07-29 14:23 J -22029844.10 -22029843.90 -22029843.69 0.0089 0.0052
 Jupiter -65027-02-16 09:21 J -22029642.14 -22029642.11 -22029642.08 0.0512 0.0508
 Neptune -65027-08-01 00:28 J -22029476.69 -22029476.48 -22029476.27 0.0089 0.0048
 Neptune -65026-08-03 10:18 J -22029109.28 -22029109.07 -22029108.84 0.0089 0.0043
 Neptune -65025-08-04 20:23 J -22028741.88 -22028741.65 -22028741.42 0.0089 0.0038

Neptune -65024-08-07 06:13 J -22028374.47 -22028374.24 -22028374.00 0.0089 0.0032
 Saturn -65023-06-20 20:23 J -22028056.86 -22028056.65 -22028056.44 0.0303 0.0141
 Neptune -65023-08-09 16:18 J -22028007.05 -22028006.82 -22028006.57 0.0089 0.0028
 Saturn -65022-07-05 12:42 J -22027677.19 -22027676.97 -22027676.75 0.0300 0.0113
 Neptune -65022-08-12 02:23 J -22027639.63 -22027639.40 -22027639.14 0.0089 0.0023
 Neptune -65021-08-13 12:42 J -22027272.20 -22027271.97 -22027271.71 0.0089 0.0017
 Neptune -65020-08-15 23:01 J -22026904.79 -22026904.54 -22026904.28 0.0089 0.0011
 Neptune -65019-08-18 09:21 J -22026537.36 -22026537.11 -22026536.85 0.0089 0.0006
 Neptune -65018-08-20 19:40 J -22026169.93 -22026169.68 -22026169.43 0.0089 0.0000
 Neptune -65017-08-22 05:45 J -22025802.51 -22025802.26 -22025802.00 0.0089 0.0005
 Neptune -65016-08-24 16:04 J -22025435.08 -22025434.83 -22025434.58 0.0089 0.0010
 Jupiter -65015-02-21 06:42 J -22025254.43 -22025254.22 -22025254.00 0.0514 0.0214
 Neptune -65015-08-27 02:23 J -22025067.64 -22025067.40 -22025067.14 0.0089 0.0015
 Neptune -65014-08-29 12:28 J -22024700.21 -22024699.98 -22024699.72 0.0089 0.0021
 Neptune -65013-08-30 22:47 J -22024332.77 -22024332.55 -22024332.29 0.0089 0.0027
 Neptune -65012-09-02 09:35 J -22023965.33 -22023965.10 -22023964.86 0.0089 0.0031
 Mars -65012-12-22 18:42 J -22023853.90 -22023853.72 -22023853.54 0.1566 0.0529
 Neptune -65011-09-04 20:09 J -22023597.89 -22023597.66 -22023597.42 0.0089 0.0036
 Neptune -65010-09-07 06:42 J -22023230.43 -22023230.22 -22023229.98 0.0089 0.0042
 Neptune -65009-09-08 17:16 J -22022862.98 -22022862.78 -22022862.55 0.0089 0.0047
 Saturn -65009-12-08 00:42 J -22022772.50 -22022772.47 -22022772.39 0.0258 0.0251
 Neptune -65008-09-11 04:04 J -22022495.51 -22022495.33 -22022495.10 0.0089 0.0052
 Saturn -65008-12-19 14:37 J -22022396.12 -22022395.89 -22022395.65 0.0259 0.0093
 Neptune -65007-09-13 14:52 J -22022128.05 -22022127.88 -22022127.66 0.0089 0.0057
 Saturn -65007-12-31 09:21 J -22022019.35 -22022019.11 -22022018.87 0.0261 0.0073
 Neptune -65006-09-16 01:40 J -22021760.59 -22021760.43 -22021760.22 0.0089 0.0062
 Saturn -65005-01-12 10:04 J -22021642.17 -22021642.08 -22021641.98 0.0264 0.0245
 Neptune -65005-09-17 12:57 J -22021393.12 -22021392.96 -22021392.78 0.0089 0.0067
 Neptune -65004-09-19 23:30 J -22021025.65 -22021025.52 -22021025.35 0.0089 0.0072
 Jupiter -65003-02-26 08:23 J -22020866.38 -22020866.15 -22020865.91 0.0515 0.0093

Neptune -65003-09-22 10:18 J -22020658.17 -22020658.07 -22020657.91 0.0089 0.0076

Neptune -65002-09-24 21:35 J -22020290.69 -22020290.60 -22020290.48 0.0089 0.0080

Neptune -65001-09-26 08:09 J -22019923.20 -22019923.16 -22019923.05 0.0089 0.0085

65TH MILLENNIUM BCE

This is a list of transits of Earth in the 65th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Neptune	-65000-09-28 19:54 J	-22019555.67	-22019555.67	-22019555.65	0.0089	0.0089		
Jupiter	-64998-08-17 21:06 J	-22018867.77	-22018867.62	-22018867.46	0.0512	0.0379		
Uranus	-64994-01-27 10:18 J	-22017609.13	-22017609.07	-22017608.98	0.0139	0.0132		
Saturn	-64994-06-14 04:47 J	-22017471.41	-22017471.30	-22017471.17	0.0304	0.0262		
Uranus	-64993-02-01 06:28 J	-22017239.48	-22017239.23	-22017238.98	0.0138	0.0044		
Saturn	-64993-06-28 01:25 J	-22017091.68	-22017091.44	-22017091.20	0.0302	0.0004		
Uranus	-64992-02-05 00:57 J	-22016869.69	-22016869.46	-22016869.20	0.0138	0.0044		
Saturn	-64992-07-12 12:57 J	-22016712.09	-22016711.96	-22016711.81	0.0299	0.0242		
Uranus	-64991-02-09 18:28 J	-22016499.80	-22016499.73	-22016499.63	0.0137	0.0129		
Jupiter	-64991-03-03 09:21 J	-22016478.26	-22016478.11	-22016477.96	0.0516	0.0397		
Mars	-64988-06-27 05:01 J	-22015266.49	-22015266.29	-22015266.09	0.1981	0.0305		
Jupiter	-64986-08-22 10:18 J	-22014480.29	-22014480.07	-22014479.84	0.0511	0.0100		
Saturn	-64979-12-14 16:47 J	-22011808.97	-22011808.80	-22011808.59	0.0259	0.0167		
Saturn	-64978-12-26 09:06 J	-22011432.37	-22011432.12	-22011431.87	0.0261	0.0003		
Saturn	-64976-01-06 06:42 J	-22011055.41	-22011055.22	-22011055.02	0.0263	0.0167		
Jupiter	-64974-08-27 00:13 J	-22010092.70	-22010092.49	-22010092.27	0.0511	0.0184		

Saturn -64964-06-21 14:09 J -22006506.12 -22006505.91 -22006505.68 0.0303 0.0128
 Saturn -64963-07-06 06:13 J -22006126.45 -22006126.24 -22006126.01 0.0300 0.0126
 Jupiter -64962-08-31 13:25 J -22005705.03 -22005704.94 -22005704.84 0.0509 0.0463
 Neptune -64953-01-12 00:42 J -22002649.48 -22002649.47 -22002649.41 0.0088 0.0088
 Neptune -64952-01-13 14:09 J -22002281.97 -22002281.91 -22002281.80 0.0088 0.0083
 Neptune -64951-01-16 03:35 J -22001914.45 -22001914.35 -22001914.21 0.0088 0.0079
 Neptune -64950-01-18 17:01 J -22001546.91 -22001546.79 -22001546.63 0.0088 0.0074
 Saturn -64950-12-09 22:33 J -22001221.65 -22001221.56 -22001221.46 0.0258 0.0238
 Neptune -64949-01-21 06:28 J -22001179.37 -22001179.23 -22001179.05 0.0088 0.0070
 Uranus -64949-07-29 15:35 J -22000989.02 -22000988.85 -22000988.66 0.0140 0.0095
 Saturn -64949-12-20 12:28 J -22000845.21 -22000844.98 -22000844.74 0.0259 0.0079
 Neptune -64948-01-22 20:09 J -22000811.83 -22000811.66 -22000811.47 0.0088 0.0065
 Uranus -64948-08-03 04:47 J -22000619.55 -22000619.30 -22000619.05 0.0141 0.0008
 Saturn -64947-01-01 07:25 J -22000468.43 -22000468.19 -22000467.95 0.0262 0.0088
 Neptune -64947-01-25 09:35 J -22000444.28 -22000444.10 -22000443.90 0.0088 0.0060
 Uranus -64947-08-07 18:57 J -22000249.91 -22000249.71 -22000249.51 0.0141 0.0082
 Saturn -64946-01-13 08:23 J -22000091.19 -22000091.15 -22000091.10 0.0264 0.0259
 Neptune -64946-01-27 23:16 J -22000076.73 -22000076.53 -22000076.32 0.0088 0.0055
 Neptune -64945-01-30 12:42 J -21999709.18 -21999708.97 -21999708.75 0.0088 0.0049
 Neptune -64944-02-01 02:23 J -21999341.62 -21999341.40 -21999341.17 0.0088 0.0044
 Neptune -64943-02-03 15:21 J -21998974.08 -21998973.86 -21998973.61 0.0088 0.0040
 Neptune -64942-02-06 05:01 J -21998606.52 -21998606.29 -21998606.03 0.0088 0.0034
 Pluto -64942-05-06 01:11 J -21998517.67 -21998517.45 -21998517.22 0.0080 0.0040
 Neptune -64941-02-08 18:42 J -21998238.97 -21998238.72 -21998238.47 0.0088 0.0029
 Neptune -64940-02-10 07:40 J -21997871.42 -21997871.18 -21997870.91 0.0088 0.0024
 Neptune -64939-02-12 20:52 J -21997503.87 -21997503.63 -21997503.36 0.0088 0.0018
 Neptune -64938-02-15 10:18 J -21997136.33 -21997136.07 -21997135.81 0.0088 0.0013
 Neptune -64937-02-17 23:30 J -21996768.78 -21996768.52 -21996768.26 0.0088 0.0007
 Neptune -64936-02-19 12:28 J -21996401.24 -21996400.98 -21996400.71 0.0088 0.0002
 Neptune -64935-02-22 01:25 J -21996033.70 -21996033.44 -21996033.17 0.0088 0.0004

Saturn -64935-06-15 00:57 J -21995920.59 -21995920.46 -21995920.31 0.0304 0.0246
 Neptune -64934-02-24 14:37 J -21995666.15 -21995665.89 -21995665.63 0.0088 0.0009
 Saturn -64934-06-29 21:06 J -21995540.86 -21995540.62 -21995540.38 0.0302 0.0012
 Neptune -64933-02-27 03:49 J -21995298.60 -21995298.34 -21995298.08 0.0088 0.0014
 Saturn -64933-07-13 08:37 J -21995161.26 -21995161.14 -21995161.02 0.0299 0.0256
 Mars -64933-12-24 19:25 J -21994996.87 -21994996.69 -21994996.50 0.1567 0.0354
 Jupiter -64932-02-20 18:13 J -21994938.95 -21994938.74 -21994938.53 0.0514 0.0225
 Neptune -64932-02-28 16:33 J -21994931.06 -21994930.81 -21994930.54 0.0088 0.0020
 Neptune -64931-03-03 05:30 J -21994563.51 -21994563.27 -21994563.00 0.0088 0.0026
 Neptune -64930-03-05 18:42 J -21994195.96 -21994195.72 -21994195.47 0.0088 0.0030
 Neptune -64929-03-07 07:11 J -21993828.42 -21993828.20 -21993827.94 0.0088 0.0036
 Neptune -64928-03-09 19:54 J -21993460.88 -21993460.67 -21993460.42 0.0088 0.0042
 Neptune -64927-03-12 08:23 J -21993093.35 -21993093.15 -21993092.91 0.0088 0.0047
 Neptune -64926-03-14 21:06 J -21992725.81 -21992725.62 -21992725.39 0.0088 0.0051
 Neptune -64925-03-16 09:35 J -21992358.28 -21992358.10 -21992357.88 0.0088 0.0056
 Neptune -64924-03-18 21:49 J -21991990.75 -21991990.59 -21991990.38 0.0088 0.0061
 Neptune -64923-03-21 10:47 J -21991623.22 -21991623.05 -21991622.87 0.0088 0.0066
 Neptune -64922-03-23 22:47 J -21991255.69 -21991255.55 -21991255.37 0.0088 0.0071
 Neptune -64921-03-25 11:01 J -21990888.15 -21990888.04 -21990887.88 0.0088 0.0076
 Jupiter -64920-02-25 16:47 J -21990551.03 -21990550.80 -21990550.56 0.0515 0.0073
 Neptune -64920-03-27 23:45 J -21990520.61 -21990520.51 -21990520.39 0.0088 0.0080
 Saturn -64920-12-15 15:49 J -21990258.04 -21990257.84 -21990257.63 0.0259 0.0153
 Neptune -64919-03-30 11:30 J -21990153.06 -21990153.02 -21990152.91 0.0088 0.0085
 Saturn -64919-12-27 08:23 J -21989881.40 -21989881.15 -21989880.90 0.0261 0.0012
 Neptune -64918-04-02 00:13 J -21989785.49 -21989785.49 -21989785.46 0.0088 0.0088
 Saturn -64917-01-08 06:13 J -21989504.41 -21989504.24 -21989504.05 0.0263 0.0183
 Jupiter -64915-08-17 08:37 J -21988552.28 -21988552.14 -21988551.99 0.0513 0.0395
 Uranus -64910-01-27 17:59 J -21986927.82 -21986927.75 -21986927.65 0.0139 0.0130
 Uranus -64909-02-01 14:09 J -21986558.15 -21986557.91 -21986557.65 0.0138 0.0041
 Uranus -64908-02-05 09:06 J -21986188.36 -21986188.12 -21986187.87 0.0138 0.0047

Jupiter -64908-03-02 16:18 J -21986162.98 -21986162.82 -21986162.66 0.0516 0.0375
 Uranus -64907-02-10 02:52 J -21985818.43 -21985818.38 -21985818.30 0.0137 0.0132
 Saturn -64905-06-22 11:30 J -21984955.24 -21984955.02 -21984954.79 0.0303 0.0112
 Saturn -64904-07-07 03:06 J -21984575.58 -21984575.37 -21984575.16 0.0300 0.0141
 Jupiter -64903-08-21 23:30 J -21984164.75 -21984164.52 -21984164.30 0.0511 0.0107
 Jupiter -64891-08-26 12:42 J -21979777.18 -21979776.97 -21979776.75 0.0510 0.0174
 Saturn -64891-12-10 22:18 J -21979670.69 -21979670.57 -21979670.44 0.0258 0.0223
 Saturn -64890-12-22 12:42 J -21979294.21 -21979293.97 -21979293.72 0.0260 0.0063
 Saturn -64888-01-02 08:09 J -21978917.39 -21978917.16 -21978916.93 0.0262 0.0104
 Jupiter -64879-08-30 23:16 J -21975389.64 -21975389.53 -21975389.42 0.0509 0.0444
 Saturn -64876-06-16 00:42 J -21974369.63 -21974369.47 -21974369.31 0.0304 0.0227
 Saturn -64875-06-30 20:09 J -21973989.90 -21973989.66 -21973989.42 0.0302 0.0030
 Saturn -64874-07-15 06:57 J -21973610.29 -21973610.21 -21973610.11 0.0298 0.0273
 Neptune -64872-07-11 15:35 J -21972882.89 -21972882.85 -21972882.80 0.0089 0.0087
 Neptune -64871-07-14 01:11 J -21972515.52 -21972515.45 -21972515.35 0.0089 0.0083
 Neptune -64870-07-16 11:01 J -21972148.13 -21972148.04 -21972147.90 0.0089 0.0079
 Neptune -64869-07-17 21:21 J -21971780.74 -21971780.61 -21971780.46 0.0089 0.0074
 Neptune -64868-07-20 06:57 J -21971413.34 -21971413.21 -21971413.03 0.0089 0.0070
 Neptune -64867-07-22 17:01 J -21971045.93 -21971045.79 -21971045.59 0.0089 0.0066
 Neptune -64866-07-25 03:06 J -21970678.54 -21970678.37 -21970678.17 0.0089 0.0061
 Neptune -64865-07-26 13:11 J -21970311.14 -21970310.95 -21970310.74 0.0089 0.0055
 Uranus -64865-07-30 04:04 J -21970307.50 -21970307.33 -21970307.12 0.0140 0.0089
 Neptune -64864-07-28 23:01 J -21969943.74 -21969943.54 -21969943.32 0.0089 0.0050
 Uranus -64864-08-03 17:30 J -21969938.02 -21969937.77 -21969937.52 0.0141 0.0003
 Neptune -64863-07-31 08:52 J -21969576.33 -21969576.13 -21969575.89 0.0089 0.0046
 Uranus -64863-08-08 07:11 J -21969568.38 -21969568.20 -21969568.00 0.0141 0.0088
 Neptune -64862-08-02 18:42 J -21969208.93 -21969208.72 -21969208.48 0.0089 0.0041
 Neptune -64861-08-04 04:33 J -21968841.52 -21968841.31 -21968841.06 0.0089 0.0036
 Saturn -64861-12-16 17:16 J -21968706.99 -21968706.78 -21968706.57 0.0259 0.0136
 Neptune -64860-08-06 14:37 J -21968474.11 -21968473.89 -21968473.64 0.0089 0.0030

Saturn -64860-12-28 10:18 J -21968330.31 -21968330.07 -21968329.82 0.0261 0.0029
 Neptune -64859-08-09 00:42 J -21968106.70 -21968106.47 -21968106.22 0.0089 0.0025
 Saturn -64858-01-09 08:52 J -21967953.29 -21967953.13 -21967952.96 0.0264 0.0200
 Neptune -64858-08-11 10:47 J -21967739.28 -21967739.05 -21967738.79 0.0089 0.0020
 Neptune -64857-08-12 21:06 J -21967371.87 -21967371.62 -21967371.37 0.0089 0.0014
 Neptune -64856-08-15 07:25 J -21967004.44 -21967004.19 -21967003.94 0.0089 0.0008
 Neptune -64855-08-17 17:30 J -21966637.02 -21966636.77 -21966636.51 0.0089 0.0003
 Neptune -64854-08-20 03:49 J -21966269.59 -21966269.34 -21966269.08 0.0089 0.0003
 Mars -64854-12-27 19:40 J -21966139.80 -21966139.68 -21966139.56 0.1567 0.1226
 Neptune -64853-08-21 13:54 J -21965902.16 -21965901.92 -21965901.66 0.0089 0.0009
 Neptune -64852-08-24 00:28 J -21965534.73 -21965534.48 -21965534.23 0.0089 0.0014
 Neptune -64851-08-26 10:33 J -21965167.30 -21965167.06 -21965166.81 0.0089 0.0019
 Neptune -64850-08-28 20:52 J -21964799.87 -21964799.63 -21964799.38 0.0089 0.0024
 Jupiter -64849-02-20 22:47 J -21964623.75 -21964623.55 -21964623.34 0.0513 0.0254
 Neptune -64849-08-30 06:57 J -21964432.43 -21964432.21 -21964431.96 0.0089 0.0030
 Neptune -64848-09-01 17:16 J -21964065.00 -21964064.78 -21964064.53 0.0089 0.0035
 Neptune -64847-09-04 04:04 J -21963697.55 -21963697.33 -21963697.09 0.0089 0.0040
 Saturn -64846-06-24 14:23 J -21963404.12 -21963403.90 -21963403.66 0.0302 0.0091
 Neptune -64846-09-06 14:23 J -21963330.11 -21963329.90 -21963329.67 0.0089 0.0046
 Saturn -64845-07-08 05:01 J -21963024.49 -21963024.29 -21963024.08 0.0300 0.0162
 Neptune -64845-09-08 00:42 J -21962962.65 -21962962.47 -21962962.23 0.0089 0.0052
 Neptune -64844-09-10 11:30 J -21962595.19 -21962595.02 -21962594.79 0.0089 0.0057
 Neptune -64843-09-12 22:33 J -21962227.73 -21962227.56 -21962227.36 0.0089 0.0061
 Neptune -64842-09-15 09:21 J -21961860.25 -21961860.11 -21961859.91 0.0089 0.0066
 Neptune -64841-09-16 20:09 J -21961492.79 -21961492.66 -21961492.48 0.0089 0.0071
 Neptune -64840-09-19 07:40 J -21961125.31 -21961125.18 -21961125.04 0.0089 0.0075
 Neptune -64839-09-21 18:13 J -21960757.83 -21960757.74 -21960757.61 0.0089 0.0080
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 Jupiter -64837-02-25 18:42 J -21960235.96 -21960235.72 -21960235.49 0.0515 0.0040
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Jupiter -64832-08-16 20:09 J -21958236.79 -21958236.66 -21958236.52 0.0513 0.0410
 Saturn -64832-12-12 00:28 J -21958119.62 -21958119.48 -21958119.32 0.0259 0.0206
 Saturn -64831-12-23 15:49 J -21957743.09 -21957742.84 -21957742.59 0.0260 0.0045
 Saturn -64829-01-04 11:45 J -21957366.22 -21957366.01 -21957365.78 0.0262 0.0124
 Uranus -64826-01-28 01:40 J -21956246.53 -21956246.43 -21956246.33 0.0139 0.0128
 Uranus -64825-02-01 21:35 J -21955876.84 -21955876.60 -21955876.34 0.0138 0.0039
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 Jupiter -64820-08-21 06:28 J -21953849.45 -21953849.23 -21953849.01 0.0511 0.0135
 Saturn -64817-06-17 06:13 J -21952818.41 -21952818.24 -21952818.06 0.0304 0.0204
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 Mars -64807-12-22 02:37 J -21948978.54 -21948978.39 -21948978.25 0.1566 0.1046
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 Pluto -64786-10-30 08:09 J -21941361.28 -21941361.16 -21941361.00 0.0064 0.0054
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 Saturn -64743-12-20 04:33 J -21925604.53 -21925604.31 -21925604.06 0.0260 0.0098
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 Jupiter -64742-03-01 21:06 J -21925532.81 -21925532.62 -21925532.43 0.0515 0.0311
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Jupiter -64683-02-18 22:47 J -21903993.73 -21903993.55 -21903993.37 0.0513 0.0337
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Saturn -64626-12-12 09:35 J -21882878.23 -21882878.10 -21882877.95 0.0259 0.0214
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 Neptune -64600-03-08 11:01 J -21873660.24 -21873660.04 -21873659.81 0.0088 0.0049
 Neptune -64599-03-10 23:59 J -21873292.70 -21873292.50 -21873292.29 0.0088 0.0055
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 Neptune -64597-03-15 01:11 J -21872557.60 -21872557.45 -21872557.25 0.0088 0.0065
 Neptune -64596-03-17 13:40 J -21872190.06 -21872189.93 -21872189.74 0.0088 0.0070
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 Saturn -64595-12-30 05:45 J -21871537.51 -21871537.26 -21871537.01 0.0262 0.0047
 Neptune -64594-03-22 14:52 J -21871454.97 -21871454.88 -21871454.75 0.0088 0.0080
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 Jupiter -64576-02-27 13:54 J -21864903.14 -21864902.92 -21864902.70 0.0515 0.0208
 Uranus -64574-01-29 11:01 J -21864202.16 -21864202.04 -21864201.87 0.0139 0.0115
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 Uranus -64572-02-07 01:40 J -21863462.65 -21863462.43 -21863462.20 0.0138 0.0064
 Jupiter -64571-08-19 11:01 J -21862904.23 -21862904.04 -21862903.84 0.0512 0.0266
 Saturn -64567-12-13 20:52 J -21861326.79 -21861326.63 -21861326.46 0.0259 0.0192
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 Saturn -64564-01-05 10:33 J -21860573.26 -21860573.06 -21860572.84 0.0263 0.0143
 Jupiter -64564-03-04 12:13 J -21860515.01 -21860514.99 -21860514.96 0.0516 0.0512

Jupiter -64559-08-23 22:04 J -21858516.81 -21858516.58 -21858516.35 0.0512 0.0015
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 Pluto -64540-10-31 17:16 J -21851507.99 -21851507.78 -21851507.52 0.0064 0.0028
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 Saturn -64534-01-12 17:59 J -21849608.83 -21849608.75 -21849608.64 0.0265 0.0244
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 Neptune -64453-01-28 11:01 J -21820008.25 -21820008.04 -21820007.79 0.0088 0.0043
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 Saturn -64405-06-16 19:25 J -21802335.83 -21802335.69 -21802335.53 0.0304 0.0237
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 Neptune -64350-09-13 15:06 J -21782158.97 -21782158.87 -21782158.74 0.0089 0.0079
 Neptune -64349-09-15 01:40 J -21781791.50 -21781791.43 -21781791.32 0.0089 0.0084
 Neptune -64348-09-17 12:13 J -21781424.00 -21781423.99 -21781423.93 0.0089 0.0089
 Saturn -64346-06-19 04:18 J -21780784.48 -21780784.32 -21780784.14 0.0304 0.0215
 Saturn -64345-07-03 00:42 J -21780404.70 -21780404.47 -21780404.23 0.0302 0.0048
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Jupiter -64339-02-20 15:06 J -21778346.08 -21778345.87 -21778345.65 0.0513 0.0224
 Saturn -64331-12-20 00:57 J -21775121.68 -21775121.46 -21775121.24 0.0259 0.0118
 Saturn -64330-12-31 17:01 J -21774745.03 -21774744.79 -21774744.54 0.0260 0.0050
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 Pluto -64294-11-02 23:01 J -21761654.79 -21761654.54 -21761654.27 0.0064 0.0011
 Neptune -64293-01-18 14:09 J -21761578.08 -21761577.91 -21761577.71 0.0088 0.0063
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Saturn -64257-06-27 16:04 J -21748268.07 -21748267.83 -21748267.60 0.0303 0.0054
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 Jupiter -64239-08-17 05:16 J -21741643.42 -21741643.28 -21741643.14 0.0514 0.0410
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 Saturn -64095-12-24 11:16 J -21688918.27 -21688918.03 -21688917.78 0.0259 0.0068
 Saturn -64093-01-05 03:21 J -21688541.59 -21688541.36 -21688541.13 0.0260 0.0100
 Jupiter -64090-02-19 18:28 J -21687399.93 -21687399.73 -21687399.53 0.0513 0.0278
 Saturn -64081-06-15 19:25 J -21683995.77 -21683995.69 -21683995.58 0.0305 0.0280
 Mars -64081-12-28 22:04 J -21683799.64 -21683799.58 -21683799.52 0.1567 0.1477
 Saturn -64080-06-30 18:57 J -21683615.95 -21683615.71 -21683615.47 0.0303 0.0014
 Saturn -64079-07-15 11:01 J -21683236.16 -21683236.04 -21683235.88 0.0301 0.0243
 Jupiter -64078-02-24 19:25 J -21683011.92 -21683011.69 -21683011.45 0.0514 0.0035
 Jupiter -64073-08-16 05:30 J -21681012.38 -21681012.27 -21681012.15 0.0514 0.0440
 Uranus -64070-01-31 08:23 J -21680114.30 -21680114.15 -21680113.95 0.0139 0.0103
 Uranus -64069-02-05 04:47 J -21679744.56 -21679744.30 -21679744.04 0.0138 0.0011
 Uranus -64068-02-08 23:30 J -21679374.71 -21679374.52 -21679374.29 0.0138 0.0080
 Jupiter -64066-03-01 18:28 J -21678623.90 -21678623.73 -21678623.55 0.0515 0.0344
 Saturn -64066-12-19 13:40 J -21678331.13 -21678330.93 -21678330.72 0.0258 0.0143
 Saturn -64065-12-30 03:49 J -21677954.59 -21677954.34 -21677954.09 0.0260 0.0023
 Saturn -64063-01-10 22:18 J -21677577.73 -21677577.57 -21677577.39 0.0262 0.0194
 Jupiter -64061-08-20 19:40 J -21676624.90 -21676624.68 -21676624.46 0.0513 0.0146
 Mars -64057-06-27 01:54 J -21675218.58 -21675218.42 -21675218.25 0.1980 0.1137
 Neptune -64052-07-08 23:30 J -21673380.60 -21673380.52 -21673380.44 0.0089 0.0084
 Saturn -64051-06-24 05:59 J -21673030.46 -21673030.25 -21673030.04 0.0304 0.0143
 Neptune -64051-07-11 09:06 J -21673013.21 -21673013.12 -21673012.99 0.0089 0.0079
 Saturn -64050-07-09 01:40 J -21672650.65 -21672650.43 -21672650.21 0.0302 0.0120
 Neptune -64050-07-13 19:11 J -21672645.81 -21672645.70 -21672645.54 0.0089 0.0074
 Neptune -64049-07-15 05:01 J -21672278.42 -21672278.29 -21672278.10 0.0089 0.0069
 Jupiter -64049-08-25 10:18 J -21672237.29 -21672237.07 -21672236.85 0.0511 0.0151
 Neptune -64048-07-17 15:21 J -21671911.02 -21671910.86 -21671910.67 0.0089 0.0063

Pluto -64048-11-04 05:59 J -21671801.51 -21671801.25 -21671800.99 0.0064 0.0011
 Neptune -64047-07-20 01:40 J -21671543.62 -21671543.43 -21671543.24 0.0089 0.0058
 Neptune -64046-07-22 11:16 J -21671176.22 -21671176.03 -21671175.81 0.0089 0.0052
 Neptune -64045-07-23 21:06 J -21670808.82 -21670808.62 -21670808.39 0.0089 0.0047
 Neptune -64044-07-26 06:42 J -21670441.42 -21670441.22 -21670440.97 0.0089 0.0041
 Neptune -64043-07-28 16:47 J -21670074.01 -21670073.80 -21670073.55 0.0089 0.0036
 Neptune -64042-07-31 02:52 J -21669706.61 -21669706.38 -21669706.13 0.0089 0.0029
 Neptune -64041-08-01 12:57 J -21669339.20 -21669338.96 -21669338.71 0.0089 0.0023
 Neptune -64040-08-03 22:47 J -21668971.79 -21668971.55 -21668971.30 0.0089 0.0017
 Neptune -64039-08-06 08:52 J -21668604.38 -21668604.13 -21668603.87 0.0089 0.0011
 Neptune -64038-08-08 19:11 J -21668236.95 -21668236.70 -21668236.45 0.0089 0.0005
 Neptune -64037-08-10 05:01 J -21667869.54 -21667869.29 -21667869.03 0.0089 0.0002
 Jupiter -64037-08-29 23:59 J -21667849.61 -21667849.50 -21667849.39 0.0510 0.0441
 Saturn -64037-12-13 18:42 J -21667743.83 -21667743.72 -21667743.57 0.0258 0.0217
 Neptune -64036-08-12 15:21 J -21667502.11 -21667501.86 -21667501.61 0.0089 0.0007
 Saturn -64036-12-25 07:11 J -21667367.44 -21667367.20 -21667366.95 0.0259 0.0055
 Neptune -64035-08-15 01:25 J -21667134.69 -21667134.44 -21667134.19 0.0089 0.0013
 Saturn -64034-01-05 23:30 J -21666990.74 -21666990.52 -21666990.29 0.0260 0.0113
 Neptune -64034-08-17 11:30 J -21666767.26 -21666767.02 -21666766.77 0.0089 0.0019
 Mars -64034-12-24 05:16 J -21666638.44 -21666638.28 -21666638.12 0.1568 0.0828
 Neptune -64033-08-18 21:21 J -21666399.84 -21666399.61 -21666399.36 0.0089 0.0025
 Neptune -64032-08-21 07:25 J -21666032.42 -21666032.19 -21666031.94 0.0089 0.0031
 Neptune -64031-08-23 17:30 J -21665664.99 -21665664.77 -21665664.53 0.0089 0.0037
 Neptune -64030-08-26 03:35 J -21665297.55 -21665297.35 -21665297.11 0.0089 0.0043
 Neptune -64029-08-27 13:40 J -21664930.12 -21664929.93 -21664929.70 0.0089 0.0049
 Neptune -64028-08-29 23:59 J -21664562.69 -21664562.50 -21664562.29 0.0089 0.0055
 Neptune -64027-09-01 10:33 J -21664195.23 -21664195.06 -21664194.86 0.0089 0.0060
 Uranus -64026-07-31 02:09 J -21663862.42 -21663862.41 -21663862.36 0.0139 0.0138
 Neptune -64026-09-03 20:23 J -21663827.79 -21663827.65 -21663827.45 0.0089 0.0067
 Uranus -64025-08-03 14:52 J -21663493.11 -21663492.88 -21663492.65 0.0140 0.0049

Neptune -64025-09-05 07:25 J -21663460.33 -21663460.19 -21663460.03 0.0089 0.0072
 Uranus -64024-08-08 03:49 J -21663123.57 -21663123.34 -21663123.10 0.0141 0.0042
 Neptune -64024-09-07 17:30 J -21663092.86 -21663092.77 -21663092.61 0.0089 0.0078
 Uranus -64023-08-12 17:30 J -21662753.82 -21662753.77 -21662753.67 0.0141 0.0135
 Neptune -64023-09-10 04:33 J -21662725.39 -21662725.31 -21662725.20 0.0089 0.0082
 Saturn -64022-06-17 13:11 J -21662445.05 -21662444.95 -21662444.82 0.0305 0.0266
 Neptune -64022-09-12 15:06 J -21662357.90 -21662357.87 -21662357.80 0.0089 0.0087
 Saturn -64021-07-01 12:28 J -21662065.22 -21662064.98 -21662064.74 0.0303 0.0002
 Saturn -64020-07-16 04:18 J -21661685.43 -21661685.32 -21661685.19 0.0301 0.0256
 Jupiter -64007-02-19 04:47 J -21657084.50 -21657084.30 -21657084.11 0.0512 0.0295
 Saturn -64007-12-20 10:04 J -21656780.29 -21656780.08 -21656779.86 0.0258 0.0131
 Saturn -64005-01-01 00:28 J -21656403.72 -21656403.48 -21656403.23 0.0260 0.0036
 Saturn -64004-01-11 19:11 J -21656026.84 -21656026.70 -21656026.53 0.0262 0.0207

64TH MILLENNIUM BCE

This is a list of transits of Earth in the 64th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-63995-02-24 03:21 J	-21652696.59	-21652696.36	-21652696.12	0.0513	0.0016		
Saturn	-63992-06-25 01:11 J	-21651479.66	-21651479.45	-21651479.23	0.0304	0.0127		
Saturn	-63991-07-09 20:37 J	-21651099.85	-21651099.64	-21651099.42	0.0301	0.0136		
Jupiter	-63990-08-16 19:25 J	-21650696.80	-21650696.69	-21650696.58	0.0514	0.0448		
Uranus	-63986-01-31 19:11 J	-21649432.88	-21649432.70	-21649432.51	0.0139	0.0098		
Uranus	-63985-02-05 15:06 J	-21649063.13	-21649062.87	-21649062.61	0.0138	0.0006		

Uranus -63984-02-09 10:04 J -21648693.28 -21648693.08 -21648692.88 0.0138 0.0084
 Jupiter -63983-02-28 23:59 J -21648308.68 -21648308.50 -21648308.31 0.0515 0.0320
 Jupiter -63978-08-21 10:04 J -21646309.30 -21646309.08 -21646308.86 0.0512 0.0153
 Saturn -63978-12-15 16:33 J -21646192.96 -21646192.81 -21646192.66 0.0258 0.0202
 Saturn -63977-12-26 05:01 J -21645816.53 -21645816.29 -21645816.04 0.0259 0.0040
 Saturn -63975-01-06 21:49 J -21645439.80 -21645439.59 -21645439.37 0.0261 0.0129
 Neptune -63970-01-05 14:09 J -21643614.92 -21643614.91 -21643614.84 0.0088 0.0088
 Neptune -63969-01-08 03:21 J -21643247.42 -21643247.36 -21643247.23 0.0088 0.0083
 Neptune -63968-01-09 17:16 J -21642879.89 -21642879.78 -21642879.63 0.0088 0.0077
 Neptune -63967-01-12 06:28 J -21642512.36 -21642512.23 -21642512.05 0.0088 0.0072
 Neptune -63966-01-14 19:54 J -21642144.82 -21642144.67 -21642144.47 0.0088 0.0066
 Jupiter -63966-08-25 21:06 J -21641921.84 -21641921.62 -21641921.40 0.0511 0.0133
 Neptune -63965-01-17 09:21 J -21641777.28 -21641777.11 -21641776.89 0.0088 0.0060
 Neptune -63964-01-18 22:47 J -21641409.73 -21641409.55 -21641409.32 0.0088 0.0055
 Neptune -63963-01-21 12:28 J -21641042.18 -21641041.98 -21641041.74 0.0088 0.0049
 Saturn -63963-06-18 11:30 J -21640894.15 -21640894.02 -21640893.88 0.0305 0.0248
 Neptune -63962-01-24 01:54 J -21640674.63 -21640674.42 -21640674.17 0.0088 0.0043
 Saturn -63962-07-03 10:04 J -21640514.32 -21640514.08 -21640513.84 0.0303 0.0018
 Neptune -63961-01-26 15:49 J -21640307.07 -21640306.84 -21640306.59 0.0088 0.0036
 Saturn -63961-07-17 01:25 J -21640134.53 -21640134.44 -21640134.33 0.0300 0.0272
 Neptune -63960-01-28 05:16 J -21639939.52 -21639939.28 -21639939.02 0.0088 0.0030
 Neptune -63959-01-30 18:57 J -21639571.95 -21639571.71 -21639571.45 0.0088 0.0024
 Pluto -63959-05-11 11:59 J -21639471.24 -21639471.00 -21639470.76 0.0081 0.0029
 Neptune -63958-02-02 08:37 J -21639204.40 -21639204.14 -21639203.88 0.0088 0.0018
 Neptune -63957-02-04 22:04 J -21638836.84 -21638836.58 -21638836.31 0.0088 0.0012
 Neptune -63956-02-06 11:30 J -21638469.28 -21638469.02 -21638468.75 0.0088 0.0005
 Neptune -63955-02-09 00:42 J -21638101.73 -21638101.47 -21638101.20 0.0088 0.0001
 Mars -63955-12-26 06:13 J -21637781.44 -21637781.24 -21637781.05 0.1568 0.0076
 Neptune -63954-02-11 14:09 J -21637734.17 -21637733.91 -21637733.65 0.0088 0.0007
 Jupiter -63954-08-30 08:52 J -21637534.25 -21637534.13 -21637533.99 0.0510 0.0419

Neptune -63953-02-14 03:06 J -21637366.62 -21637366.37 -21637366.10 0.0088 0.0014
 Neptune -63952-02-15 16:33 J -21636999.06 -21636998.81 -21636998.54 0.0088 0.0019
 Neptune -63951-02-18 05:45 J -21636631.50 -21636631.26 -21636631.00 0.0088 0.0025
 Neptune -63950-02-20 19:11 J -21636263.94 -21636263.70 -21636263.45 0.0088 0.0031
 Neptune -63949-02-23 08:23 J -21635896.38 -21635896.15 -21635895.90 0.0088 0.0037
 Neptune -63948-02-24 21:49 J -21635528.81 -21635528.59 -21635528.36 0.0088 0.0043
 Saturn -63948-12-21 09:21 J -21635229.33 -21635229.11 -21635228.88 0.0258 0.0115
 Neptune -63947-02-27 10:47 J -21635161.26 -21635161.05 -21635160.82 0.0088 0.0049
 Saturn -63946-01-02 00:13 J -21634852.73 -21634852.49 -21634852.24 0.0260 0.0052
 Neptune -63946-03-01 23:59 J -21634793.69 -21634793.50 -21634793.28 0.0088 0.0055
 Saturn -63945-01-13 19:25 J -21634475.80 -21634475.69 -21634475.55 0.0262 0.0223
 Neptune -63945-03-03 12:57 J -21634426.12 -21634425.96 -21634425.74 0.0088 0.0062
 Neptune -63944-03-06 01:54 J -21634058.57 -21634058.42 -21634058.23 0.0088 0.0067
 Neptune -63943-03-08 15:06 J -21633691.00 -21633690.87 -21633690.70 0.0088 0.0072
 Neptune -63942-03-11 04:18 J -21633323.44 -21633323.32 -21633323.20 0.0088 0.0078
 Uranus -63942-07-31 10:04 J -21633181.12 -21633181.08 -21633181.04 0.0139 0.0137
 Neptune -63941-03-12 16:33 J -21632955.87 -21632955.81 -21632955.69 0.0088 0.0084
 Uranus -63941-08-03 22:04 J -21632811.81 -21632811.58 -21632811.34 0.0140 0.0048
 Neptune -63940-03-15 05:45 J -21632588.26 -21632588.26 -21632588.24 0.0088 0.0088
 Uranus -63940-08-08 11:01 J -21632442.27 -21632442.04 -21632441.79 0.0141 0.0044
 Uranus -63939-08-13 01:11 J -21632072.51 -21632072.45 -21632072.38 0.0141 0.0135
 Saturn -63933-06-26 01:25 J -21629928.66 -21629928.44 -21629928.21 0.0303 0.0107
 Saturn -63932-07-10 20:23 J -21629548.85 -21629548.65 -21629548.44 0.0301 0.0155
 Jupiter -63924-02-18 06:42 J -21626769.39 -21626769.22 -21626769.03 0.0512 0.0332
 Saturn -63919-12-16 16:33 J -21624641.97 -21624641.81 -21624641.63 0.0258 0.0186
 Saturn -63918-12-28 05:59 J -21624265.50 -21624265.25 -21624265.00 0.0259 0.0023
 Saturn -63916-01-07 23:30 J -21623888.73 -21623888.52 -21623888.32 0.0261 0.0146
 Jupiter -63912-02-23 07:11 J -21622381.43 -21622381.20 -21622380.96 0.0514 0.0019
 Jupiter -63907-08-16 04:04 J -21620381.40 -21620381.33 -21620381.24 0.0514 0.0476
 Saturn -63904-06-19 14:09 J -21619343.06 -21619342.91 -21619342.74 0.0304 0.0226

Saturn -63903-07-04 12:13 J -21618963.22 -21618962.99 -21618962.75 0.0303 0.0039
 Uranus -63902-02-01 03:49 J -21618751.53 -21618751.34 -21618751.15 0.0139 0.0095
 Saturn -63902-07-19 03:06 J -21618583.42 -21618583.37 -21618583.31 0.0300 0.0292
 Uranus -63901-02-05 23:45 J -21618381.77 -21618381.51 -21618381.25 0.0138 0.0003
 Uranus -63900-02-09 18:28 J -21618011.91 -21618011.73 -21618011.51 0.0138 0.0088
 Jupiter -63900-02-28 08:23 J -21617993.34 -21617993.15 -21617992.95 0.0515 0.0299
 Jupiter -63895-08-20 16:18 J -21615994.03 -21615993.82 -21615993.60 0.0513 0.0186
 Saturn -63889-12-22 11:45 J -21613678.24 -21613678.01 -21613677.78 0.0259 0.0098
 Neptune -63888-07-08 12:13 J -21613480.06 -21613479.99 -21613479.90 0.0089 0.0084
 Saturn -63887-01-03 03:21 J -21613301.60 -21613301.36 -21613301.12 0.0260 0.0070
 Neptune -63887-07-10 22:04 J -21613112.67 -21613112.58 -21613112.44 0.0089 0.0079
 Saturn -63886-01-14 23:16 J -21612924.62 -21612924.53 -21612924.43 0.0262 0.0242
 Neptune -63886-07-13 07:54 J -21612745.28 -21612745.17 -21612745.00 0.0089 0.0074
 Neptune -63885-07-14 17:59 J -21612377.89 -21612377.75 -21612377.57 0.0089 0.0068
 Neptune -63884-07-17 04:18 J -21612010.49 -21612010.32 -21612010.13 0.0089 0.0062
 Neptune -63883-07-19 13:54 J -21611643.09 -21611642.92 -21611642.70 0.0089 0.0057
 Jupiter -63883-08-25 05:01 J -21611606.52 -21611606.29 -21611606.07 0.0512 0.0106
 Neptune -63882-07-21 23:59 J -21611275.68 -21611275.50 -21611275.27 0.0089 0.0051
 Neptune -63881-07-23 10:04 J -21610908.29 -21610908.08 -21610907.85 0.0089 0.0045
 Neptune -63880-07-25 19:54 J -21610540.88 -21610540.67 -21610540.43 0.0089 0.0039
 Neptune -63879-07-28 05:45 J -21610173.48 -21610173.26 -21610173.01 0.0089 0.0034
 Neptune -63878-07-30 15:49 J -21609806.07 -21609805.84 -21609805.59 0.0089 0.0027
 Neptune -63877-08-01 01:40 J -21609438.67 -21609438.43 -21609438.18 0.0089 0.0021
 Neptune -63876-08-03 11:30 J -21609071.26 -21609071.02 -21609070.76 0.0089 0.0016
 Mars -63876-12-28 06:42 J -21608924.37 -21608924.22 -21608924.07 0.1567 0.0968
 Neptune -63875-08-05 21:49 J -21608703.84 -21608703.59 -21608703.34 0.0089 0.0009
 Saturn -63874-06-28 07:11 J -21608377.42 -21608377.20 -21608376.96 0.0303 0.0083
 Neptune -63874-08-08 07:40 J -21608336.43 -21608336.18 -21608335.92 0.0089 0.0003
 Saturn -63873-07-12 01:25 J -21607997.63 -21607997.44 -21607997.24 0.0301 0.0178
 Neptune -63873-08-09 17:45 J -21607969.01 -21607968.76 -21607968.50 0.0089 0.0004

Neptune -63872-08-12 03:49 J -21607601.58 -21607601.34 -21607601.08 0.0089 0.0010
 Neptune -63871-08-14 14:09 J -21607234.15 -21607233.91 -21607233.66 0.0089 0.0016
 Jupiter -63871-08-29 19:11 J -21607218.84 -21607218.70 -21607218.56 0.0510 0.0403
 Neptune -63870-08-17 00:13 J -21606866.73 -21606866.49 -21606866.24 0.0089 0.0023
 Neptune -63869-08-18 10:33 J -21606499.30 -21606499.06 -21606498.82 0.0089 0.0029
 Neptune -63868-08-20 20:09 J -21606131.87 -21606131.66 -21606131.40 0.0089 0.0036
 Neptune -63867-08-23 06:28 J -21605764.44 -21605764.23 -21605763.99 0.0089 0.0041
 Neptune -63866-08-25 16:33 J -21605397.01 -21605396.81 -21605396.58 0.0089 0.0047
 Neptune -63865-08-27 02:52 J -21605029.57 -21605029.38 -21605029.16 0.0089 0.0053
 Neptune -63864-08-29 13:11 J -21604662.13 -21604661.95 -21604661.75 0.0089 0.0059
 Neptune -63863-08-31 23:16 J -21604294.69 -21604294.53 -21604294.34 0.0089 0.0064
 Neptune -63862-09-03 09:35 J -21603927.23 -21603927.10 -21603926.92 0.0089 0.0070
 Neptune -63861-09-04 20:09 J -21603559.78 -21603559.66 -21603559.52 0.0089 0.0076
 Neptune -63860-09-07 06:28 J -21603192.31 -21603192.23 -21603192.10 0.0089 0.0081
 Saturn -63860-12-17 20:23 J -21603090.83 -21603090.65 -21603090.46 0.0259 0.0168
 Neptune -63859-09-09 17:16 J -21602824.82 -21602824.78 -21602824.70 0.0089 0.0087
 Saturn -63859-12-29 10:33 J -21602714.31 -21602714.06 -21602713.81 0.0260 0.0003
 Uranus -63858-07-31 16:04 J -21602499.86 -21602499.83 -21602499.76 0.0139 0.0137
 Saturn -63857-01-10 04:33 J -21602337.50 -21602337.31 -21602337.12 0.0261 0.0167
 Uranus -63857-08-04 04:33 J -21602130.55 -21602130.31 -21602130.08 0.0140 0.0047
 Uranus -63856-08-08 17:16 J -21601761.01 -21601760.78 -21601760.54 0.0140 0.0044
 Uranus -63855-08-13 06:57 J -21601391.26 -21601391.21 -21601391.14 0.0141 0.0136
 Saturn -63845-06-20 23:59 J -21597791.68 -21597791.50 -21597791.31 0.0304 0.0199
 Saturn -63844-07-05 20:52 J -21597411.86 -21597411.63 -21597411.39 0.0303 0.0067
 Jupiter -63841-02-18 13:11 J -21596454.11 -21596453.95 -21596453.78 0.0512 0.0361
 Saturn -63831-12-13 04:18 J -21592503.40 -21592503.32 -21592503.22 0.0258 0.0241
 Saturn -63830-12-24 17:16 J -21592127.01 -21592126.78 -21592126.53 0.0259 0.0078
 Jupiter -63829-02-23 11:16 J -21592066.26 -21592066.03 -21592065.79 0.0513 0.0052
 Mars -63829-12-22 14:23 J -21591762.99 -21591762.90 -21591762.80 0.1570 0.1344
 Saturn -63828-01-04 09:49 J -21591750.32 -21591750.09 -21591749.85 0.0260 0.0091

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 Neptune -63298-02-09 06:13 J -21398132.48 -21398132.24 -21398131.97 0.0088 0.0018
 Neptune -63297-02-11 19:54 J -21397764.92 -21397764.67 -21397764.41 0.0088 0.0025
 Neptune -63296-02-13 09:21 J -21397397.34 -21397397.11 -21397396.85 0.0088 0.0032
 Neptune -63295-02-15 22:47 J -21397029.77 -21397029.55 -21397029.30 0.0088 0.0038
 Neptune -63294-02-18 11:59 J -21396662.20 -21396662.00 -21396661.75 0.0088 0.0046
 Neptune -63293-02-21 01:40 J -21396294.63 -21396294.43 -21396294.20 0.0088 0.0052

Neptune -63292-02-22 14:52 J -21395927.06 -21395926.88 -21395926.66 0.0088 0.0058
 Neptune -63291-02-25 04:18 J -21395559.48 -21395559.32 -21395559.12 0.0088 0.0065
 Neptune -63290-02-27 17:45 J -21395191.92 -21395191.76 -21395191.61 0.0088 0.0071
 Jupiter -63290-08-25 17:16 J -21395013.00 -21395012.78 -21395012.55 0.0512 0.0124
 Neptune -63289-03-01 06:13 J -21394824.34 -21394824.24 -21394824.08 0.0088 0.0077
 Neptune -63288-03-03 19:25 J -21394456.75 -21394456.69 -21394456.58 0.0088 0.0083
 Saturn -63285-07-01 01:40 J -21393241.67 -21393241.43 -21393241.19 0.0304 0.0055
 Saturn -63284-07-15 21:21 J -21392861.77 -21392861.61 -21392861.43 0.0302 0.0212
 Jupiter -63278-08-30 06:28 J -21390625.35 -21390625.23 -21390625.09 0.0511 0.0421
 Saturn -63271-12-21 20:37 J -21387954.83 -21387954.64 -21387954.42 0.0258 0.0146
 Uranus -63270-08-03 01:11 J -21387730.55 -21387730.45 -21387730.32 0.0139 0.0123
 Saturn -63269-01-02 09:21 J -21387578.36 -21387578.11 -21387577.86 0.0259 0.0023
 Uranus -63269-08-06 13:25 J -21387361.18 -21387360.94 -21387360.70 0.0140 0.0032
 Saturn -63268-01-13 01:25 J -21387201.60 -21387201.44 -21387201.27 0.0261 0.0195
 Uranus -63268-08-11 01:54 J -21386991.63 -21386991.42 -21386991.18 0.0140 0.0061
 Mars -63261-12-25 07:54 J -21384298.35 -21384298.17 -21384297.99 0.1573 0.0621
 Saturn -63256-06-24 12:28 J -21382656.16 -21382655.98 -21382655.78 0.0304 0.0186
 Saturn -63255-07-09 11:30 J -21382276.25 -21382276.02 -21382275.79 0.0303 0.0085
 Jupiter -63248-02-17 16:47 J -21379860.97 -21379860.80 -21379860.63 0.0512 0.0352
 Saturn -63242-12-17 02:37 J -21377367.50 -21377367.39 -21377367.25 0.0258 0.0221
 Saturn -63241-12-27 13:40 J -21376991.17 -21376990.93 -21376990.68 0.0258 0.0056
 Saturn -63239-01-08 03:35 J -21376614.57 -21376614.35 -21376614.12 0.0259 0.0113
 Jupiter -63236-02-22 17:45 J -21375473.00 -21375472.76 -21375472.52 0.0513 0.0029
 Neptune -63232-07-06 15:35 J -21373877.89 -21373877.85 -21373877.75 0.0089 0.0086
 Neptune -63231-07-09 02:23 J -21373510.51 -21373510.40 -21373510.29 0.0089 0.0079
 Jupiter -63231-08-16 01:40 J -21373472.47 -21373472.43 -21373472.37 0.0515 0.0499
 Uranus -63230-02-03 16:04 J -21373301.04 -21373300.83 -21373300.61 0.0139 0.0078
 Neptune -63230-07-11 12:13 J -21373143.12 -21373142.99 -21373142.83 0.0089 0.0073
 Uranus -63229-02-08 11:59 J -21372931.25 -21372931.00 -21372930.74 0.0139 0.0017
 Neptune -63229-07-12 22:04 J -21372775.73 -21372775.58 -21372775.40 0.0089 0.0067

Uranus -63228-02-12 06:57 J -21372561.36 -21372561.21 -21372561.05 0.0138 0.0110
 Neptune -63228-07-15 07:54 J -21372408.33 -21372408.17 -21372407.96 0.0089 0.0061
 Neptune -63227-07-17 17:59 J -21372040.94 -21372040.75 -21372040.54 0.0089 0.0054
 Saturn -63226-07-02 19:25 J -21371690.93 -21371690.69 -21371690.45 0.0304 0.0041
 Neptune -63226-07-20 03:49 J -21371673.53 -21371673.34 -21371673.11 0.0089 0.0048
 Saturn -63225-07-16 15:21 J -21371311.01 -21371310.86 -21371310.70 0.0302 0.0225
 Neptune -63225-07-21 13:54 J -21371306.13 -21371305.92 -21371305.68 0.0089 0.0041
 Jupiter -63224-02-27 18:28 J -21371084.92 -21371084.73 -21371084.53 0.0514 0.0294
 Neptune -63224-07-23 23:45 J -21370938.73 -21370938.51 -21370938.26 0.0089 0.0035
 Neptune -63223-07-26 09:49 J -21370571.32 -21370571.09 -21370570.84 0.0089 0.0028
 Pluto -63222-05-15 09:49 J -21370278.31 -21370278.09 -21370277.85 0.0081 0.0035
 Neptune -63222-07-28 19:40 J -21370203.91 -21370203.68 -21370203.42 0.0089 0.0021
 Neptune -63221-07-30 05:59 J -21369836.50 -21369836.25 -21369836.00 0.0089 0.0014
 Neptune -63220-08-01 15:49 J -21369469.09 -21369468.84 -21369468.59 0.0089 0.0007
 Neptune -63219-08-04 02:09 J -21369101.67 -21369101.41 -21369101.16 0.0089 0.0001
 Jupiter -63219-08-20 15:21 J -21369085.06 -21369084.86 -21369084.64 0.0514 0.0197
 Neptune -63218-08-06 12:13 J -21368734.25 -21368733.99 -21368733.74 0.0089 0.0007
 Neptune -63217-08-07 22:04 J -21368366.83 -21368366.58 -21368366.33 0.0089 0.0013
 Neptune -63216-08-10 07:54 J -21367999.41 -21367999.17 -21367998.92 0.0089 0.0020
 Neptune -63215-08-12 17:45 J -21367631.99 -21367631.76 -21367631.51 0.0089 0.0027
 Neptune -63214-08-15 03:35 J -21367264.57 -21367264.35 -21367264.10 0.0089 0.0034
 Neptune -63213-08-16 13:40 J -21366897.14 -21366896.93 -21366896.69 0.0089 0.0040
 Neptune -63212-08-18 23:30 J -21366529.72 -21366529.52 -21366529.29 0.0089 0.0047
 Saturn -63212-12-22 17:16 J -21366403.99 -21366403.78 -21366403.56 0.0258 0.0133
 Neptune -63211-08-21 09:35 J -21366162.29 -21366162.10 -21366161.89 0.0089 0.0054
 Saturn -63210-01-03 05:30 J -21366027.51 -21366027.27 -21366027.02 0.0259 0.0036
 Neptune -63210-08-23 19:25 J -21365794.85 -21365794.69 -21365794.48 0.0089 0.0061
 Saturn -63209-01-14 21:35 J -21365650.74 -21365650.60 -21365650.44 0.0261 0.0207
 Neptune -63209-08-25 05:45 J -21365427.41 -21365427.26 -21365427.08 0.0089 0.0067
 Neptune -63208-08-27 15:35 J -21365059.96 -21365059.85 -21365059.68 0.0089 0.0073

Jupiter -63207-08-25 05:45 J -21364697.48 -21364697.26 -21364697.03 0.0513 0.0110
 Neptune -63207-08-30 02:09 J -21364692.50 -21364692.41 -21364692.28 0.0089 0.0079
 Neptune -63206-09-01 12:28 J -21364325.03 -21364324.98 -21364324.89 0.0089 0.0085
 Saturn -63197-06-25 05:45 J -21361105.46 -21361105.26 -21361105.06 0.0304 0.0173
 Saturn -63196-07-10 04:18 J -21360725.54 -21360725.32 -21360725.09 0.0303 0.0098
 Jupiter -63195-08-29 19:54 J -21360309.80 -21360309.67 -21360309.53 0.0511 0.0413
 Uranus -63186-08-03 09:06 J -21357049.22 -21357049.12 -21357048.98 0.0139 0.0121
 Uranus -63185-08-06 21:21 J -21356679.85 -21356679.61 -21356679.37 0.0140 0.0030
 Uranus -63184-08-11 10:04 J -21356310.29 -21356310.08 -21356309.85 0.0140 0.0063
 Saturn -63183-12-17 22:47 J -21355816.69 -21355816.55 -21355816.40 0.0258 0.0208
 Mars -63182-12-28 07:54 J -21355441.35 -21355441.17 -21355440.98 0.1572 0.0288
 Saturn -63182-12-29 09:35 J -21355440.34 -21355440.10 -21355439.85 0.0258 0.0043
 Saturn -63180-01-08 23:45 J -21355063.72 -21355063.51 -21355063.29 0.0259 0.0127
 Saturn -63168-06-18 11:01 J -21350520.07 -21350520.04 -21350519.98 0.0305 0.0299
 Saturn -63167-07-03 12:28 J -21350140.22 -21350139.98 -21350139.74 0.0304 0.0028
 Saturn -63166-07-18 08:23 J -21349760.29 -21349760.15 -21349760.00 0.0302 0.0239
 Jupiter -63165-02-18 05:30 J -21349545.43 -21349545.27 -21349545.09 0.0511 0.0364
 Jupiter -63153-02-23 04:33 J -21345157.55 -21345157.31 -21345157.07 0.0512 0.0045
 Saturn -63153-12-23 13:11 J -21344853.17 -21344852.95 -21344852.73 0.0258 0.0120
 Saturn -63151-01-04 01:40 J -21344476.68 -21344476.43 -21344476.18 0.0259 0.0048
 Saturn -63150-01-15 17:45 J -21344099.89 -21344099.76 -21344099.62 0.0261 0.0220
 Neptune -63149-01-05 05:30 J -21343745.33 -21343745.27 -21343745.15 0.0088 0.0083
 Neptune -63148-01-06 18:57 J -21343377.81 -21343377.71 -21343377.55 0.0088 0.0077
 Neptune -63147-01-09 08:37 J -21343010.29 -21343010.14 -21343009.97 0.0088 0.0070
 Neptune -63146-01-11 21:49 J -21342642.75 -21342642.59 -21342642.39 0.0088 0.0063
 Uranus -63146-02-03 21:35 J -21342619.81 -21342619.60 -21342619.38 0.0139 0.0078
 Neptune -63145-01-14 11:30 J -21342275.21 -21342275.02 -21342274.81 0.0088 0.0057
 Uranus -63145-02-08 17:45 J -21342250.02 -21342249.76 -21342249.50 0.0139 0.0017
 Neptune -63144-01-16 01:11 J -21341907.66 -21341907.45 -21341907.23 0.0088 0.0050
 Uranus -63144-02-12 12:28 J -21341880.11 -21341879.98 -21341879.81 0.0138 0.0111

Neptune -63143-01-18 14:23 J -21341540.11 -21341539.90 -21341539.65 0.0088 0.0043
 Neptune -63142-01-21 04:04 J -21341172.56 -21341172.33 -21341172.08 0.0088 0.0036
 Neptune -63141-01-23 17:30 J -21340805.00 -21340804.77 -21340804.50 0.0088 0.0030
 Jupiter -63141-02-28 03:21 J -21340769.55 -21340769.36 -21340769.15 0.0513 0.0276
 Neptune -63140-01-25 07:11 J -21340437.44 -21340437.20 -21340436.93 0.0088 0.0022
 Neptune -63139-01-27 20:52 J -21340069.88 -21340069.63 -21340069.36 0.0088 0.0016
 Neptune -63138-01-30 10:18 J -21339702.33 -21339702.07 -21339701.80 0.0088 0.0008
 Saturn -63138-06-26 22:18 J -21339554.77 -21339554.57 -21339554.36 0.0304 0.0159
 Neptune -63137-02-01 23:59 J -21339334.77 -21339334.50 -21339334.24 0.0088 0.0001
 Saturn -63137-07-10 20:52 J -21339174.85 -21339174.63 -21339174.41 0.0303 0.0112
 Neptune -63136-02-03 13:11 J -21338967.21 -21338966.95 -21338966.68 0.0088 0.0006
 Jupiter -63136-08-20 05:59 J -21338769.46 -21338769.25 -21338769.04 0.0514 0.0203
 Neptune -63135-02-06 02:23 J -21338599.65 -21338599.40 -21338599.13 0.0088 0.0013
 Neptune -63134-02-08 15:35 J -21338232.09 -21338231.85 -21338231.58 0.0088 0.0021
 Neptune -63133-02-11 05:01 J -21337864.53 -21337864.29 -21337864.03 0.0088 0.0027
 Neptune -63132-02-12 18:28 J -21337496.96 -21337496.73 -21337496.47 0.0088 0.0034
 Neptune -63131-02-15 07:40 J -21337129.39 -21337129.18 -21337128.92 0.0088 0.0041
 Neptune -63130-02-17 21:35 J -21336761.82 -21336761.60 -21336761.38 0.0088 0.0048
 Neptune -63129-02-20 10:47 J -21336394.24 -21336394.05 -21336393.83 0.0088 0.0054
 Neptune -63128-02-21 23:59 J -21336026.66 -21336026.50 -21336026.28 0.0088 0.0062
 Neptune -63127-02-24 13:40 J -21335659.09 -21335658.93 -21335658.76 0.0088 0.0068
 Neptune -63126-02-27 02:37 J -21335291.51 -21335291.39 -21335291.23 0.0088 0.0075
 Neptune -63125-02-29 16:04 J -21334923.92 -21334923.83 -21334923.71 0.0088 0.0081
 Neptune -63124-03-03 04:33 J -21334556.31 -21334556.31 -21334556.23 0.0088 0.0088
 Jupiter -63124-08-24 20:52 J -21334381.85 -21334381.63 -21334381.40 0.0512 0.0104
 Saturn -63124-12-18 18:28 J -21334265.87 -21334265.73 -21334265.55 0.0258 0.0195
 Saturn -63123-12-30 05:59 J -21333889.50 -21333889.25 -21333889.00 0.0258 0.0029
 Saturn -63121-01-10 20:09 J -21333512.86 -21333512.66 -21333512.44 0.0259 0.0140
 Jupiter -63112-08-29 08:23 J -21329994.28 -21329994.15 -21329994.00 0.0511 0.0398
 Saturn -63109-06-19 04:33 J -21328969.39 -21328969.31 -21328969.22 0.0305 0.0284

Saturn -63108-07-04 05:16 J -21328589.52 -21328589.28 -21328589.04 0.0304 0.0013
 Saturn -63107-07-19 00:57 J -21328209.59 -21328209.46 -21328209.33 0.0302 0.0252
 Mars -63103-12-30 08:52 J -21326584.25 -21326584.13 -21326584.01 0.1571 0.1197
 Uranus -63102-08-03 18:28 J -21326367.84 -21326367.73 -21326367.58 0.0139 0.0118
 Uranus -63101-08-07 06:42 J -21325998.46 -21325998.22 -21325997.97 0.0140 0.0027
 Uranus -63100-08-11 19:25 J -21325628.89 -21325628.69 -21325628.46 0.0140 0.0067
 Saturn -63094-12-25 09:06 J -21323302.34 -21323302.12 -21323301.89 0.0258 0.0107
 Saturn -63092-01-04 22:04 J -21322925.82 -21322925.58 -21322925.34 0.0259 0.0062
 Saturn -63091-01-16 14:23 J -21322549.00 -21322548.90 -21322548.78 0.0261 0.0234
 Jupiter -63082-02-17 14:37 J -21319230.05 -21319229.89 -21319229.73 0.0511 0.0384
 Saturn -63079-06-27 17:16 J -21318003.99 -21318003.78 -21318003.57 0.0304 0.0143
 Saturn -63078-07-12 15:35 J -21317624.07 -21317623.85 -21317623.63 0.0303 0.0128
 Jupiter -63070-02-22 09:21 J -21314842.34 -21314842.11 -21314841.87 0.0513 0.0076
 Neptune -63068-07-06 04:04 J -21313977.38 -21313977.33 -21313977.26 0.0089 0.0086
 Neptune -63067-07-08 14:09 J -21313610.00 -21313609.91 -21313609.79 0.0089 0.0080
 Neptune -63066-07-10 23:59 J -21313242.61 -21313242.50 -21313242.33 0.0089 0.0074
 Neptune -63065-07-12 10:33 J -21312875.22 -21312875.06 -21312874.89 0.0089 0.0067
 Pluto -63065-11-09 21:35 J -21312754.85 -21312754.60 -21312754.34 0.0064 0.0006
 Saturn -63065-12-19 15:35 J -21312715.03 -21312714.85 -21312714.67 0.0258 0.0180
 Neptune -63064-07-14 20:09 J -21312507.82 -21312507.66 -21312507.45 0.0089 0.0061
 Saturn -63064-12-31 03:06 J -21312338.62 -21312338.37 -21312338.12 0.0258 0.0015
 Neptune -63063-07-17 06:28 J -21312140.42 -21312140.23 -21312140.02 0.0089 0.0054
 Saturn -63062-01-11 17:45 J -21311961.96 -21311961.76 -21311961.55 0.0260 0.0156
 Uranus -63062-02-04 05:45 J -21311938.47 -21311938.26 -21311938.04 0.0139 0.0076
 Neptune -63062-07-19 16:33 J -21311773.02 -21311772.81 -21311772.59 0.0089 0.0047
 Uranus -63061-02-09 01:54 J -21311568.67 -21311568.42 -21311568.16 0.0139 0.0020
 Neptune -63061-07-21 01:54 J -21311405.62 -21311405.42 -21311405.17 0.0089 0.0041
 Uranus -63060-02-12 20:52 J -21311198.76 -21311198.63 -21311198.47 0.0138 0.0114
 Neptune -63060-07-23 11:45 J -21311038.22 -21311038.01 -21311037.76 0.0089 0.0034
 Neptune -63059-07-25 21:49 J -21310670.82 -21310670.59 -21310670.34 0.0089 0.0027

Jupiter -63058-02-27 10:18 J -21310454.27 -21310454.07 -21310453.86 0.0514 0.0252
 Neptune -63058-07-28 07:54 J -21310303.41 -21310303.17 -21310302.92 0.0089 0.0020
 Neptune -63057-07-29 17:45 J -21309936.01 -21309935.76 -21309935.51 0.0089 0.0013
 Neptune -63056-08-01 03:49 J -21309568.59 -21309568.34 -21309568.09 0.0089 0.0006
 Mars -63056-12-24 14:52 J -21309423.00 -21309422.88 -21309422.75 0.1576 0.1185
 Neptune -63055-08-03 13:40 J -21309201.18 -21309200.93 -21309200.67 0.0089 0.0001
 Neptune -63054-08-05 23:45 J -21308833.76 -21308833.51 -21308833.26 0.0089 0.0008
 Neptune -63053-08-07 09:35 J -21308466.34 -21308466.10 -21308465.84 0.0089 0.0015
 Jupiter -63053-08-19 17:45 J -21308453.96 -21308453.76 -21308453.55 0.0514 0.0223
 Neptune -63052-08-09 19:40 J -21308098.92 -21308098.68 -21308098.43 0.0089 0.0022
 Neptune -63051-08-12 05:45 J -21307731.49 -21307731.26 -21307731.01 0.0089 0.0029
 Saturn -63050-06-21 00:42 J -21307418.57 -21307418.47 -21307418.34 0.0304 0.0268
 Neptune -63050-08-14 15:35 J -21307364.07 -21307363.85 -21307363.61 0.0089 0.0036
 Saturn -63049-07-05 01:11 J -21307038.69 -21307038.45 -21307038.21 0.0304 0.0007
 Neptune -63049-08-16 01:25 J -21306996.64 -21306996.44 -21306996.20 0.0089 0.0043
 Saturn -63048-07-19 20:23 J -21306658.76 -21306658.65 -21306658.54 0.0302 0.0268
 Neptune -63048-08-18 11:16 J -21306629.22 -21306629.03 -21306628.80 0.0089 0.0050
 Mars -63047-07-01 18:42 J -21306311.91 -21306311.72 -21306311.53 0.1974 0.0584
 Neptune -63047-08-20 21:35 J -21306261.78 -21306261.60 -21306261.39 0.0089 0.0057
 Neptune -63046-08-23 07:25 J -21305894.35 -21305894.19 -21305893.99 0.0089 0.0063
 Neptune -63045-08-24 17:45 J -21305526.91 -21305526.76 -21305526.59 0.0089 0.0070
 Neptune -63044-08-27 03:35 J -21305159.46 -21305159.35 -21305159.20 0.0089 0.0076
 Neptune -63043-08-29 13:54 J -21304792.00 -21304791.92 -21304791.81 0.0089 0.0083
 Neptune -63042-09-01 00:13 J -21304424.49 -21304424.49 -21304424.46 0.0089 0.0089
 Jupiter -63041-08-24 06:28 J -21304066.46 -21304066.23 -21304066.01 0.0513 0.0078
 Saturn -63036-12-14 19:40 J -21302127.69 -21302127.68 -21302127.63 0.0258 0.0257
 Saturn -63035-12-26 06:42 J -21301751.44 -21301751.22 -21301750.98 0.0258 0.0092
 Saturn -63033-01-06 20:09 J -21301374.89 -21301374.66 -21301374.41 0.0259 0.0078
 Saturn -63032-01-17 13:25 J -21300998.01 -21300997.94 -21300997.86 0.0261 0.0249
 Jupiter -63029-08-28 19:11 J -21299678.85 -21299678.70 -21299678.54 0.0512 0.0380

Saturn -63020-06-28 15:06 J -21296453.09 -21296452.87 -21296452.65 0.0304 0.0124

Saturn -63019-07-13 12:42 J -21296073.17 -21296072.97 -21296072.75 0.0302 0.0147

Uranus -63018-08-04 05:30 J -21295686.39 -21295686.27 -21295686.11 0.0139 0.0114

Uranus -63017-08-07 17:45 J -21295317.00 -21295316.76 -21295316.51 0.0140 0.0022

Uranus -63016-08-12 06:42 J -21294947.42 -21294947.22 -21294947.00 0.0140 0.0072

Saturn -63006-12-21 14:09 J -21291164.10 -21291163.91 -21291163.72 0.0258 0.0165

Saturn -63004-01-01 02:09 J -21290787.66 -21290787.41 -21290787.15 0.0259 0.0006

Saturn -63003-01-12 17:16 J -21290410.96 -21290410.78 -21290410.58 0.0260 0.0173

63RD MILLENNIUM BCE

This is a list of transits of Earth in the 63rd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Jupiter -62999-02-16 18:28 J -21288914.86 -21288914.73 -21288914.59 0.0511 0.0420

Saturn -62991-06-22 01:54 J -21285867.55 -21285867.42 -21285867.27 0.0304 0.0246

Saturn -62990-07-07 01:54 J -21285487.66 -21285487.42 -21285487.18 0.0304 0.0025

Saturn -62989-07-20 20:09 J -21285107.72 -21285107.66 -21285107.58 0.0302 0.0288

Jupiter -62987-02-21 19:25 J -21284526.93 -21284526.69 -21284526.46 0.0512 0.0097

Neptune -62985-01-04 14:23 J -21283844.96 -21283844.90 -21283844.78 0.0088 0.0084

Neptune -62984-01-06 04:04 J -21283477.44 -21283477.33 -21283477.19 0.0088 0.0077

Neptune -62983-01-08 17:01 J -21283109.92 -21283109.79 -21283109.60 0.0088 0.0071

Neptune -62982-01-11 06:28 J -21282742.39 -21282742.23 -21282742.03 0.0088 0.0064

Neptune -62981-01-13 19:54 J -21282374.85 -21282374.67 -21282374.45 0.0088 0.0057

Neptune -62980-01-15 09:35 J -21282007.31 -21282007.10 -21282006.88 0.0088 0.0050

Neptune -62979-01-17 23:01 J -21281639.76 -21281639.54 -21281639.30 0.0088 0.0043
 Neptune -62978-01-20 12:28 J -21281272.21 -21281271.98 -21281271.73 0.0088 0.0036
 Uranus -62978-02-04 16:33 J -21281257.03 -21281256.81 -21281256.58 0.0139 0.0071
 Neptune -62977-01-23 01:54 J -21280904.66 -21280904.42 -21280904.16 0.0088 0.0029
 Uranus -62977-02-09 12:57 J -21280887.22 -21280886.96 -21280886.71 0.0139 0.0025
 Saturn -62977-12-15 19:25 J -21280576.77 -21280576.69 -21280576.60 0.0258 0.0240
 Mars -62977-12-26 16:18 J -21280566.01 -21280565.82 -21280565.63 0.1574 0.0266
 Neptune -62976-01-24 15:35 J -21280537.09 -21280536.85 -21280536.58 0.0088 0.0022
 Uranus -62976-02-13 07:40 J -21280517.29 -21280517.18 -21280517.03 0.0138 0.0119
 Pluto -62976-05-16 20:23 J -21280424.91 -21280424.65 -21280424.39 0.0081 0.0005
 Saturn -62976-12-27 06:57 J -21280200.44 -21280200.21 -21280199.97 0.0258 0.0075
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 Neptune -62968-02-12 03:21 J -21277596.59 -21277596.36 -21277596.11 0.0088 0.0036
 Neptune -62967-02-14 16:33 J -21277229.02 -21277228.81 -21277228.56 0.0088 0.0044
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 Neptune -62963-02-23 22:04 J -21275758.71 -21275758.58 -21275758.40 0.0088 0.0071
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 Neptune -62961-02-29 00:42 J -21275023.52 -21275023.47 -21275023.37 0.0088 0.0085
 Saturn -62961-06-29 18:28 J -21274901.96 -21274901.73 -21274901.50 0.0304 0.0101

Saturn -62960-07-14 15:21 J -21274522.05 -21274521.86 -21274521.66 0.0302 0.0168
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 Saturn -62932-06-23 08:37 J -21264316.31 -21264316.14 -21264315.98 0.0304 0.0221
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 Saturn -62931-07-08 07:40 J -21263936.42 -21263936.18 -21263935.95 0.0303 0.0050
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 Neptune -62903-07-08 01:25 J -21253709.53 -21253709.44 -21253709.33 0.0089 0.0081
 Saturn -62902-07-02 03:21 J -21253350.59 -21253350.36 -21253350.12 0.0303 0.0073
 Neptune -62902-07-10 11:16 J -21253342.14 -21253342.03 -21253341.87 0.0089 0.0075
 Neptune -62901-07-11 21:21 J -21252974.75 -21252974.61 -21252974.43 0.0089 0.0068
 Saturn -62901-07-15 23:45 J -21252970.69 -21252970.51 -21252970.32 0.0302 0.0195
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 Neptune -62898-07-19 04:04 J -21251872.53 -21251872.33 -21251872.11 0.0089 0.0047
 Mars -62898-12-29 16:33 J -21251708.98 -21251708.81 -21251708.64 0.1573 0.0653
 Neptune -62897-07-20 14:09 J -21251505.13 -21251504.91 -21251504.68 0.0089 0.0040
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 Neptune -62737-07-11 07:54 J -21193074.30 -21193074.17 -21193073.98 0.0089 0.0069
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 Pluto -62730-05-19 01:25 J -21190571.68 -21190571.44 -21190571.19 0.0081 0.0025
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 Neptune -62729-07-28 16:18 J -21190135.06 -21190134.82 -21190134.56 0.0089 0.0011
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Neptune -62725-08-06 07:54 J -21188665.41 -21188665.17 -21188664.92 0.0089 0.0018
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 Neptune -62406-07-17 09:35 J -21072171.30 -21072171.10 -21072170.88 0.0089 0.0049
 Neptune -62405-07-18 19:25 J -21071803.90 -21071803.69 -21071803.45 0.0089 0.0042
 Neptune -62404-07-21 05:30 J -21071436.49 -21071436.27 -21071436.02 0.0089 0.0034
 Neptune -62403-07-23 15:21 J -21071069.09 -21071068.86 -21071068.61 0.0089 0.0027
 Saturn -62402-06-26 05:59 J -21070731.40 -21070731.25 -21070731.07 0.0304 0.0222
 Neptune -62402-07-26 01:25 J -21070701.67 -21070701.44 -21070701.18 0.0089 0.0019
 Saturn -62401-07-10 06:13 J -21070351.47 -21070351.24 -21070351.00 0.0303 0.0055
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 Mars -62400-07-03 01:11 J -21069993.63 -21069993.45 -21069993.26 0.1968 0.0752
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 Neptune -62396-08-07 13:25 J -21068497.17 -21068496.94 -21068496.69 0.0089 0.0028
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Jupiter -62394-02-21 16:47 J -21067934.03 -21067933.80 -21067933.57 0.0511 0.0105
 Neptune -62394-08-12 09:06 J -21067762.33 -21067762.12 -21067761.89 0.0089 0.0043
 Neptune -62393-08-13 18:42 J -21067394.90 -21067394.72 -21067394.49 0.0089 0.0051
 Neptune -62392-08-16 04:47 J -21067027.47 -21067027.30 -21067027.09 0.0089 0.0058
 Uranus -62391-02-03 02:09 J -21066856.48 -21066856.41 -21066856.32 0.0140 0.0132
 Neptune -62391-08-18 14:52 J -21066660.04 -21066659.88 -21066659.70 0.0089 0.0065
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 Neptune -62390-08-21 00:42 J -21066292.59 -21066292.47 -21066292.30 0.0089 0.0073
 Uranus -62389-02-12 18:57 J -21066116.92 -21066116.71 -21066116.46 0.0139 0.0065
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 Saturn -62388-12-20 02:52 J -21065440.51 -21065440.38 -21065440.24 0.0258 0.0215
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 Jupiter -62382-02-26 17:16 J -21063545.99 -21063545.78 -21063545.57 0.0513 0.0226
 Jupiter -62377-08-19 13:11 J -21061545.14 -21061544.95 -21061544.75 0.0515 0.0255
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 Jupiter -62353-08-28 17:01 J -21052769.94 -21052769.79 -21052769.63 0.0513 0.0373
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 Uranus -62345-08-11 04:47 J -21049865.55 -21049865.30 -21049865.05 0.0140 0.0012
 Uranus -62344-08-15 17:16 J -21049495.93 -21049495.78 -21049495.61 0.0140 0.0107
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 Saturn -62329-12-20 23:45 J -21043889.65 -21043889.51 -21043889.34 0.0258 0.0202

Neptune -62328-01-03 05:59 J -21043876.32 -21043876.25 -21043876.14 0.0088 0.0083
 Pluto -62328-11-13 22:18 J -21043561.76 -21043561.57 -21043561.37 0.0064 0.0042
 Saturn -62327-01-01 10:47 J -21043513.30 -21043513.05 -21043512.80 0.0258 0.0033
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 Neptune -62316-01-30 22:33 J -21039465.81 -21039465.56 -21039465.29 0.0088 0.0012
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 Saturn -62312-07-19 08:37 J -21037835.30 -21037835.14 -21037834.97 0.0303 0.0216
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 Jupiter -62311-02-21 04:18 J -21037618.55 -21037618.32 -21037618.08 0.0511 0.0122
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 Uranus -62307-02-03 17:01 J -21036174.89 -21036174.79 -21036174.65 0.0140 0.0124

Neptune -62307-02-20 23:16 J -21036157.61 -21036157.53 -21036157.41 0.0088 0.0082
 Uranus -62306-02-08 14:23 J -21035805.15 -21035804.90 -21035804.64 0.0139 0.0024
 Uranus -62305-02-13 10:18 J -21035435.29 -21035435.07 -21035434.85 0.0139 0.0073
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 Saturn -62284-06-27 21:21 J -21027629.80 -21027629.61 -21027629.43 0.0304 0.0191
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 Mars -62283-12-26 13:40 J -21027083.07 -21027082.93 -21027082.79 0.1585 0.1079
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 Uranus -62261-08-11 15:21 J -21019184.11 -21019183.86 -21019183.61 0.0140 0.0016
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 Neptune -62243-07-14 08:09 J -21012638.34 -21012638.16 -21012637.96 0.0089 0.0058
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 Jupiter -62240-02-15 16:04 J -21011690.92 -21011690.83 -21011690.74 0.0510 0.0465
 Neptune -62240-07-20 13:54 J -21011536.14 -21011535.92 -21011535.68 0.0089 0.0035

Saturn -62240-12-28 09:49 J -21011375.32 -21011375.09 -21011374.86 0.0258 0.0099
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 Pluto -62238-05-22 10:18 J -21010865.24 -21010865.07 -21010864.89 0.0081 0.0059
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 Neptune -62237-07-26 19:40 J -21010433.92 -21010433.68 -21010433.42 0.0089 0.0012
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 Jupiter -62211-08-19 16:33 J -21000914.00 -21000913.81 -21000913.62 0.0515 0.0282
 Saturn -62211-12-23 15:35 J -21000788.03 -21000787.85 -21000787.66 0.0258 0.0175
 Saturn -62209-01-04 02:23 J -21000411.65 -21000411.40 -21000411.15 0.0258 0.0006
 Saturn -62208-01-14 15:21 J -21000035.05 -21000034.86 -21000034.66 0.0259 0.0166

Mars -62204-12-28 15:06 J -20998226.06 -20998225.87 -20998225.68 0.1583 0.0118
 Jupiter -62199-08-24 05:01 J -20996526.52 -20996526.29 -20996526.06 0.0514 0.0032
 Saturn -62195-07-06 20:23 J -20995113.88 -20995113.65 -20995113.40 0.0304 0.0031
 Saturn -62194-07-21 18:28 J -20994733.86 -20994733.73 -20994733.58 0.0303 0.0244
 Jupiter -62187-08-28 18:13 J -20992138.91 -20992138.74 -20992138.57 0.0513 0.0343
 Saturn -62182-12-18 18:42 J -20990200.75 -20990200.72 -20990200.67 0.0258 0.0254
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 Neptune -62157-01-19 07:11 J -20981403.43 -20981403.20 -20981402.93 0.0088 0.0030
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 Neptune -62156-01-20 20:52 J -20981035.87 -20981035.63 -20981035.36 0.0088 0.0022
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 Jupiter -62121-03-01 20:37 J -20968211.69 -20968211.64 -20968211.58 0.0513 0.0499
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 Jupiter -62116-08-23 15:49 J -20966211.07 -20966210.84 -20966210.61 0.0514 0.0009
 Saturn -62107-07-01 04:18 J -20962977.53 -20962977.32 -20962977.11 0.0304 0.0144
 Saturn -62106-07-16 03:35 J -20962597.55 -20962597.35 -20962597.12 0.0303 0.0134
 Jupiter -62104-08-28 07:25 J -20961823.35 -20961823.19 -20961823.01 0.0513 0.0332
 Uranus -62094-08-09 00:13 J -20958190.70 -20958190.49 -20958190.26 0.0139 0.0069

Uranus -62093-08-12 11:59 J -20957821.24 -20957821.00 -20957820.75 0.0139 0.0026
 Saturn -62093-12-25 09:35 J -20957686.29 -20957686.10 -20957685.88 0.0259 0.0146
 Uranus -62092-08-17 00:42 J -20957451.59 -20957451.47 -20957451.35 0.0140 0.0121
 Saturn -62091-01-05 21:21 J -20957309.86 -20957309.61 -20957309.36 0.0259 0.0026
 Saturn -62090-01-17 11:01 J -20956933.19 -20956933.04 -20956932.87 0.0259 0.0198
 Neptune -62082-07-07 07:54 J -20953840.22 -20953840.17 -20953840.06 0.0089 0.0084
 Pluto -62082-11-16 00:42 J -20953708.68 -20953708.47 -20953708.25 0.0064 0.0036
 Neptune -62081-07-08 18:28 J -20953472.84 -20953472.73 -20953472.58 0.0089 0.0076
 Pluto -62081-11-16 12:13 J -20953342.14 -20953341.99 -20953341.79 0.0064 0.0046
 Neptune -62080-07-11 05:01 J -20953105.45 -20953105.29 -20953105.12 0.0089 0.0068
 Neptune -62079-07-13 15:21 J -20952738.04 -20952737.86 -20952737.68 0.0089 0.0060
 Saturn -62078-06-24 13:54 J -20952392.02 -20952391.92 -20952391.80 0.0304 0.0269
 Neptune -62078-07-16 00:57 J -20952370.64 -20952370.46 -20952370.23 0.0089 0.0053
 Saturn -62077-07-08 14:23 J -20952012.14 -20952011.90 -20952011.66 0.0304 0.0007
 Neptune -62077-07-17 11:01 J -20952003.24 -20952003.04 -20952002.80 0.0089 0.0045
 Neptune -62076-07-19 21:06 J -20951635.84 -20951635.62 -20951635.37 0.0089 0.0037
 Saturn -62076-07-23 11:01 J -20951632.12 -20951632.04 -20951631.93 0.0303 0.0279
 Neptune -62075-07-22 07:11 J -20951268.42 -20951268.20 -20951267.94 0.0089 0.0029
 Neptune -62074-07-24 17:16 J -20950901.02 -20950900.78 -20950900.52 0.0089 0.0021
 Neptune -62073-07-26 03:35 J -20950533.60 -20950533.35 -20950533.10 0.0089 0.0012
 Neptune -62072-07-28 13:25 J -20950166.19 -20950165.94 -20950165.69 0.0089 0.0004
 Neptune -62071-07-30 23:30 J -20949798.77 -20949798.52 -20949798.27 0.0089 0.0004
 Neptune -62070-08-02 09:35 J -20949431.35 -20949431.10 -20949430.85 0.0089 0.0012
 Neptune -62069-08-03 19:11 J -20949063.93 -20949063.70 -20949063.44 0.0089 0.0021
 Neptune -62068-08-06 05:16 J -20948696.51 -20948696.28 -20948696.03 0.0089 0.0029
 Neptune -62067-08-08 15:06 J -20948329.08 -20948328.87 -20948328.62 0.0089 0.0037
 Neptune -62066-08-11 01:11 J -20947961.65 -20947961.45 -20947961.21 0.0089 0.0045
 Neptune -62065-08-12 11:01 J -20947594.23 -20947594.04 -20947593.82 0.0089 0.0053
 Neptune -62064-08-14 20:37 J -20947226.79 -20947226.64 -20947226.43 0.0089 0.0062
 Saturn -62064-12-20 14:23 J -20947099.02 -20947098.90 -20947098.77 0.0259 0.0224

Neptune -62063-08-17 06:28 J -20946859.36 -20946859.23 -20946859.04 0.0089 0.0069
 Saturn -62062-01-01 01:54 J -20946722.66 -20946722.42 -20946722.17 0.0258 0.0054
 Jupiter -62062-02-20 06:13 J -20946672.46 -20946672.24 -20946672.02 0.0511 0.0194
 Neptune -62062-08-19 16:47 J -20946491.91 -20946491.80 -20946491.65 0.0089 0.0076
 Saturn -62061-01-12 14:52 J -20946346.10 -20946345.88 -20946345.65 0.0259 0.0119
 Neptune -62061-08-21 02:23 J -20946124.46 -20946124.40 -20946124.29 0.0089 0.0084
 Uranus -62055-02-05 05:45 J -20944130.41 -20944130.26 -20944130.07 0.0140 0.0104
 Uranus -62054-02-10 03:35 J -20943760.61 -20943760.35 -20943760.09 0.0140 0.0004
 Uranus -62053-02-14 23:45 J -20943390.68 -20943390.51 -20943390.31 0.0139 0.0096
 Jupiter -62050-02-25 03:49 J -20942284.57 -20942284.34 -20942284.11 0.0512 0.0133
 Saturn -62048-07-02 05:01 J -20941426.51 -20941426.29 -20941426.07 0.0304 0.0122
 Saturn -62047-07-17 04:04 J -20941046.53 -20941046.33 -20941046.12 0.0303 0.0154
 Jupiter -62045-08-18 13:25 J -20940283.12 -20940282.94 -20940282.77 0.0516 0.0332
 Jupiter -62038-03-01 21:35 J -20937896.70 -20937896.60 -20937896.48 0.0513 0.0454
 Saturn -62034-12-27 10:04 J -20936135.29 -20936135.08 -20936134.86 0.0259 0.0128
 Jupiter -62033-08-23 05:16 J -20935895.51 -20935895.28 -20935895.05 0.0514 0.0012
 Saturn -62032-01-06 22:33 J -20935758.81 -20935758.56 -20935758.32 0.0259 0.0044
 Saturn -62031-01-18 12:57 J -20935382.09 -20935381.96 -20935381.82 0.0260 0.0217
 Jupiter -62021-08-27 16:33 J -20931507.98 -20931507.81 -20931507.62 0.0513 0.0303
 Saturn -62019-06-25 17:59 J -20930840.87 -20930840.75 -20930840.60 0.0303 0.0247
 Saturn -62018-07-10 17:59 J -20930460.99 -20930460.75 -20930460.51 0.0304 0.0031
 Saturn -62017-07-24 14:09 J -20930080.92 -20930080.91 -20930080.88 0.0302 0.0301
 Uranus -62010-08-09 13:54 J -20927509.14 -20927508.92 -20927508.69 0.0139 0.0062
 Uranus -62009-08-13 01:40 J -20927139.67 -20927139.43 -20927139.18 0.0139 0.0033
 Uranus -62008-08-17 13:54 J -20926770.00 -20926769.92 -20926769.81 0.0140 0.0129
 Saturn -62005-12-21 15:35 J -20925547.99 -20925547.85 -20925547.69 0.0259 0.0207
 Saturn -62003-01-02 03:49 J -20925171.59 -20925171.34 -20925171.09 0.0259 0.0036
 Saturn -62002-01-13 17:16 J -20924794.98 -20924794.78 -20924794.56 0.0259 0.0138

62ND MILLENNIUM BCE

This is a list of transits of Earth in the 62nd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Neptune	-62000-01-01 14:23 J	-20924075.91	-20924075.90	-20924075.85	0.0088	0.0088		
Neptune	-61999-01-04 03:06 J	-20923708.45	-20923708.37	-20923708.23	0.0088	0.0081		
Mars	-61999-12-27 20:52 J	-20923350.79	-20923350.63	-20923350.46	0.1587	0.0733		
Neptune	-61998-01-06 16:04 J	-20923340.95	-20923340.83	-20923340.65	0.0088	0.0073		
Neptune	-61997-01-09 05:16 J	-20922973.43	-20922973.28	-20922973.07	0.0088	0.0065		
Neptune	-61996-01-10 18:42 J	-20922605.90	-20922605.72	-20922605.50	0.0088	0.0056		
Neptune	-61995-01-13 07:40 J	-20922238.37	-20922238.18	-20922237.94	0.0088	0.0049		
Neptune	-61994-01-15 20:52 J	-20921870.84	-20921870.63	-20921870.37	0.0088	0.0041		
Neptune	-61993-01-18 10:47 J	-20921503.29	-20921503.05	-20921502.80	0.0088	0.0032		
Neptune	-61992-01-19 23:59 J	-20921135.74	-20921135.50	-20921135.24	0.0088	0.0023		
Pluto	-61992-05-23 13:25 J	-20921012.04	-20921011.94	-20921011.81	0.0080	0.0072		
Neptune	-61991-01-22 13:40 J	-20920768.19	-20920767.93	-20920767.67	0.0088	0.0015		
Neptune	-61990-01-25 02:52 J	-20920400.64	-20920400.38	-20920400.11	0.0088	0.0006		
Neptune	-61989-01-27 16:33 J	-20920033.07	-20920032.81	-20920032.55	0.0088	0.0002		
Saturn	-61989-07-03 12:13 J	-20919875.21	-20919874.99	-20919874.76	0.0303	0.0096		
Neptune	-61988-01-29 05:30 J	-20919665.52	-20919665.27	-20919664.99	0.0088	0.0012		
Saturn	-61988-07-18 10:33 J	-20919495.25	-20919495.06	-20919494.86	0.0303	0.0180		
Neptune	-61987-01-31 18:42 J	-20919297.96	-20919297.72	-20919297.45	0.0088	0.0020		
Neptune	-61986-02-03 08:23 J	-20918930.40	-20918930.15	-20918929.90	0.0088	0.0027		
Neptune	-61985-02-05 21:35 J	-20918562.84	-20918562.60	-20918562.35	0.0088	0.0036		

Neptune -61984-02-07 10:33 J -20918195.27 -20918195.06 -20918194.81 0.0088 0.0045
 Neptune -61983-02-09 23:45 J -20917827.70 -20917827.51 -20917827.28 0.0088 0.0053
 Neptune -61982-02-12 13:25 J -20917460.12 -20917459.94 -20917459.74 0.0088 0.0061
 Neptune -61981-02-15 02:52 J -20917092.54 -20917092.38 -20917092.21 0.0088 0.0069
 Neptune -61980-02-16 16:18 J -20916724.94 -20916724.82 -20916724.68 0.0088 0.0077
 Jupiter -61979-02-19 04:47 J -20916357.50 -20916357.30 -20916357.09 0.0510 0.0249
 Neptune -61979-02-19 05:30 J -20916357.33 -20916357.27 -20916357.18 0.0088 0.0085 *
 Saturn -61975-12-28 13:11 J -20914584.17 -20914583.95 -20914583.72 0.0259 0.0109
 Saturn -61973-01-09 02:09 J -20914207.65 -20914207.41 -20914207.16 0.0259 0.0064
 Saturn -61972-01-19 17:30 J -20913830.87 -20913830.77 -20913830.67 0.0260 0.0237
 Uranus -61971-02-05 16:47 J -20913448.96 -20913448.80 -20913448.59 0.0140 0.0099
 Uranus -61970-02-10 14:52 J -20913079.14 -20913078.88 -20913078.62 0.0140 0.0002
 Uranus -61969-02-15 11:30 J -20912709.19 -20912709.02 -20912708.84 0.0139 0.0101
 Jupiter -61967-02-24 03:21 J -20911969.59 -20911969.36 -20911969.12 0.0512 0.0081
 Jupiter -61962-08-18 19:40 J -20909967.83 -20909967.68 -20909967.51 0.0516 0.0372
 Saturn -61960-06-27 04:33 J -20909289.47 -20909289.31 -20909289.14 0.0303 0.0218
 Saturn -61959-07-12 03:35 J -20908909.58 -20908909.35 -20908909.11 0.0303 0.0059
 Jupiter -61955-03-01 03:35 J -20907581.48 -20907581.35 -20907581.21 0.0513 0.0421
 Jupiter -61950-08-23 08:37 J -20905580.37 -20905580.14 -20905579.91 0.0515 0.0055
 Saturn -61946-12-23 19:54 J -20903996.83 -20903996.67 -20903996.49 0.0259 0.0188
 Saturn -61944-01-03 08:37 J -20903620.39 -20903620.14 -20903619.89 0.0259 0.0016
 Saturn -61943-01-14 22:47 J -20903243.73 -20903243.55 -20903243.34 0.0259 0.0160
 Jupiter -61938-08-27 20:23 J -20901192.85 -20901192.65 -20901192.45 0.0514 0.0259
 Saturn -61930-07-06 00:42 J -20898323.70 -20898323.47 -20898323.23 0.0303 0.0065
 Saturn -61929-07-19 22:04 J -20897943.75 -20897943.58 -20897943.40 0.0303 0.0209
 Uranus -61926-08-10 03:21 J -20896827.57 -20896827.36 -20896827.11 0.0139 0.0055
 Uranus -61925-08-13 15:21 J -20896458.10 -20896457.86 -20896457.62 0.0139 0.0041
 Uranus -61924-08-18 03:21 J -20896088.39 -20896088.36 -20896088.29 0.0140 0.0137
 Mars -61920-12-29 23:01 J -20894493.73 -20894493.54 -20894493.35 0.1585 0.0246
 Neptune -61918-07-06 13:54 J -20893939.94 -20893939.92 -20893939.84 0.0089 0.0087

Neptune -61917-07-08 00:28 J -20893572.58 -20893572.48 -20893572.35 0.0089 0.0079
 Saturn -61917-12-18 06:28 J -20893409.23 -20893409.23 -20893409.22 0.0260 0.0260
 Neptune -61916-07-10 10:47 J -20893205.19 -20893205.05 -20893204.88 0.0089 0.0071
 Saturn -61916-12-29 19:11 J -20893032.94 -20893032.70 -20893032.47 0.0259 0.0089
 Neptune -61915-07-12 21:06 J -20892837.78 -20892837.62 -20892837.42 0.0089 0.0063
 Saturn -61914-01-10 08:37 J -20892656.37 -20892656.14 -20892655.90 0.0259 0.0086
 Neptune -61914-07-15 07:25 J -20892470.38 -20892470.19 -20892469.98 0.0089 0.0055
 Saturn -61913-01-22 00:28 J -20892279.49 -20892279.48 -20892279.46 0.0260 0.0260
 Neptune -61913-07-16 17:30 J -20892102.97 -20892102.77 -20892102.54 0.0089 0.0047
 Neptune -61912-07-19 03:35 J -20891735.56 -20891735.35 -20891735.11 0.0089 0.0039
 Neptune -61911-07-21 13:40 J -20891368.16 -20891367.93 -20891367.68 0.0089 0.0030
 Neptune -61910-07-23 23:45 J -20891000.75 -20891000.51 -20891000.25 0.0089 0.0022
 Neptune -61909-07-25 09:35 J -20890633.34 -20890633.10 -20890632.84 0.0089 0.0014
 Neptune -61908-07-27 19:40 J -20890265.93 -20890265.68 -20890265.42 0.0089 0.0006
 Neptune -61907-07-30 05:45 J -20889898.51 -20889898.26 -20889898.01 0.0089 0.0003
 Neptune -61906-08-01 15:21 J -20889531.10 -20889530.86 -20889530.60 0.0089 0.0012
 Neptune -61905-08-03 01:25 J -20889163.68 -20889163.44 -20889163.18 0.0089 0.0020
 Neptune -61904-08-05 11:30 J -20888796.25 -20888796.02 -20888795.77 0.0089 0.0028
 Neptune -61903-08-07 21:35 J -20888428.82 -20888428.60 -20888428.36 0.0089 0.0037
 Neptune -61902-08-10 07:25 J -20888061.39 -20888061.19 -20888060.95 0.0089 0.0045
 Saturn -61901-06-28 20:52 J -20887737.81 -20887737.63 -20887737.44 0.0303 0.0186
 Neptune -61901-08-11 17:45 J -20887693.95 -20887693.76 -20887693.55 0.0089 0.0053
 Saturn -61900-07-13 19:25 J -20887357.92 -20887357.69 -20887357.46 0.0303 0.0091
 Neptune -61900-08-14 03:49 J -20887326.52 -20887326.34 -20887326.15 0.0089 0.0061
 Neptune -61899-08-16 13:54 J -20886959.07 -20886958.92 -20886958.76 0.0089 0.0069
 Neptune -61898-08-18 23:30 J -20886591.63 -20886591.52 -20886591.38 0.0089 0.0077
 Neptune -61897-08-20 09:21 J -20886224.16 -20886224.11 -20886224.02 0.0089 0.0085
 Jupiter -61896-02-18 08:37 J -20886042.34 -20886042.14 -20886041.95 0.0510 0.0290
 Uranus -61887-02-06 06:42 J -20882767.40 -20882767.22 -20882767.01 0.0140 0.0091
 Saturn -61887-12-25 02:52 J -20882445.57 -20882445.38 -20882445.19 0.0259 0.0167

Uranus -61886-02-11 04:33 J -20882397.56 -20882397.31 -20882397.04 0.0140 0.0011
 Saturn -61885-01-05 16:04 J -20882069.08 -20882068.83 -20882068.58 0.0259 0.0007
 Uranus -61885-02-16 01:11 J -20882027.59 -20882027.45 -20882027.28 0.0139 0.0110
 Saturn -61884-01-16 07:11 J -20881692.37 -20881692.20 -20881692.02 0.0260 0.0182
 Jupiter -61884-02-23 06:13 J -20881654.47 -20881654.24 -20881654.00 0.0511 0.0042
 Jupiter -61879-08-17 20:09 J -20879652.78 -20879652.66 -20879652.53 0.0516 0.0428
 Jupiter -61872-02-28 02:52 J -20877266.53 -20877266.38 -20877266.21 0.0512 0.0369
 Saturn -61871-07-07 18:28 J -20876771.97 -20876771.73 -20876771.49 0.0303 0.0031
 Saturn -61870-07-22 14:52 J -20876392.01 -20876391.88 -20876391.73 0.0302 0.0243
 Jupiter -61867-08-22 11:16 J -20875265.25 -20875265.03 -20875264.80 0.0515 0.0103
 Saturn -61858-12-20 14:09 J -20871857.99 -20871857.91 -20871857.80 0.0260 0.0240
 Saturn -61857-12-31 03:21 J -20871481.59 -20871481.36 -20871481.11 0.0259 0.0068
 Saturn -61855-01-11 17:30 J -20871104.99 -20871104.77 -20871104.54 0.0260 0.0109
 Jupiter -61855-08-27 01:25 J -20870877.64 -20870877.44 -20870877.23 0.0514 0.0219
 Saturn -61842-07-01 17:16 J -20866185.98 -20866185.78 -20866185.57 0.0303 0.0152
 Uranus -61842-08-10 19:25 J -20866145.92 -20866145.69 -20866145.45 0.0139 0.0045
 Saturn -61841-07-15 15:06 J -20865806.08 -20865805.87 -20865805.65 0.0303 0.0126
 Uranus -61841-08-14 07:11 J -20865776.43 -20865776.20 -20865775.97 0.0139 0.0050
 Mars -61841-12-31 23:59 J -20865636.62 -20865636.50 -20865636.38 0.1584 0.1193
 Pluto -61836-11-17 01:11 J -20863855.64 -20863855.45 -20863855.21 0.0064 0.0035
 Neptune -61835-01-03 05:59 J -20863808.30 -20863808.25 -20863808.13 0.0088 0.0084
 Pluto -61835-11-18 13:11 J -20863489.11 -20863488.95 -20863488.76 0.0064 0.0047
 Neptune -61834-01-05 19:11 J -20863440.81 -20863440.70 -20863440.54 0.0088 0.0076
 Neptune -61833-01-08 08:09 J -20863073.30 -20863073.16 -20863072.96 0.0088 0.0068
 Neptune -61832-01-09 21:35 J -20862705.78 -20862705.60 -20862705.39 0.0088 0.0059
 Neptune -61831-01-12 10:33 J -20862338.25 -20862338.06 -20862337.83 0.0088 0.0051
 Neptune -61830-01-14 23:45 J -20861970.72 -20861970.51 -20861970.26 0.0088 0.0042
 Neptune -61829-01-17 13:11 J -20861603.19 -20861602.95 -20861602.70 0.0088 0.0034
 Neptune -61828-01-19 02:23 J -20861235.64 -20861235.40 -20861235.13 0.0088 0.0025
 Saturn -61828-12-26 11:45 J -20860894.20 -20860894.01 -20860893.79 0.0259 0.0147

Neptune -61827-01-21 15:49 J -20860868.09 -20860867.84 -20860867.58 0.0088 0.0016
 Saturn -61826-01-07 01:40 J -20860517.68 -20860517.43 -20860517.18 0.0259 0.0029
 Neptune -61826-01-24 05:16 J -20860500.54 -20860500.28 -20860500.01 0.0088 0.0008
 Saturn -61825-01-18 17:01 J -20860140.93 -20860140.79 -20860140.63 0.0260 0.0205
 Neptune -61825-01-26 18:57 J -20860132.98 -20860132.71 -20860132.45 0.0088 0.0002
 Neptune -61824-01-28 08:09 J -20859765.42 -20859765.16 -20859764.90 0.0088 0.0010
 Neptune -61823-01-30 21:35 J -20859397.85 -20859397.60 -20859397.34 0.0088 0.0018
 Neptune -61822-02-02 10:33 J -20859030.29 -20859030.06 -20859029.79 0.0088 0.0028
 Neptune -61821-02-05 00:13 J -20858662.72 -20858662.49 -20858662.24 0.0088 0.0036
 Neptune -61820-02-06 13:11 J -20858295.16 -20858294.95 -20858294.71 0.0088 0.0045
 Neptune -61819-02-09 02:37 J -20857927.59 -20857927.39 -20857927.17 0.0088 0.0053
 Neptune -61818-02-11 15:35 J -20857560.01 -20857559.85 -20857559.64 0.0088 0.0061
 Neptune -61817-02-14 05:01 J -20857192.43 -20857192.29 -20857192.10 0.0088 0.0069
 Neptune -61816-02-15 18:13 J -20856824.84 -20856824.74 -20856824.59 0.0088 0.0078
 Neptune -61815-02-18 07:40 J -20856457.22 -20856457.18 -20856457.09 0.0088 0.0086
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 Saturn -61813-06-24 16:33 J -20855599.91 -20855599.81 -20855599.69 0.0303 0.0270
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 Saturn -61811-07-24 11:30 J -20854840.10 -20854840.02 -20854839.92 0.0302 0.0279
 Uranus -61803-02-06 23:01 J -20852085.74 -20852085.54 -20852085.32 0.0140 0.0081
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 Uranus -61801-02-16 17:16 J -20851345.89 -20851345.78 -20851345.63 0.0139 0.0120
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 Saturn -61607-06-25 05:01 J -20780358.34 -20780358.29 -20780358.22 0.0302 0.0292
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 Neptune -61492-02-04 17:30 J -20738494.97 -20738494.77 -20738494.52 0.0088 0.0044
 Neptune -61491-02-07 06:57 J -20738127.40 -20738127.21 -20738126.98 0.0088 0.0052

Neptune -61490-02-09 20:09 J -20737759.83 -20737759.66 -20737759.45 0.0088 0.0061
 Neptune -61489-02-12 09:49 J -20737392.25 -20737392.09 -20737391.93 0.0088 0.0070
 Saturn -61489-06-27 20:23 J -20737255.78 -20737255.65 -20737255.50 0.0303 0.0244
 Neptune -61488-02-13 22:33 J -20737024.65 -20737024.56 -20737024.41 0.0088 0.0079
 Saturn -61488-07-12 20:52 J -20736875.87 -20736875.63 -20736875.39 0.0303 0.0036
 Neptune -61487-02-16 11:30 J -20736657.03 -20736657.02 -20736656.94 0.0088 0.0087
 Saturn -61475-12-24 23:16 J -20731962.68 -20731962.53 -20731962.36 0.0259 0.0199
 Saturn -61473-01-05 10:47 J -20731586.30 -20731586.05 -20731585.80 0.0258 0.0026
 Saturn -61472-01-15 23:16 J -20731209.73 -20731209.53 -20731209.32 0.0259 0.0150
 Jupiter -61469-02-20 04:33 J -20730079.53 -20730079.31 -20730079.09 0.0510 0.0211
 Mars -61469-07-03 08:23 J -20729945.35 -20729945.15 -20729944.96 0.1953 0.0369
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 Jupiter -61457-02-25 03:49 J -20725691.57 -20725691.34 -20725691.11 0.0511 0.0127
 Jupiter -61452-08-18 21:06 J -20723689.78 -20723689.62 -20723689.44 0.0517 0.0353
 Jupiter -61445-03-01 01:25 J -20721303.54 -20721303.44 -20721303.34 0.0512 0.0464
 Saturn -61445-12-30 16:33 J -20720999.04 -20720998.81 -20720998.59 0.0259 0.0105
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 Mars -61431-12-30 11:16 J -20715886.22 -20715886.03 -20715885.84 0.1594 0.0038
 Saturn -61430-06-29 19:25 J -20715704.84 -20715704.69 -20715704.52 0.0303 0.0226
 Saturn -61429-07-13 19:40 J -20715324.91 -20715324.68 -20715324.44 0.0303 0.0055
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 Neptune -61414-07-30 07:54 J -20709830.42 -20709830.17 -20709829.92 0.0089 0.0007
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 Saturn -61399-07-22 02:23 J -20704359.57 -20704359.40 -20704359.22 0.0304 0.0205
 Jupiter -61386-02-19 14:23 J -20699764.11 -20699763.90 -20699763.69 0.0509 0.0233
 Saturn -61385-01-01 13:54 J -20699448.15 -20699447.92 -20699447.68 0.0258 0.0091
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 Uranus -61382-02-14 15:06 J -20698308.09 -20698307.87 -20698307.62 0.0140 0.0061
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Saturn -61371-06-30 14:37 J -20694154.05 -20694153.89 -20694153.71 0.0303 0.0210
 Saturn -61370-07-15 14:52 J -20693774.11 -20693773.88 -20693773.64 0.0303 0.0071
 Jupiter -61369-08-18 09:21 J -20693374.26 -20693374.11 -20693373.94 0.0517 0.0370
 Jupiter -61362-03-01 06:57 J -20690988.33 -20690988.21 -20690988.08 0.0512 0.0432
 Jupiter -61357-08-23 02:37 J -20688986.62 -20688986.39 -20688986.16 0.0515 0.0034
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 Saturn -61355-01-07 06:57 J -20688484.46 -20688484.21 -20688483.96 0.0258 0.0005
 Saturn -61354-01-18 19:11 J -20688107.88 -20688107.70 -20688107.52 0.0259 0.0180
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 Jupiter -61345-08-27 15:35 J -20684599.04 -20684598.85 -20684598.66 0.0514 0.0288
 Pluto -61344-11-19 19:11 J -20684149.83 -20684149.70 -20684149.54 0.0064 0.0053
 Pluto -61343-11-21 07:25 J -20683783.42 -20683783.19 -20683782.95 0.0064 0.0028
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 Saturn -61340-07-22 19:40 J -20682808.84 -20682808.68 -20682808.51 0.0304 0.0220
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 Neptune -61338-01-12 08:37 J -20682270.34 -20682270.14 -20682269.91 0.0088 0.0050
 Uranus -61338-08-14 05:59 J -20682056.49 -20682056.25 -20682056.00 0.0138 0.0003
 Neptune -61337-01-14 22:04 J -20681902.81 -20681902.58 -20681902.34 0.0088 0.0041
 Uranus -61337-08-17 17:16 J -20681686.96 -20681686.78 -20681686.61 0.0139 0.0098
 Neptune -61336-01-16 11:01 J -20681535.28 -20681535.04 -20681534.79 0.0088 0.0032
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 Saturn -61328-12-21 22:18 J -20678273.63 -20678273.57 -20678273.50 0.0259 0.0250
 Neptune -61327-02-06 09:21 J -20678227.31 -20678227.11 -20678226.88 0.0088 0.0052
 Saturn -61326-01-02 09:49 J -20677897.33 -20677897.09 -20677896.85 0.0258 0.0076
 Neptune -61326-02-08 22:33 J -20677859.73 -20677859.56 -20677859.35 0.0088 0.0061
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 Neptune -61323-02-15 14:23 J -20676756.91 -20676756.90 -20676756.83 0.0088 0.0087
 Saturn -61312-07-01 07:54 J -20672603.34 -20672603.17 -20672602.98 0.0303 0.0195
 Saturn -61311-07-16 08:09 J -20672223.39 -20672223.16 -20672222.93 0.0303 0.0087
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 Uranus -61300-02-05 08:37 J -20668366.16 -20668366.14 -20668366.08 0.0141 0.0140
 Uranus -61299-02-10 07:54 J -20667996.42 -20667996.17 -20667995.92 0.0141 0.0034
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 Saturn -61296-01-08 02:23 J -20666933.65 -20666933.40 -20666933.15 0.0258 0.0020
 Saturn -61295-01-19 14:37 J -20666557.04 -20666556.89 -20666556.71 0.0259 0.0195
 Jupiter -61291-02-23 19:25 J -20665060.93 -20665060.69 -20665060.46 0.0511 0.0073
 Jupiter -61286-08-18 22:47 J -20663058.70 -20663058.55 -20663058.40 0.0517 0.0389
 Saturn -61282-07-09 13:40 J -20661638.16 -20661637.93 -20661637.69 0.0304 0.0047
 Saturn -61281-07-23 12:28 J -20661258.13 -20661257.98 -20661257.82 0.0304 0.0234
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 Jupiter -61274-08-23 13:11 J -20658671.18 -20658670.95 -20658670.73 0.0516 0.0061
 Saturn -61269-12-22 17:01 J -20656722.88 -20656722.79 -20656722.68 0.0259 0.0237
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 Saturn -61266-01-14 16:47 J -20655970.02 -20655969.80 -20655969.57 0.0258 0.0113
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 Neptune -61260-07-07 05:30 J -20653604.33 -20653604.27 -20653604.20 0.0089 0.0085

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 Uranus -61255-08-10 11:45 J -20651744.20 -20651744.01 -20651743.81 0.0138 0.0083
 Pluto -61254-05-27 23:01 J -20651453.77 -20651453.54 -20651453.28 0.0081 0.0025
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 Uranus -61254-08-14 22:04 J -20651374.83 -20651374.58 -20651374.33 0.0138 0.0012
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 Uranus -61253-08-18 08:52 J -20651005.27 -20651005.13 -20651004.96 0.0139 0.0108
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 Neptune -61249-07-30 22:33 J -20649562.80 -20649562.56 -20649562.30 0.0089 0.0015
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 Neptune -61244-08-11 00:57 J -20647725.63 -20647725.46 -20647725.27 0.0089 0.0061
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 Neptune -61242-08-15 20:52 J -20646990.73 -20646990.63 -20646990.49 0.0089 0.0078
 Neptune -61241-08-17 06:42 J -20646623.25 -20646623.22 -20646623.14 0.0089 0.0087
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 Mars -61226-12-29 15:06 J -20641011.04 -20641010.87 -20641010.70 0.1600 0.0707
 Saturn -61223-07-10 07:25 J -20640087.43 -20640087.19 -20640086.95 0.0304 0.0031

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 Saturn -61193-07-17 19:40 J -20629121.89 -20629121.68 -20629121.45 0.0303 0.0119
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 Saturn -61165-06-26 04:47 J -20618916.36 -20618916.30 -20618916.23 0.0302 0.0290
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 Saturn -61164-07-11 04:18 J -20618536.56 -20618536.32 -20618536.08 0.0303 0.0013
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 Neptune -61162-02-08 01:40 J -20617959.60 -20617959.43 -20617959.22 0.0088 0.0060
 Neptune -61161-02-10 14:52 J -20617592.02 -20617591.88 -20617591.69 0.0088 0.0069
 Neptune -61160-02-12 04:18 J -20617224.42 -20617224.32 -20617224.18 0.0088 0.0079
 Neptune -61159-02-14 17:16 J -20616856.79 -20616856.78 -20616856.71 0.0088 0.0088
 Saturn -61151-12-25 08:52 J -20613621.27 -20613621.13 -20613620.98 0.0259 0.0209
 Saturn -61149-01-05 21:06 J -20613244.86 -20613244.62 -20613244.37 0.0259 0.0033
 Saturn -61148-01-16 09:49 J -20612868.28 -20612868.09 -20612867.87 0.0259 0.0144
 Mars -61147-12-31 17:01 J -20612153.98 -20612153.79 -20612153.60 0.1597 0.0296
 Jupiter -61137-02-18 16:47 J -20608817.98 -20608817.80 -20608817.61 0.0509 0.0313
 Saturn -61135-07-04 18:57 J -20607950.92 -20607950.71 -20607950.50 0.0303 0.0143
 Saturn -61134-07-19 17:59 J -20607570.96 -20607570.75 -20607570.53 0.0303 0.0139
 Uranus -61132-02-06 16:18 J -20607002.94 -20607002.82 -20607002.67 0.0141 0.0120
 Uranus -61131-02-11 15:06 J -20606633.12 -20606632.87 -20606632.61 0.0141 0.0014
 Uranus -61130-02-16 12:42 J -20606263.16 -20606262.97 -20606262.76 0.0140 0.0090
 Jupiter -61125-02-23 09:06 J -20604430.35 -20604430.12 -20604429.88 0.0510 0.0013
 Saturn -61121-12-31 04:47 J -20602657.53 -20602657.30 -20602657.07 0.0259 0.0110
 Jupiter -61120-08-17 23:16 J -20602427.65 -20602427.53 -20602427.41 0.0518 0.0435
 Saturn -61119-01-11 17:01 J -20602281.02 -20602280.79 -20602280.54 0.0259 0.0067
 Saturn -61118-01-23 06:57 J -20601904.30 -20601904.21 -20601904.12 0.0259 0.0242
 Jupiter -61113-02-28 08:09 J -20600042.33 -20600042.16 -20600041.99 0.0512 0.0352

Jupiter -61108-08-22 12:57 J -20598040.19 -20598039.96 -20598039.74 0.0516 0.0105
 Saturn -61106-06-28 07:11 J -20597365.30 -20597365.20 -20597365.09 0.0302 0.0269
 Mars -61106-07-07 00:13 J -20597356.63 -20597356.49 -20597356.36 0.1950 0.1391
 Saturn -61105-07-12 06:13 J -20596985.48 -20596985.24 -20596985.00 0.0303 0.0010
 Saturn -61104-07-27 03:35 J -20596605.42 -20596605.35 -20596605.28 0.0303 0.0288
 Pluto -61097-11-21 22:04 J -20593930.84 -20593930.58 -20593930.32 0.0064 0.0002
 Jupiter -61096-08-27 02:09 J -20593652.61 -20593652.41 -20593652.20 0.0515 0.0224
 Neptune -61095-07-08 21:06 J -20593336.72 -20593336.62 -20593336.51 0.0089 0.0080
 Neptune -61094-07-11 07:25 J -20592969.33 -20592969.19 -20592969.03 0.0089 0.0071
 Neptune -61093-07-12 17:30 J -20592601.93 -20592601.77 -20592601.57 0.0089 0.0062
 Neptune -61092-07-15 03:35 J -20592234.53 -20592234.35 -20592234.12 0.0089 0.0053
 Saturn -61092-12-26 07:54 J -20592070.32 -20592070.17 -20592069.99 0.0260 0.0193
 Neptune -61091-07-17 13:54 J -20591867.12 -20591866.92 -20591866.68 0.0089 0.0044
 Saturn -61090-01-06 21:06 J -20591693.87 -20591693.62 -20591693.37 0.0259 0.0016
 Neptune -61090-07-20 00:42 J -20591499.70 -20591499.47 -20591499.24 0.0089 0.0034
 Saturn -61089-01-18 10:33 J -20591317.25 -20591317.06 -20591316.86 0.0259 0.0161
 Neptune -61089-07-21 10:33 J -20591132.30 -20591132.06 -20591131.81 0.0089 0.0025
 Neptune -61088-07-23 20:37 J -20590764.88 -20590764.64 -20590764.38 0.0089 0.0016
 Neptune -61087-07-26 07:11 J -20590397.46 -20590397.20 -20590396.95 0.0089 0.0006
 Uranus -61087-08-11 16:18 J -20590381.03 -20590380.82 -20590380.60 0.0138 0.0067
 Neptune -61086-07-28 17:16 J -20590030.03 -20590029.78 -20590029.52 0.0089 0.0004
 Uranus -61086-08-16 02:23 J -20590011.64 -20590011.40 -20590011.15 0.0138 0.0028
 Neptune -61085-07-30 03:35 J -20589662.60 -20589662.35 -20589662.09 0.0089 0.0013
 Uranus -61085-08-19 13:25 J -20589642.03 -20589641.94 -20589641.82 0.0139 0.0125
 Neptune -61084-08-01 13:54 J -20589295.17 -20589294.92 -20589294.68 0.0089 0.0022
 Neptune -61083-08-03 23:59 J -20588927.73 -20588927.50 -20588927.25 0.0089 0.0032
 Neptune -61082-08-06 10:04 J -20588560.29 -20588560.08 -20588559.85 0.0089 0.0041
 Neptune -61081-08-07 19:54 J -20588192.86 -20588192.67 -20588192.44 0.0089 0.0051
 Neptune -61080-08-10 05:59 J -20587825.42 -20587825.25 -20587825.05 0.0089 0.0060
 Neptune -61079-08-12 16:04 J -20587457.97 -20587457.83 -20587457.65 0.0089 0.0069

Neptune -61078-08-15 02:09 J -20587090.51 -20587090.41 -20587090.27 0.0089 0.0078
 Neptune -61077-08-16 11:59 J -20586723.02 -20586723.00 -20586722.92 0.0089 0.0087
 Saturn -61076-07-05 23:16 J -20586399.75 -20586399.53 -20586399.31 0.0303 0.0118
 Saturn -61075-07-20 21:49 J -20586019.79 -20586019.59 -20586019.38 0.0303 0.0163
 Mars -61067-01-02 19:11 J -20583296.81 -20583296.70 -20583296.59 0.1595 0.1290
 Saturn -61061-01-02 05:45 J -20581106.49 -20581106.26 -20581106.03 0.0260 0.0092
 Saturn -61060-01-12 18:42 J -20580729.95 -20580729.72 -20580729.48 0.0259 0.0086
 Jupiter -61054-02-17 17:45 J -20578502.92 -20578502.76 -20578502.59 0.0508 0.0365
 Uranus -61048-02-07 04:18 J -20576321.46 -20576321.32 -20576321.15 0.0141 0.0113
 Uranus -61047-02-12 03:21 J -20575951.62 -20575951.36 -20575951.10 0.0141 0.0007
 Saturn -61047-06-29 14:37 J -20575814.02 -20575813.89 -20575813.74 0.0302 0.0244
 Uranus -61046-02-17 00:57 J -20575581.62 -20575581.46 -20575581.25 0.0140 0.0098
 Saturn -61046-07-14 13:25 J -20575434.18 -20575433.94 -20575433.70 0.0303 0.0037
 Jupiter -61042-02-22 16:33 J -20574115.05 -20574114.81 -20574114.57 0.0510 0.0023
 Jupiter -61037-08-17 03:49 J -20572112.41 -20572112.34 -20572112.25 0.0518 0.0481
 Saturn -61033-12-27 10:33 J -20570519.23 -20570519.06 -20570518.86 0.0260 0.0175
 Saturn -61031-01-08 00:13 J -20570142.74 -20570142.49 -20570142.24 0.0259 0.0004
 Saturn -61030-01-19 13:54 J -20569766.08 -20569765.92 -20569765.73 0.0259 0.0181
 Jupiter -61030-02-27 14:37 J -20569727.07 -20569726.89 -20569726.70 0.0511 0.0321
 Jupiter -61025-08-21 16:47 J -20567725.01 -20567724.80 -20567724.58 0.0517 0.0152
 Mars -61021-12-27 17:59 J -20566135.84 -20566135.75 -20566135.67 0.1606 0.1420
 Saturn -61017-07-07 09:06 J -20564848.34 -20564848.12 -20564847.88 0.0303 0.0090
 Saturn -61016-07-22 07:11 J -20564468.38 -20564468.20 -20564468.00 0.0303 0.0192
 Neptune -61013-01-04 02:09 J -20563572.49 -20563572.41 -20563572.33 0.0088 0.0084
 Jupiter -61013-08-26 08:37 J -20563337.35 -20563337.14 -20563336.92 0.0515 0.0186
 Neptune -61012-01-05 14:37 J -20563205.01 -20563204.89 -20563204.73 0.0088 0.0075
 Neptune -61011-01-08 03:21 J -20562837.51 -20562837.36 -20562837.16 0.0088 0.0066
 Neptune -61010-01-10 16:04 J -20562470.00 -20562469.83 -20562469.60 0.0088 0.0057
 Neptune -61009-01-13 05:30 J -20562102.48 -20562102.27 -20562102.04 0.0088 0.0047
 Neptune -61008-01-14 18:28 J -20561734.95 -20561734.73 -20561734.47 0.0088 0.0038

Pluto -61008-05-28 07:54 J -20561601.41 -20561601.17 -20561600.93 0.0081 0.0028
 Neptune -61007-01-17 07:40 J -20561367.42 -20561367.18 -20561366.92 0.0088 0.0028
 Neptune -61006-01-19 21:06 J -20560999.87 -20560999.62 -20560999.36 0.0088 0.0018
 Neptune -61005-01-22 10:04 J -20560632.33 -20560632.08 -20560631.81 0.0088 0.0009
 Neptune -61004-01-23 23:30 J -20560264.79 -20560264.52 -20560264.26 0.0088 0.0002
 Saturn -61004-12-22 20:23 J -20559931.71 -20559931.65 -20559931.57 0.0261 0.0250
 Neptune -61003-01-26 12:28 J -20559897.24 -20559896.98 -20559896.71 0.0088 0.0012
 Uranus -61003-08-12 04:33 J -20559699.53 -20559699.31 -20559699.08 0.0138 0.0061
 Saturn -61002-01-03 10:04 J -20559555.32 -20559555.08 -20559554.84 0.0260 0.0072
 Neptune -61002-01-29 01:25 J -20559529.69 -20559529.44 -20559529.18 0.0088 0.0021
 Uranus -61002-08-16 14:37 J -20559330.12 -20559329.89 -20559329.64 0.0138 0.0035
 Saturn -61001-01-14 23:45 J -20559178.74 -20559178.51 -20559178.28 0.0259 0.0106
 Neptune -61001-01-31 14:23 J -20559162.13 -20559161.90 -20559161.64 0.0088 0.0031
 Uranus -61001-08-20 01:40 J -20558960.50 -20558960.43 -20558960.35 0.0139 0.0131

61ST MILLENNIUM BCE

This is a list of transits of Earth in the 61st millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Neptune	-61000-02-02 03:35 J	-20558794.57	-20558794.35	-20558794.11	0.0088	0.0041		
Neptune	-60999-02-04 16:18 J	-20558427.01	-20558426.82	-20558426.58	0.0088	0.0051		
Neptune	-60998-02-07 05:45 J	-20558059.44	-20558059.26	-20558059.05	0.0088	0.0060		
Neptune	-60997-02-09 18:42 J	-20557691.85	-20557691.72	-20557691.53	0.0088	0.0069		
Neptune	-60996-02-11 08:09 J	-20557324.26	-20557324.16	-20557324.02	0.0088	0.0078		

Neptune -60995-02-13 21:35 J -20556956.62 -20556956.60 -20556956.55 0.0088 0.0087
 Saturn -60988-07-01 04:47 J -20554262.46 -20554262.30 -20554262.12 0.0302 0.0214
 Saturn -60987-07-16 03:06 J -20553882.60 -20553882.37 -20553882.13 0.0303 0.0068
 Saturn -60974-12-29 16:33 J -20548968.00 -20548967.81 -20548967.60 0.0260 0.0155
 Saturn -60972-01-09 06:28 J -20548591.47 -20548591.23 -20548590.98 0.0259 0.0025
 Saturn -60971-01-20 20:52 J -20548214.77 -20548214.63 -20548214.46 0.0259 0.0203
 Jupiter -60971-02-16 22:18 J -20548187.71 -20548187.57 -20548187.42 0.0508 0.0403
 Uranus -60964-02-07 14:52 J -20545640.04 -20545639.88 -20545639.71 0.0141 0.0108
 Uranus -60963-02-12 14:09 J -20545270.17 -20545269.91 -20545269.65 0.0141 0.0002
 Uranus -60962-02-17 11:45 J -20544900.16 -20544900.01 -20544899.81 0.0140 0.0104
 Jupiter -60959-02-21 17:59 J -20543799.98 -20543799.75 -20543799.51 0.0509 0.0071
 Saturn -60958-07-10 00:28 J -20543296.71 -20543296.48 -20543296.24 0.0303 0.0058
 Saturn -60957-07-23 21:49 J -20542916.74 -20542916.59 -20542916.42 0.0303 0.0224
 Jupiter -60947-02-26 10:18 J -20539412.27 -20539412.07 -20539411.86 0.0510 0.0253
 Saturn -60945-12-24 03:35 J -20538380.45 -20538380.35 -20538380.22 0.0261 0.0230
 Saturn -60943-01-04 17:45 J -20538004.01 -20538003.76 -20538003.52 0.0260 0.0051
 Saturn -60942-01-16 07:40 J -20537627.39 -20537627.18 -20537626.95 0.0260 0.0129
 Jupiter -60942-08-21 22:18 J -20537409.78 -20537409.57 -20537409.36 0.0517 0.0195
 Mars -60942-12-30 20:37 J -20537278.83 -20537278.64 -20537278.46 0.1603 0.0391
 Neptune -60931-07-08 02:23 J -20533436.47 -20533436.40 -20533436.32 0.0089 0.0084
 Neptune -60930-07-10 12:42 J -20533069.09 -20533068.97 -20533068.82 0.0089 0.0075
 Jupiter -60930-08-26 11:16 J -20533022.25 -20533022.03 -20533021.81 0.0516 0.0136
 Saturn -60929-07-02 23:16 J -20532710.71 -20532710.53 -20532710.33 0.0302 0.0181
 Neptune -60929-07-11 23:01 J -20532701.69 -20532701.54 -20532701.35 0.0089 0.0066
 Neptune -60928-07-14 09:35 J -20532334.28 -20532334.10 -20532333.89 0.0089 0.0056
 Saturn -60928-07-17 21:06 J -20532330.84 -20532330.62 -20532330.39 0.0303 0.0102
 Neptune -60927-07-16 19:54 J -20531966.87 -20531966.67 -20531966.44 0.0089 0.0047
 Neptune -60926-07-19 06:13 J -20531599.46 -20531599.24 -20531599.00 0.0089 0.0037
 Neptune -60925-07-20 16:33 J -20531232.04 -20531231.81 -20531231.56 0.0089 0.0028
 Neptune -60924-07-23 02:52 J -20530864.62 -20530864.38 -20530864.13 0.0089 0.0018

Neptune -60923-07-25 13:11 J -20530497.20 -20530496.95 -20530496.69 0.0089 0.0009
 Neptune -60922-07-27 23:30 J -20530129.77 -20530129.52 -20530129.27 0.0089 0.0001
 Neptune -60921-07-29 09:21 J -20529762.35 -20529762.11 -20529761.85 0.0089 0.0011
 Neptune -60920-07-31 19:40 J -20529394.91 -20529394.68 -20529394.42 0.0089 0.0021
 Neptune -60919-08-03 05:59 J -20529027.48 -20529027.25 -20529027.00 0.0089 0.0030
 Uranus -60919-08-12 17:30 J -20529017.98 -20529017.77 -20529017.52 0.0138 0.0054
 Neptune -60918-08-05 16:04 J -20528660.04 -20528659.83 -20528659.59 0.0089 0.0040
 Uranus -60918-08-17 03:35 J -20528648.58 -20528648.35 -20528648.10 0.0138 0.0042
 Jupiter -60918-08-30 23:45 J -20528634.60 -20528634.51 -20528634.40 0.0514 0.0463
 Neptune -60917-08-07 02:37 J -20528292.60 -20528292.39 -20528292.18 0.0089 0.0050
 Neptune -60916-08-09 12:28 J -20527925.15 -20527924.98 -20527924.78 0.0089 0.0059
 Neptune -60915-08-11 22:47 J -20527557.70 -20527557.55 -20527557.38 0.0089 0.0069
 Saturn -60915-12-31 01:25 J -20527416.65 -20527416.44 -20527416.22 0.0260 0.0133
 Neptune -60914-08-14 08:23 J -20527190.25 -20527190.15 -20527190.00 0.0089 0.0078
 Saturn -60913-01-11 15:35 J -20527040.10 -20527039.85 -20527039.61 0.0259 0.0047
 Neptune -60913-08-15 18:28 J -20526822.76 -20526822.73 -20526822.66 0.0089 0.0087
 Saturn -60912-01-22 06:13 J -20526663.35 -20526663.24 -20526663.10 0.0260 0.0226
 Saturn -60900-06-26 23:01 J -20522124.56 -20522124.54 -20522124.51 0.0301 0.0299
 Saturn -60899-07-11 21:06 J -20521744.86 -20521744.62 -20521744.38 0.0303 0.0021
 Saturn -60898-07-26 18:13 J -20521364.87 -20521364.74 -20521364.62 0.0302 0.0259
 Jupiter -60888-02-15 17:45 J -20517872.84 -20517872.76 -20517872.67 0.0507 0.0469
 Saturn -60886-12-26 13:11 J -20516829.09 -20516828.95 -20516828.79 0.0261 0.0209
 Saturn -60884-01-06 03:35 J -20516452.60 -20516452.35 -20516452.11 0.0260 0.0029
 Saturn -60883-01-17 17:59 J -20516075.95 -20516075.75 -20516075.54 0.0260 0.0151
 Uranus -60880-02-07 22:04 J -20514958.74 -20514958.58 -20514958.40 0.0141 0.0106
 Uranus -60879-02-12 21:21 J -20514588.87 -20514588.61 -20514588.35 0.0141 0.0002
 Uranus -60878-02-17 19:54 J -20514218.84 -20514218.67 -20514218.50 0.0140 0.0107
 Jupiter -60876-02-20 13:11 J -20513485.18 -20513484.95 -20513484.72 0.0509 0.0139
 Saturn -60870-07-05 21:21 J -20511158.81 -20511158.61 -20511158.39 0.0302 0.0145
 Saturn -60869-07-19 18:57 J -20510778.93 -20510778.71 -20510778.50 0.0303 0.0138

Jupiter -60864-02-25 10:33 J -20509097.28 -20509097.06 -20509096.84 0.0510 0.0203
 Mars -60862-01-01 22:47 J -20508421.72 -20508421.55 -20508421.37 0.1601 0.0631
 Jupiter -60859-08-20 21:06 J -20507094.82 -20507094.62 -20507094.42 0.0517 0.0258
 Saturn -60855-01-01 11:59 J -20505865.22 -20505865.00 -20505864.77 0.0260 0.0111
 Saturn -60854-01-13 02:09 J -20505488.65 -20505488.41 -20505488.16 0.0259 0.0070
 Saturn -60853-01-24 17:16 J -20505111.83 -20505111.78 -20505111.69 0.0260 0.0249
 Pluto -60851-11-23 09:06 J -20504078.32 -20504078.12 -20504077.87 0.0064 0.0034
 Pluto -60850-11-24 20:37 J -20503711.78 -20503711.64 -20503711.43 0.0064 0.0048
 Neptune -60849-01-03 07:11 J -20503672.21 -20503672.20 -20503672.13 0.0088 0.0088
 Neptune -60848-01-04 19:54 J -20503304.76 -20503304.67 -20503304.52 0.0088 0.0079
 Neptune -60847-01-07 09:06 J -20502937.27 -20502937.12 -20502936.94 0.0088 0.0069
 Jupiter -60847-08-25 09:06 J -20502707.35 -20502707.12 -20502706.90 0.0516 0.0071
 Neptune -60846-01-09 21:35 J -20502569.77 -20502569.60 -20502569.38 0.0088 0.0060
 Neptune -60845-01-12 10:47 J -20502202.25 -20502202.05 -20502201.81 0.0088 0.0050
 Neptune -60844-01-13 23:59 J -20501834.73 -20501834.50 -20501834.26 0.0088 0.0040
 Neptune -60843-01-16 12:42 J -20501467.20 -20501466.97 -20501466.70 0.0088 0.0031
 Neptune -60842-01-19 01:54 J -20501099.66 -20501099.42 -20501099.15 0.0088 0.0021
 Neptune -60841-01-21 15:06 J -20500732.12 -20500731.87 -20500731.60 0.0088 0.0011
 Saturn -60841-06-28 21:06 J -20500572.73 -20500572.62 -20500572.50 0.0302 0.0264
 Neptune -60840-01-23 04:33 J -20500364.57 -20500364.31 -20500364.04 0.0088 0.0001
 Saturn -60840-07-13 19:11 J -20500192.94 -20500192.70 -20500192.46 0.0303 0.0017
 Neptune -60839-01-25 17:30 J -20499997.03 -20499996.77 -20499996.50 0.0088 0.0010
 Saturn -60839-07-28 15:21 J -20499812.89 -20499812.86 -20499812.80 0.0302 0.0296
 Neptune -60838-01-28 06:28 J -20499629.47 -20499629.23 -20499628.96 0.0088 0.0021
 Neptune -60837-01-30 19:25 J -20499261.92 -20499261.69 -20499261.42 0.0088 0.0030
 Neptune -60836-02-01 08:52 J -20498894.36 -20498894.13 -20498893.89 0.0088 0.0040
 Neptune -60835-02-03 21:35 J -20498526.80 -20498526.60 -20498526.36 0.0088 0.0050
 Uranus -60835-08-13 07:11 J -20498336.42 -20498336.20 -20498335.95 0.0138 0.0047
 Jupiter -60835-08-29 23:01 J -20498319.68 -20498319.54 -20498319.40 0.0515 0.0403
 Neptune -60834-02-06 10:33 J -20498159.23 -20498159.06 -20498158.84 0.0088 0.0059

Uranus -60834-08-17 17:30 J -20497967.00 -20497966.77 -20497966.53 0.0138 0.0050
 Neptune -60833-02-08 23:59 J -20497791.65 -20497791.50 -20497791.33 0.0088 0.0069
 Neptune -60832-02-10 12:42 J -20497424.06 -20497423.97 -20497423.82 0.0088 0.0079
 Neptune -60831-02-13 02:23 J -20497056.42 -20497056.40 -20497056.36 0.0088 0.0088
 Saturn -60827-12-27 23:59 J -20495277.66 -20495277.50 -20495277.32 0.0261 0.0187
 Saturn -60825-01-08 14:23 J -20494901.15 -20494900.90 -20494900.65 0.0260 0.0006
 Saturn -60824-01-19 05:01 J -20494524.47 -20494524.29 -20494524.10 0.0260 0.0174
 Mars -60822-07-05 21:35 J -20493626.80 -20493626.60 -20493626.40 0.1942 0.0025
 Saturn -60811-07-07 21:06 J -20489606.85 -20489606.62 -20489606.40 0.0302 0.0108
 Saturn -60810-07-22 17:59 J -20489226.93 -20489226.75 -20489226.54 0.0302 0.0176
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 Uranus -60794-02-18 06:13 J -20483537.37 -20483537.24 -20483537.06 0.0140 0.0113
 Jupiter -60793-02-20 12:57 J -20483170.18 -20483169.96 -20483169.74 0.0509 0.0190
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 Jupiter -60781-02-25 09:06 J -20478782.34 -20478782.12 -20478781.89 0.0510 0.0147
 Saturn -60781-07-15 17:16 J -20478641.02 -20478640.78 -20478640.54 0.0303 0.0054
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 Jupiter -60769-03-01 02:52 J -20474394.46 -20474394.38 -20474394.30 0.0511 0.0479
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Neptune -60762-07-18 13:11 J -20471699.17 -20471698.95 -20471698.72 0.0089 0.0040
 Pluto -60761-05-30 12:42 J -20471382.16 -20471381.97 -20471381.77 0.0081 0.0052
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 Uranus -60711-02-13 19:11 J -20453225.96 -20453225.70 -20453225.44 0.0141 0.0012
 Uranus -60710-02-18 17:45 J -20452855.90 -20452855.76 -20452855.62 0.0140 0.0118

Jupiter -60710-02-19 10:47 J -20452855.25 -20452855.05 -20452854.84 0.0508 0.0248
 Saturn -60709-12-30 20:23 J -20452174.85 -20452174.65 -20452174.43 0.0260 0.0144
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 Saturn -60633-07-27 22:33 J -20424571.65 -20424571.56 -20424571.45 0.0302 0.0272
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 Uranus -60627-02-14 09:06 J -20422544.37 -20422544.12 -20422543.85 0.0141 0.0021
 Jupiter -60627-02-18 10:18 J -20422540.26 -20422540.07 -20422539.87 0.0508 0.0300
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 Jupiter -60610-08-18 22:04 J -20416149.70 -20416149.58 -20416149.44 0.0518 0.0430
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 Uranus -60542-02-19 19:11 J -20391492.75 -20391492.70 -20391492.60 0.0140 0.0134
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 Saturn -60472-01-05 08:52 J -20365970.37 -20365970.13 -20365969.89 0.0259 0.0073
 Saturn -60471-01-16 21:06 J -20365593.84 -20365593.62 -20365593.38 0.0259 0.0108
 Jupiter -60461-02-18 01:40 J -20361909.59 -20361909.43 -20361909.26 0.0507 0.0362
 Uranus -60460-02-10 08:37 J -20361551.34 -20361551.14 -20361550.91 0.0141 0.0076
 Uranus -60459-02-15 08:09 J -20361181.41 -20361181.16 -20361180.90 0.0141 0.0033
 Mars -60459-07-08 13:40 J -20361038.01 -20361037.93 -20361037.86 0.1939 0.1778
 Uranus -60458-02-20 05:59 J -20360811.25 -20360811.25 -20360811.20 0.0140 0.0140
 Saturn -60458-07-03 07:40 J -20360678.32 -20360678.18 -20360678.01 0.0302 0.0231
 Saturn -60457-07-17 07:11 J -20360298.44 -20360298.20 -20360297.96 0.0303 0.0054
 Mars -60453-12-30 02:52 J -20358671.54 -20358671.38 -20358671.21 0.1615 0.0823
 Jupiter -60449-02-22 18:28 J -20357521.97 -20357521.73 -20357521.50 0.0509 0.0031
 Jupiter -60444-08-17 17:59 J -20355518.82 -20355518.75 -20355518.67 0.0519 0.0488
 Saturn -60444-12-31 14:52 J -20355383.08 -20355382.88 -20355382.67 0.0260 0.0152
 Saturn -60442-01-12 03:06 J -20355006.62 -20355006.37 -20355006.12 0.0259 0.0027
 Saturn -60441-01-23 15:06 J -20354630.00 -20354629.87 -20354629.70 0.0259 0.0205
 Neptune -60438-07-08 11:01 J -20353368.06 -20353368.04 -20353367.96 0.0089 0.0087

Jupiter -60437-02-27 17:30 J -20353133.95 -20353133.77 -20353133.58 0.0510 0.0321
 Neptune -60437-07-09 21:35 J -20353000.70 -20353000.60 -20353000.45 0.0089 0.0077
 Neptune -60436-07-12 08:09 J -20352633.30 -20352633.16 -20352632.97 0.0089 0.0067
 Neptune -60435-07-14 18:28 J -20352265.90 -20352265.73 -20352265.51 0.0089 0.0057
 Neptune -60434-07-17 05:01 J -20351898.48 -20351898.29 -20351898.05 0.0089 0.0047
 Neptune -60433-07-18 16:04 J -20351531.06 -20351530.83 -20351530.59 0.0089 0.0036
 Neptune -60432-07-21 02:23 J -20351163.64 -20351163.40 -20351163.15 0.0089 0.0026
 Jupiter -60432-08-22 08:52 J -20351131.35 -20351131.13 -20351130.91 0.0517 0.0145
 Neptune -60431-07-23 12:42 J -20350796.21 -20350795.97 -20350795.71 0.0089 0.0016
 Neptune -60430-07-25 23:16 J -20350428.78 -20350428.53 -20350428.28 0.0089 0.0005
 Neptune -60429-07-27 09:35 J -20350061.35 -20350061.10 -20350060.84 0.0089 0.0006
 Saturn -60428-07-10 13:40 J -20349713.16 -20349712.93 -20349712.69 0.0303 0.0081
 Neptune -60428-07-29 19:40 J -20349693.92 -20349693.68 -20349693.42 0.0089 0.0016
 Saturn -60427-07-25 12:28 J -20349333.15 -20349332.98 -20349332.80 0.0304 0.0206
 Neptune -60427-08-01 05:45 J -20349326.49 -20349326.26 -20349326.01 0.0089 0.0026
 Neptune -60426-08-03 16:04 J -20348959.06 -20348958.83 -20348958.59 0.0089 0.0036
 Neptune -60425-08-05 02:23 J -20348591.62 -20348591.40 -20348591.19 0.0089 0.0046
 Neptune -60424-08-07 11:59 J -20348224.17 -20348224.00 -20348223.78 0.0089 0.0057
 Neptune -60423-08-09 22:04 J -20347856.72 -20347856.58 -20347856.39 0.0089 0.0067
 Neptune -60422-08-12 08:23 J -20347489.25 -20347489.15 -20347489.00 0.0089 0.0077
 Neptune -60421-08-13 18:28 J -20347121.76 -20347121.73 -20347121.65 0.0089 0.0087
 Jupiter -60420-08-26 23:30 J -20346743.73 -20346743.52 -20346743.31 0.0516 0.0196
 Uranus -60416-08-11 11:45 J -20345298.14 -20345298.01 -20345297.84 0.0137 0.0110
 Uranus -60415-08-15 21:06 J -20344928.87 -20344928.62 -20344928.37 0.0138 0.0015
 Saturn -60415-12-26 17:01 J -20344795.88 -20344795.79 -20344795.68 0.0260 0.0236
 Uranus -60414-08-20 06:57 J -20344559.41 -20344559.21 -20344559.01 0.0138 0.0082
 Saturn -60413-01-07 05:59 J -20344419.49 -20344419.25 -20344419.01 0.0259 0.0057
 Saturn -60412-01-17 18:13 J -20344042.95 -20344042.74 -20344042.51 0.0259 0.0123
 Saturn -60399-07-04 02:52 J -20339127.55 -20339127.38 -20339127.21 0.0302 0.0214
 Saturn -60398-07-19 02:09 J -20338747.65 -20338747.41 -20338747.18 0.0303 0.0071

Saturn -60384-01-01 11:30 J -20333832.22 -20333832.02 -20333831.80 0.0260 0.0137
 Saturn -60383-01-12 23:59 J -20333455.75 -20333455.50 -20333455.25 0.0259 0.0042
 Saturn -60382-01-24 12:13 J -20333079.11 -20333078.99 -20333078.85 0.0259 0.0220
 Jupiter -60378-02-17 08:09 J -20331594.30 -20331594.16 -20331594.01 0.0508 0.0397
 Uranus -60376-02-10 14:37 J -20330870.10 -20330869.89 -20330869.66 0.0141 0.0074
 Uranus -60375-02-15 14:09 J -20330500.16 -20330499.91 -20330499.66 0.0141 0.0034
 Mars -60373-01-02 06:13 J -20329814.43 -20329814.24 -20329814.05 0.1612 0.0236
 Saturn -60369-07-11 07:11 J -20328162.43 -20328162.20 -20328161.96 0.0303 0.0065
 Saturn -60368-07-26 05:45 J -20327782.42 -20327782.26 -20327782.09 0.0303 0.0221
 Jupiter -60366-02-22 07:11 J -20327206.43 -20327206.20 -20327205.96 0.0509 0.0049
 Pluto -60358-11-26 10:47 J -20324007.21 -20324007.05 -20324006.88 0.0063 0.0049
 Pluto -60357-11-26 22:04 J -20323640.79 -20323640.58 -20323640.34 0.0064 0.0031
 Saturn -60356-12-27 13:11 J -20323245.07 -20323244.95 -20323244.82 0.0260 0.0222
 Neptune -60355-01-05 05:30 J -20323236.36 -20323236.27 -20323236.13 0.0088 0.0080
 Neptune -60354-01-07 18:28 J -20322868.87 -20322868.73 -20322868.54 0.0088 0.0070
 Saturn -60354-01-08 02:09 J -20322868.66 -20322868.41 -20322868.16 0.0259 0.0042 *
 Jupiter -60354-02-27 05:30 J -20322818.46 -20322818.27 -20322818.08 0.0510 0.0304
 Neptune -60353-01-10 07:40 J -20322501.36 -20322501.18 -20322500.97 0.0088 0.0059
 Saturn -60353-01-19 14:23 J -20322492.10 -20322491.90 -20322491.68 0.0259 0.0138
 Neptune -60352-01-11 20:23 J -20322133.85 -20322133.65 -20322133.41 0.0088 0.0049
 Neptune -60351-01-14 09:49 J -20321766.32 -20321766.09 -20321765.85 0.0088 0.0038
 Neptune -60350-01-16 22:33 J -20321398.80 -20321398.56 -20321398.30 0.0088 0.0027
 Neptune -60349-01-19 11:59 J -20321031.26 -20321031.00 -20321030.75 0.0088 0.0017
 Jupiter -60349-08-21 19:11 J -20320815.91 -20320815.70 -20320815.48 0.0518 0.0173
 Neptune -60348-01-21 00:42 J -20320663.73 -20320663.47 -20320663.21 0.0088 0.0006
 Neptune -60347-01-23 13:54 J -20320296.18 -20320295.92 -20320295.66 0.0088 0.0004
 Neptune -60346-01-26 02:52 J -20319928.63 -20319928.38 -20319928.12 0.0088 0.0015
 Neptune -60345-01-28 15:49 J -20319561.08 -20319560.84 -20319560.58 0.0088 0.0026
 Neptune -60344-01-30 05:01 J -20319193.52 -20319193.29 -20319193.04 0.0088 0.0037
 Neptune -60343-02-01 18:28 J -20318825.95 -20318825.73 -20318825.50 0.0088 0.0047

Neptune -60342-02-04 07:25 J -20318458.37 -20318458.19 -20318457.97 0.0088 0.0058
 Neptune -60341-02-06 20:52 J -20318090.79 -20318090.63 -20318090.45 0.0088 0.0068
 Neptune -60340-02-08 09:35 J -20317723.19 -20317723.10 -20317722.95 0.0088 0.0079
 Saturn -60340-07-04 19:54 J -20317576.84 -20317576.67 -20317576.47 0.0302 0.0199
 Neptune -60339-02-10 23:16 J -20317355.53 -20317355.53 -20317355.51 0.0088 0.0088
 Saturn -60339-07-19 18:57 J -20317196.93 -20317196.71 -20317196.47 0.0303 0.0087
 Jupiter -60337-08-26 12:57 J -20316428.17 -20316427.96 -20316427.75 0.0516 0.0180
 Uranus -60332-08-11 21:49 J -20314616.72 -20314616.59 -20314616.41 0.0137 0.0106
 Uranus -60331-08-16 07:11 J -20314247.45 -20314247.20 -20314246.95 0.0138 0.0011
 Uranus -60330-08-20 16:47 J -20313877.98 -20313877.80 -20313877.60 0.0138 0.0086
 Saturn -60325-01-03 07:40 J -20312281.39 -20312281.18 -20312280.95 0.0260 0.0122
 Saturn -60324-01-13 20:09 J -20311904.90 -20311904.66 -20311904.41 0.0259 0.0058
 Saturn -60323-01-25 08:52 J -20311528.22 -20311528.13 -20311528.02 0.0259 0.0235
 Saturn -60310-07-13 01:54 J -20306611.66 -20306611.42 -20306611.18 0.0303 0.0048
 Saturn -60309-07-26 23:59 J -20306231.64 -20306231.50 -20306231.34 0.0303 0.0237
 Saturn -60297-12-28 08:37 J -20301694.28 -20301694.14 -20301693.98 0.0260 0.0208
 Saturn -60295-01-08 22:04 J -20301317.83 -20301317.58 -20301317.33 0.0259 0.0027
 Jupiter -60295-02-16 21:06 J -20301278.76 -20301278.62 -20301278.48 0.0507 0.0413
 Mars -60294-01-04 09:49 J -20300957.20 -20300957.09 -20300956.98 0.1609 0.1298
 Saturn -60294-01-20 10:47 J -20300941.24 -20300941.05 -20300940.84 0.0259 0.0153
 Uranus -60292-02-10 20:52 J -20300188.84 -20300188.63 -20300188.40 0.0141 0.0074
 Uranus -60291-02-15 20:09 J -20299818.91 -20299818.66 -20299818.40 0.0141 0.0035
 Jupiter -60283-02-21 17:16 J -20296891.02 -20296890.78 -20296890.54 0.0508 0.0072
 Saturn -60281-07-05 14:37 J -20296026.07 -20296025.89 -20296025.69 0.0302 0.0182
 Saturn -60280-07-20 13:11 J -20295646.17 -20295645.95 -20295645.72 0.0303 0.0104
 Neptune -60273-07-09 08:23 J -20293100.25 -20293100.15 -20293100.04 0.0089 0.0080
 Neptune -60272-07-11 18:28 J -20292732.87 -20292732.73 -20292732.56 0.0089 0.0070
 Jupiter -60271-02-26 09:35 J -20292503.30 -20292503.10 -20292502.89 0.0510 0.0261
 Neptune -60271-07-14 04:47 J -20292365.47 -20292365.30 -20292365.09 0.0089 0.0060
 Neptune -60270-07-16 15:21 J -20291998.05 -20291997.86 -20291997.63 0.0089 0.0050

Neptune -60269-07-18 01:54 J -20291630.64 -20291630.42 -20291630.19 0.0089 0.0039

Pluto -60268-06-02 04:33 J -20291311.57 -20291311.31 -20291311.05 0.0081 0.0002

Neptune -60268-07-20 12:13 J -20291263.22 -20291262.99 -20291262.74 0.0089 0.0029

Neptune -60267-07-22 22:47 J -20290895.80 -20290895.55 -20290895.30 0.0089 0.0018

Saturn -60266-01-04 04:04 J -20290730.55 -20290730.33 -20290730.10 0.0260 0.0107

Neptune -60266-07-25 09:21 J -20290528.36 -20290528.11 -20290527.85 0.0089 0.0007

Jupiter -60266-08-22 11:30 J -20290500.24 -20290500.02 -20290499.81 0.0518 0.0184

Saturn -60265-01-15 16:47 J -20290354.03 -20290353.80 -20290353.55 0.0259 0.0074

Neptune -60265-07-26 19:40 J -20290160.93 -20290160.68 -20290160.42 0.0089 0.0003

Saturn -60264-01-26 05:59 J -20289977.30 -20289977.25 -20289977.18 0.0259 0.0251

Neptune -60264-07-29 05:45 J -20289793.50 -20289793.26 -20289793.00 0.0089 0.0014

Neptune -60263-07-31 16:04 J -20289426.07 -20289425.83 -20289425.58 0.0089 0.0024

Neptune -60262-08-03 02:09 J -20289058.63 -20289058.41 -20289058.17 0.0089 0.0035

Neptune -60261-08-04 12:28 J -20288691.19 -20288690.98 -20288690.76 0.0089 0.0045

Neptune -60260-08-06 22:04 J -20288323.76 -20288323.58 -20288323.36 0.0089 0.0056

Neptune -60259-08-09 08:23 J -20287956.30 -20287956.15 -20287955.96 0.0089 0.0066

Neptune -60258-08-11 18:42 J -20287588.84 -20287588.72 -20287588.58 0.0089 0.0076

Neptune -60257-08-13 04:47 J -20287221.34 -20287221.30 -20287221.23 0.0089 0.0087

Jupiter -60254-08-27 01:54 J -20286112.63 -20286112.42 -20286112.20 0.0516 0.0159

Saturn -60251-07-13 21:49 J -20285060.83 -20285060.59 -20285060.35 0.0303 0.0030

Saturn -60250-07-28 19:40 J -20284680.81 -20284680.68 -20284680.55 0.0303 0.0254

Uranus -60248-08-12 09:06 J -20283935.28 -20283935.12 -20283934.94 0.0137 0.0101

Mars -60248-12-29 04:18 J -20283796.35 -20283796.32 -20283796.28 0.1623 0.1595

Uranus -60247-08-16 18:13 J -20283565.98 -20283565.74 -20283565.49 0.0138 0.0006

Uranus -60246-08-21 04:04 J -20283196.51 -20283196.33 -20283196.14 0.0138 0.0091

Jupiter -60242-08-31 15:49 J -20281724.89 -20281724.84 -20281724.78 0.0515 0.0497

Saturn -60238-12-30 05:01 J -20280143.45 -20280143.29 -20280143.12 0.0261 0.0193

Saturn -60236-01-09 18:57 J -20279766.96 -20279766.71 -20279766.47 0.0259 0.0013

Saturn -60235-01-21 07:54 J -20279390.34 -20279390.17 -20279389.97 0.0259 0.0169

Saturn -60222-07-07 12:57 J -20274475.16 -20274474.96 -20274474.76 0.0302 0.0162

Saturn -60221-07-21 11:01 J -20274095.26 -20274095.04 -20274094.82 0.0303 0.0123
 Jupiter -60212-02-15 23:59 J -20270963.59 -20270963.50 -20270963.40 0.0507 0.0461
 Uranus -60208-02-11 03:35 J -20269507.56 -20269507.35 -20269507.11 0.0141 0.0072
 Saturn -60207-01-05 01:25 J -20269179.67 -20269179.44 -20269179.20 0.0260 0.0091
 Uranus -60207-02-16 02:52 J -20269137.62 -20269137.38 -20269137.12 0.0141 0.0037
 Saturn -60206-01-16 14:37 J -20268803.11 -20268802.89 -20268802.65 0.0259 0.0091
 Jupiter -60200-02-20 21:06 J -20266575.85 -20266575.62 -20266575.38 0.0508 0.0117
 Saturn -60193-06-30 00:57 J -20263889.50 -20263889.46 -20263889.38 0.0300 0.0290
 Saturn -60192-07-14 22:04 J -20263509.82 -20263509.58 -20263509.34 0.0302 0.0009
 Neptune -60191-01-04 13:40 J -20263335.98 -20263335.93 -20263335.81 0.0089 0.0084
 Saturn -60191-07-29 18:57 J -20263129.80 -20263129.71 -20263129.60 0.0303 0.0275
 Neptune -60190-01-07 03:06 J -20262968.50 -20262968.37 -20262968.21 0.0089 0.0073
 Neptune -60189-01-09 15:49 J -20262601.00 -20262600.84 -20262600.63 0.0088 0.0063
 Neptune -60188-01-11 05:01 J -20262233.49 -20262233.29 -20262233.06 0.0088 0.0052
 Jupiter -60188-02-25 20:09 J -20262187.86 -20262187.66 -20262187.44 0.0510 0.0238
 Neptune -60187-01-13 18:13 J -20261865.97 -20261865.74 -20261865.51 0.0088 0.0041
 Neptune -60186-01-16 06:57 J -20261498.44 -20261498.21 -20261497.95 0.0088 0.0031
 Neptune -60185-01-18 19:54 J -20261130.91 -20261130.67 -20261130.40 0.0088 0.0020
 Neptune -60184-01-20 09:06 J -20260763.37 -20260763.12 -20260762.85 0.0088 0.0009
 Neptune -60183-01-22 22:18 J -20260395.83 -20260395.57 -20260395.31 0.0088 0.0003
 Jupiter -60183-08-21 19:40 J -20260184.89 -20260184.68 -20260184.48 0.0518 0.0221
 Neptune -60182-01-25 11:01 J -20260028.29 -20260028.04 -20260027.77 0.0088 0.0014
 Neptune -60181-01-27 23:59 J -20259660.74 -20259660.50 -20259660.23 0.0088 0.0025
 Neptune -60180-01-29 12:57 J -20259293.18 -20259292.96 -20259292.70 0.0088 0.0036
 Neptune -60179-02-01 02:37 J -20258925.61 -20258925.39 -20258925.16 0.0088 0.0046
 Saturn -60179-12-31 02:52 J -20258592.55 -20258592.38 -20258592.18 0.0261 0.0178
 Neptune -60178-02-03 15:35 J -20258558.04 -20258557.85 -20258557.64 0.0088 0.0056
 Saturn -60177-01-11 17:30 J -20258216.02 -20258215.77 -20258215.52 0.0260 0.0007
 Neptune -60177-02-06 04:33 J -20258190.45 -20258190.31 -20258190.11 0.0088 0.0068
 Saturn -60176-01-22 06:57 J -20257839.37 -20257839.21 -20257839.02 0.0259 0.0187

Neptune -60176-02-07 18:13 J -20257822.85 -20257822.74 -20257822.61 0.0088 0.0078
 Neptune -60175-02-10 07:40 J -20257455.18 -20257455.18 -20257455.16 0.0088 0.0088
 Mars -60175-07-07 15:49 J -20257308.03 -20257307.84 -20257307.65 0.1930 0.0570
 Jupiter -60171-08-26 09:06 J -20255797.34 -20255797.12 -20255796.89 0.0517 0.0122
 Mars -60169-12-31 07:40 J -20254939.37 -20254939.18 -20254939.00 0.1620 0.0519
 Uranus -60164-08-12 20:23 J -20253253.82 -20253253.65 -20253253.47 0.0137 0.0096
 Saturn -60163-07-08 14:52 J -20252924.09 -20252923.88 -20252923.67 0.0302 0.0140
 Uranus -60163-08-17 05:30 J -20252884.52 -20252884.27 -20252884.02 0.0138 0.0002
 Saturn -60162-07-23 12:28 J -20252544.19 -20252543.98 -20252543.76 0.0303 0.0146
 Uranus -60162-08-21 15:06 J -20252515.03 -20252514.87 -20252514.67 0.0138 0.0097
 Jupiter -60159-08-31 01:25 J -20251409.52 -20251409.44 -20251409.34 0.0516 0.0471
 Saturn -60150-12-26 09:49 J -20248005.13 -20248005.09 -20248005.03 0.0262 0.0256
 Saturn -60148-01-06 00:42 J -20247628.70 -20247628.47 -20247628.22 0.0260 0.0075
 Saturn -60147-01-17 14:37 J -20247252.10 -20247251.89 -20247251.65 0.0260 0.0109
 Saturn -60134-07-02 06:57 J -20242338.31 -20242338.21 -20242338.09 0.0300 0.0266
 Saturn -60133-07-16 03:21 J -20241958.60 -20241958.36 -20241958.11 0.0302 0.0016
 Saturn -60132-07-30 23:45 J -20241578.53 -20241578.51 -20241578.46 0.0303 0.0299
 Jupiter -60129-02-16 08:37 J -20240648.19 -20240648.14 -20240648.09 0.0507 0.0493
 Uranus -60124-02-11 13:25 J -20238826.15 -20238825.94 -20238825.70 0.0141 0.0069
 Uranus -60123-02-16 12:42 J -20238456.22 -20238455.97 -20238455.72 0.0141 0.0041
 Saturn -60119-01-01 04:04 J -20237041.53 -20237041.33 -20237041.14 0.0261 0.0160
 Saturn -60118-01-12 18:28 J -20236664.98 -20236664.73 -20236664.48 0.0260 0.0023
 Saturn -60117-01-24 08:37 J -20236288.28 -20236288.14 -20236287.97 0.0259 0.0205
 Jupiter -60117-02-21 05:16 J -20236260.50 -20236260.28 -20236260.05 0.0508 0.0147
 Pluto -60111-11-28 00:28 J -20233788.69 -20233788.48 -20233788.23 0.0064 0.0030
 Pluto -60110-11-29 11:59 J -20233422.13 -20233422.00 -20233421.81 0.0064 0.0051
 Neptune -60109-07-08 18:42 J -20233199.78 -20233199.72 -20233199.63 0.0089 0.0084
 Neptune -60108-07-11 05:01 J -20232832.41 -20232832.29 -20232832.13 0.0089 0.0074
 Neptune -60107-07-13 16:04 J -20232465.01 -20232464.83 -20232464.65 0.0089 0.0063
 Neptune -60106-07-16 01:54 J -20232097.60 -20232097.42 -20232097.19 0.0089 0.0053

Jupiter -60105-02-26 01:25 J -20231872.66 -20231872.44 -20231872.22 0.0509 0.0198
 Neptune -60105-07-17 12:42 J -20231730.18 -20231729.97 -20231729.74 0.0089 0.0042
 Saturn -60104-07-09 22:47 J -20231372.77 -20231372.55 -20231372.33 0.0301 0.0113
 Neptune -60104-07-19 23:16 J -20231362.77 -20231362.53 -20231362.30 0.0089 0.0031
 Neptune -60103-07-22 09:21 J -20230995.34 -20230995.11 -20230994.85 0.0089 0.0021
 Saturn -60103-07-24 19:54 J -20230992.87 -20230992.67 -20230992.47 0.0302 0.0173
 Neptune -60102-07-24 19:54 J -20230627.91 -20230627.67 -20230627.41 0.0089 0.0010
 Neptune -60101-07-26 06:28 J -20230260.48 -20230260.23 -20230259.98 0.0089 0.0001
 Neptune -60100-07-28 16:47 J -20229893.04 -20229892.80 -20229892.54 0.0089 0.0012
 Jupiter -60100-08-21 01:40 J -20229869.62 -20229869.43 -20229869.23 0.0519 0.0265
 Neptune -60099-07-31 03:06 J -20229525.61 -20229525.37 -20229525.12 0.0089 0.0023
 Neptune -60098-08-02 13:11 J -20229158.16 -20229157.95 -20229157.69 0.0089 0.0034
 Neptune -60097-08-03 23:45 J -20228790.73 -20228790.51 -20228790.29 0.0089 0.0044
 Neptune -60096-08-06 09:35 J -20228423.28 -20228423.10 -20228422.88 0.0089 0.0055
 Neptune -60095-08-08 19:25 J -20228055.83 -20228055.69 -20228055.49 0.0089 0.0066
 Neptune -60094-08-11 05:59 J -20227688.36 -20227688.25 -20227688.11 0.0089 0.0076
 Neptune -60093-08-12 16:04 J -20227320.88 -20227320.83 -20227320.76 0.0089 0.0086
 Saturn -60091-12-27 11:45 J -20226454.10 -20226454.01 -20226453.91 0.0262 0.0240
 Mars -60089-01-03 11:01 J -20226082.22 -20226082.04 -20226081.86 0.1616 0.0554
 Saturn -60089-01-08 03:21 J -20226077.61 -20226077.36 -20226077.12 0.0261 0.0056
 Saturn -60088-01-18 17:45 J -20225700.97 -20225700.76 -20225700.53 0.0260 0.0128
 Jupiter -60088-08-25 18:42 J -20225481.95 -20225481.72 -20225481.50 0.0518 0.0090
 Uranus -60080-08-13 07:11 J -20222572.37 -20222572.20 -20222572.00 0.0137 0.0092
 Uranus -60079-08-17 16:47 J -20222203.05 -20222202.80 -20222202.55 0.0138 0.0005
 Uranus -60078-08-22 02:23 J -20221833.55 -20221833.40 -20221833.21 0.0138 0.0103
 Jupiter -60076-08-30 08:09 J -20221094.28 -20221094.16 -20221094.03 0.0516 0.0431
 Saturn -60075-07-03 17:59 J -20220786.89 -20220786.75 -20220786.60 0.0300 0.0239
 Saturn -60074-07-18 14:23 J -20220407.14 -20220406.90 -20220406.67 0.0302 0.0044
 Saturn -60060-01-02 07:25 J -20215490.39 -20215490.19 -20215489.97 0.0261 0.0142
 Saturn -60059-01-13 22:33 J -20215113.80 -20215113.56 -20215113.31 0.0260 0.0042

Saturn -60058-01-25 13:11 J -20214737.06 -20214736.95 -20214736.81 0.0260 0.0225
 Saturn -60045-07-11 11:59 J -20209821.23 -20209821.00 -20209820.77 0.0301 0.0082
 Saturn -60044-07-26 08:23 J -20209441.32 -20209441.15 -20209440.96 0.0302 0.0203
 Uranus -60040-02-12 00:13 J -20208144.72 -20208144.49 -20208144.25 0.0141 0.0063
 Uranus -60039-02-16 23:16 J -20207774.77 -20207774.53 -20207774.28 0.0141 0.0046
 Jupiter -60034-02-20 03:06 J -20205945.58 -20205945.37 -20205945.15 0.0507 0.0210
 Saturn -60032-12-28 16:47 J -20204902.92 -20204902.80 -20204902.66 0.0262 0.0221
 Saturn -60030-01-09 08:37 J -20204526.38 -20204526.14 -20204525.89 0.0261 0.0036
 Saturn -60029-01-20 23:45 J -20204149.71 -20204149.51 -20204149.30 0.0260 0.0148
 Neptune -60027-01-03 23:45 J -20203435.55 -20203435.51 -20203435.46 0.0089 0.0087
 Neptune -60026-01-06 12:13 J -20203068.10 -20203067.99 -20203067.84 0.0089 0.0077
 Neptune -60025-01-09 01:11 J -20202700.60 -20202700.45 -20202700.26 0.0089 0.0066
 Neptune -60024-01-10 14:23 J -20202333.10 -20202332.90 -20202332.69 0.0088 0.0055
 Neptune -60023-01-13 03:35 J -20201965.57 -20201965.35 -20201965.12 0.0088 0.0044
 Neptune -60022-01-15 16:33 J -20201598.05 -20201597.81 -20201597.56 0.0088 0.0033
 Jupiter -60022-02-24 22:33 J -20201557.78 -20201557.56 -20201557.32 0.0508 0.0134
 Neptune -60021-01-18 05:45 J -20201230.51 -20201230.26 -20201230.01 0.0088 0.0022
 Pluto -60021-06-03 22:18 J -20201092.79 -20201092.57 -20201092.35 0.0081 0.0042
 Neptune -60020-01-19 18:42 J -20200862.97 -20200862.72 -20200862.45 0.0088 0.0011
 Neptune -60019-01-22 07:40 J -20200495.44 -20200495.18 -20200494.91 0.0088 0.0001
 Neptune -60018-01-24 20:52 J -20200127.89 -20200127.63 -20200127.37 0.0088 0.0012
 Neptune -60017-01-27 09:49 J -20199760.34 -20199760.09 -20199759.84 0.0088 0.0023
 Jupiter -60017-08-20 05:16 J -20199554.46 -20199554.28 -20199554.10 0.0519 0.0315
 Neptune -60016-01-28 22:47 J -20199392.79 -20199392.55 -20199392.30 0.0088 0.0034
 Saturn -60016-07-05 10:47 J -20199235.22 -20199235.05 -20199234.87 0.0300 0.0208
 Neptune -60015-01-31 11:45 J -20199025.23 -20199025.01 -20199024.78 0.0088 0.0045
 Saturn -60015-07-20 06:57 J -20198855.44 -20198855.21 -20198854.98 0.0302 0.0077
 Neptune -60014-02-03 00:42 J -20198657.66 -20198657.47 -20198657.25 0.0088 0.0056
 Neptune -60013-02-05 13:54 J -20198290.08 -20198289.92 -20198289.73 0.0088 0.0067
 Neptune -60012-02-07 02:52 J -20197922.48 -20197922.38 -20197922.23 0.0088 0.0078

Neptune -60011-02-09 16:18 J -20197554.82 -20197554.82 -20197554.78 0.0088 0.0088

Jupiter -60010-03-01 20:23 J -20197169.71 -20197169.65 -20197169.58 0.0510 0.0487

Jupiter -60005-08-24 19:54 J -20195166.89 -20195166.67 -20195166.44 0.0518 0.0034

Saturn -60001-01-04 14:23 J -20193939.11 -20193938.90 -20193938.67 0.0261 0.0122

60TH MILLENNIUM BCE

This is a list of transits of Earth in the 60th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-60000-01-15 05:45 J	-20193562.50	-20193562.26	-20193562.01	0.0260	0.0064		
Saturn	-59999-01-26 21:06 J	-20193185.69	-20193185.62	-20193185.53	0.0260	0.0246		
Uranus	-59996-08-13 16:47 J	-20191890.97	-20191890.80	-20191890.59	0.0137	0.0089		
Uranus	-59995-08-18 02:23 J	-20191521.65	-20191521.40	-20191521.15	0.0138	0.0009		
Uranus	-59994-08-22 12:28 J	-20191152.13	-20191151.98	-20191151.82	0.0138	0.0106		
Jupiter	-59993-08-29 08:09 J	-20190779.31	-20190779.16	-20190779.00	0.0516	0.0371		
Saturn	-59986-07-14 05:59 J	-20188269.49	-20188269.25	-20188269.01	0.0302	0.0048		
Saturn	-59985-07-28 01:54 J	-20187889.55	-20187889.42	-20187889.26	0.0302	0.0238		
Saturn	-59973-12-30 00:57 J	-20183351.61	-20183351.46	-20183351.29	0.0262	0.0201		
Saturn	-59971-01-10 17:01 J	-20182975.04	-20182974.79	-20182974.54	0.0261	0.0015		
Saturn	-59970-01-22 07:54 J	-20182598.34	-20182598.17	-20182597.97	0.0260	0.0170		
Mars	-59964-12-30 07:40 J	-20180064.29	-20180064.18	-20180064.07	0.1628	0.1325		
Saturn	-59957-07-07 07:11 J	-20177683.39	-20177683.20	-20177683.00	0.0300	0.0174		
Uranus	-59956-02-12 10:47 J	-20177463.28	-20177463.05	-20177462.81	0.0141	0.0058		
Saturn	-59956-07-22 03:21 J	-20177303.58	-20177303.36	-20177303.14	0.0302	0.0112		

Uranus -59955-02-17 09:35 J -20177093.33 -20177093.10 -20177092.85 0.0141 0.0052
 Jupiter -59951-02-19 03:49 J -20175630.54 -20175630.34 -20175630.13 0.0507 0.0262
 Neptune -59945-07-08 06:28 J -20173299.25 -20173299.23 -20173299.19 0.0089 0.0088
 Neptune -59944-07-10 16:47 J -20172931.90 -20172931.80 -20172931.65 0.0089 0.0078
 Neptune -59943-07-13 03:21 J -20172564.51 -20172564.36 -20172564.17 0.0089 0.0067
 Saturn -59942-01-05 23:59 J -20172387.72 -20172387.50 -20172387.26 0.0261 0.0100
 Neptune -59942-07-15 13:54 J -20172197.10 -20172196.92 -20172196.71 0.0089 0.0056
 Saturn -59941-01-17 15:35 J -20172011.08 -20172010.85 -20172010.61 0.0260 0.0086
 Neptune -59941-07-17 00:13 J -20171829.70 -20171829.49 -20171829.26 0.0089 0.0045
 Neptune -59940-07-19 10:47 J -20171462.28 -20171462.05 -20171461.81 0.0089 0.0034
 Jupiter -59939-02-23 23:59 J -20171242.73 -20171242.50 -20171242.26 0.0508 0.0085
 Neptune -59939-07-21 21:06 J -20171094.86 -20171094.62 -20171094.37 0.0089 0.0023
 Neptune -59938-07-24 07:25 J -20170727.44 -20170727.19 -20170726.93 0.0089 0.0012
 Neptune -59937-07-25 17:45 J -20170360.01 -20170359.76 -20170359.50 0.0089 0.0002
 Neptune -59936-07-28 04:04 J -20169992.58 -20169992.33 -20169992.07 0.0089 0.0010
 Neptune -59935-07-30 14:23 J -20169625.13 -20169624.90 -20169624.64 0.0089 0.0021
 Neptune -59934-08-02 00:42 J -20169257.70 -20169257.47 -20169257.22 0.0089 0.0032
 Jupiter -59934-08-20 02:52 J -20169239.52 -20169239.38 -20169239.22 0.0519 0.0386
 Neptune -59933-08-03 11:01 J -20168890.25 -20168890.04 -20168889.81 0.0089 0.0043
 Neptune -59932-08-05 21:06 J -20168522.80 -20168522.62 -20168522.40 0.0089 0.0054
 Neptune -59931-08-08 07:25 J -20168155.34 -20168155.19 -20168155.00 0.0089 0.0065
 Neptune -59930-08-10 17:16 J -20167787.88 -20167787.78 -20167787.62 0.0089 0.0076
 Neptune -59929-08-12 03:35 J -20167420.39 -20167420.35 -20167420.27 0.0089 0.0087
 Saturn -59928-07-01 07:54 J -20167097.22 -20167097.17 -20167097.12 0.0300 0.0292
 Jupiter -59927-02-28 19:40 J -20166854.80 -20166854.68 -20166854.55 0.0509 0.0431
 Saturn -59927-07-16 03:35 J -20166717.59 -20166717.35 -20166717.11 0.0302 0.0011
 Saturn -59926-07-30 23:30 J -20166337.62 -20166337.52 -20166337.42 0.0302 0.0273
 Jupiter -59922-08-24 18:13 J -20164851.97 -20164851.74 -20164851.51 0.0518 0.0035
 Saturn -59913-01-01 11:30 J -20161800.19 -20161800.02 -20161799.83 0.0262 0.0179
 Saturn -59912-01-12 03:21 J -20161423.61 -20161423.36 -20161423.11 0.0261 0.0008

Uranus -59912-08-14 01:40 J -20161209.63 -20161209.43 -20161209.24 0.0137 0.0085
 Saturn -59911-01-23 18:42 J -20161046.88 -20161046.72 -20161046.55 0.0260 0.0192
 Uranus -59911-08-18 10:47 J -20160840.30 -20160840.05 -20160839.80 0.0138 0.0011
 Uranus -59910-08-22 20:37 J -20160470.78 -20160470.64 -20160470.47 0.0138 0.0109
 Jupiter -59910-08-29 09:21 J -20160464.29 -20160464.11 -20160463.93 0.0517 0.0315
 Saturn -59898-07-10 06:28 J -20156131.45 -20156131.23 -20156131.02 0.0301 0.0137
 Saturn -59897-07-24 02:09 J -20155751.61 -20155751.41 -20155751.19 0.0302 0.0150
 Mars -59891-07-06 20:37 J -20153577.83 -20153577.64 -20153577.45 0.1920 0.0527
 Saturn -59885-12-26 19:25 J -20151212.70 -20151212.69 -20151212.68 0.0262 0.0262
 Mars -59884-01-01 11:45 J -20151207.20 -20151207.01 -20151206.83 0.1624 0.0224
 Saturn -59883-01-07 11:16 J -20150836.26 -20150836.03 -20150835.78 0.0261 0.0077
 Saturn -59882-01-19 02:37 J -20150459.61 -20150459.39 -20150459.15 0.0260 0.0109
 Uranus -59872-02-12 17:45 J -20146781.99 -20146781.76 -20146781.51 0.0141 0.0055
 Uranus -59871-02-17 17:01 J -20146412.02 -20146411.79 -20146411.54 0.0141 0.0055
 Saturn -59869-07-03 05:16 J -20145545.39 -20145545.28 -20145545.15 0.0300 0.0258
 Jupiter -59868-02-18 03:21 J -20145315.54 -20145315.36 -20145315.17 0.0506 0.0319
 Saturn -59868-07-18 01:25 J -20145165.68 -20145165.44 -20145165.20 0.0302 0.0026
 Pluto -59864-11-29 13:25 J -20143570.18 -20143569.94 -20143569.68 0.0064 0.0014
 Neptune -59862-01-05 21:49 J -20143167.67 -20143167.59 -20143167.45 0.0089 0.0081
 Neptune -59861-01-08 10:33 J -20142800.19 -20142800.06 -20142799.87 0.0089 0.0070
 Neptune -59860-01-09 23:45 J -20142432.69 -20142432.51 -20142432.30 0.0089 0.0059
 Neptune -59859-01-12 12:28 J -20142065.18 -20142064.98 -20142064.74 0.0088 0.0048
 Neptune -59858-01-15 02:09 J -20141697.65 -20141697.41 -20141697.17 0.0088 0.0036
 Neptune -59857-01-17 15:06 J -20141330.11 -20141329.87 -20141329.61 0.0088 0.0025
 Neptune -59856-01-19 04:04 J -20140962.58 -20140962.33 -20140962.06 0.0088 0.0014
 Jupiter -59856-02-22 20:09 J -20140927.90 -20140927.66 -20140927.42 0.0507 0.0019
 Neptune -59855-01-21 17:30 J -20140595.03 -20140594.77 -20140594.51 0.0088 0.0002
 Saturn -59854-01-02 23:16 J -20140248.73 -20140248.53 -20140248.33 0.0262 0.0156
 Neptune -59854-01-24 06:28 J -20140227.49 -20140227.23 -20140226.97 0.0088 0.0009
 Saturn -59853-01-14 14:37 J -20139872.13 -20139871.89 -20139871.64 0.0260 0.0031

Neptune -59853-01-26 19:40 J -20139859.93 -20139859.68 -20139859.42 0.0088 0.0021
 Saturn -59852-01-25 05:59 J -20139495.38 -20139495.25 -20139495.11 0.0260 0.0215
 Neptune -59852-01-28 08:23 J -20139492.38 -20139492.15 -20139491.89 0.0088 0.0033
 Neptune -59851-01-30 21:21 J -20139124.82 -20139124.61 -20139124.36 0.0088 0.0044
 Jupiter -59851-08-19 01:40 J -20138924.54 -20138924.43 -20138924.32 0.0520 0.0452
 Neptune -59850-02-02 10:33 J -20138757.25 -20138757.06 -20138756.84 0.0088 0.0055
 Neptune -59849-02-04 23:45 J -20138389.67 -20138389.51 -20138389.32 0.0088 0.0066
 Neptune -59848-02-06 12:57 J -20138022.08 -20138021.96 -20138021.82 0.0088 0.0077
 Neptune -59847-02-09 01:54 J -20137654.43 -20137654.42 -20137654.37 0.0088 0.0088
 Jupiter -59844-02-27 14:52 J -20136540.04 -20136539.88 -20136539.71 0.0509 0.0363
 Saturn -59839-07-12 04:33 J -20134579.54 -20134579.31 -20134579.08 0.0301 0.0101
 Jupiter -59839-08-23 17:16 J -20134537.00 -20134536.78 -20134536.55 0.0519 0.0096
 Saturn -59838-07-27 00:28 J -20134199.66 -20134199.48 -20134199.28 0.0302 0.0186
 Uranus -59828-08-14 09:21 J -20130528.30 -20130528.11 -20130527.91 0.0137 0.0083
 Uranus -59827-08-18 18:42 J -20130158.97 -20130158.72 -20130158.47 0.0137 0.0014
 Jupiter -59827-08-28 08:52 J -20130149.33 -20130149.13 -20130148.93 0.0517 0.0255
 Uranus -59826-08-23 04:04 J -20129789.45 -20129789.33 -20129789.16 0.0138 0.0112
 Saturn -59826-12-29 07:40 J -20129661.28 -20129661.18 -20129661.08 0.0262 0.0238
 Saturn -59824-01-08 23:16 J -20129284.77 -20129284.53 -20129284.28 0.0261 0.0053
 Saturn -59823-01-20 14:23 J -20128908.12 -20128907.90 -20128907.69 0.0260 0.0132
 Saturn -59810-07-06 02:23 J -20123993.56 -20123993.40 -20123993.24 0.0301 0.0223
 Saturn -59809-07-19 22:47 J -20123613.79 -20123613.55 -20123613.32 0.0302 0.0062
 Mars -59805-01-04 15:06 J -20122350.03 -20122349.87 -20122349.70 0.1621 0.0869
 Saturn -59795-01-04 10:04 J -20118697.28 -20118697.08 -20118696.86 0.0261 0.0133
 Saturn -59794-01-16 01:25 J -20118320.68 -20118320.44 -20118320.19 0.0260 0.0054
 Saturn -59793-01-27 16:33 J -20117943.90 -20117943.81 -20117943.70 0.0260 0.0237
 Uranus -59788-02-12 22:47 J -20116100.78 -20116100.55 -20116100.30 0.0141 0.0056
 Uranus -59787-02-17 22:04 J -20115730.81 -20115730.58 -20115730.33 0.0141 0.0055
 Jupiter -59785-02-18 00:57 J -20115000.61 -20115000.46 -20115000.30 0.0506 0.0379
 Neptune -59780-07-10 04:33 J -20113031.38 -20113031.31 -20113031.18 0.0089 0.0082

Saturn -59780-07-13 23:45 J -20113027.74 -20113027.51 -20113027.27 0.0301 0.0066
 Neptune -59779-07-12 15:21 J -20112663.99 -20112663.86 -20112663.68 0.0089 0.0071
 Saturn -59779-07-28 20:09 J -20112647.82 -20112647.66 -20112647.50 0.0302 0.0220
 Neptune -59778-07-15 01:40 J -20112296.59 -20112296.43 -20112296.21 0.0089 0.0060
 Neptune -59777-07-16 12:42 J -20111929.18 -20111928.97 -20111928.75 0.0089 0.0048
 Neptune -59776-07-18 23:01 J -20111561.76 -20111561.54 -20111561.30 0.0089 0.0037
 Neptune -59775-07-21 09:21 J -20111194.34 -20111194.11 -20111193.85 0.0089 0.0026
 Pluto -59774-06-06 11:59 J -20110874.14 -20110874.00 -20110873.85 0.0080 0.0066
 Neptune -59774-07-23 19:54 J -20110826.91 -20110826.67 -20110826.41 0.0089 0.0015
 Jupiter -59773-02-22 17:59 J -20110612.99 -20110612.75 -20110612.51 0.0507 0.0040
 Neptune -59773-07-25 06:13 J -20110459.49 -20110459.24 -20110458.98 0.0089 0.0004
 Neptune -59772-07-27 16:33 J -20110092.05 -20110091.81 -20110091.55 0.0089 0.0008
 Neptune -59771-07-30 02:52 J -20109724.62 -20109724.38 -20109724.13 0.0089 0.0019
 Neptune -59770-08-01 13:11 J -20109357.19 -20109356.95 -20109356.71 0.0089 0.0030
 Neptune -59769-08-02 23:01 J -20108989.74 -20108989.54 -20108989.29 0.0089 0.0042
 Neptune -59768-08-05 09:35 J -20108622.28 -20108622.10 -20108621.88 0.0089 0.0053
 Jupiter -59768-08-18 03:06 J -20108609.41 -20108609.37 -20108609.32 0.0520 0.0508
 Neptune -59767-08-07 19:54 J -20108254.83 -20108254.67 -20108254.48 0.0089 0.0064
 Saturn -59767-12-30 18:57 J -20108109.85 -20108109.71 -20108109.57 0.0262 0.0215
 Neptune -59766-08-10 05:59 J -20107887.36 -20107887.25 -20107887.09 0.0089 0.0075
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 Neptune -59362-01-22 13:25 J -19960526.20 -19960525.94 -19960525.68 0.0088 0.0002
 Neptune -59361-01-25 02:23 J -19960158.65 -19960158.40 -19960158.14 0.0088 0.0014
 Neptune -59360-01-26 15:21 J -19959791.10 -19959790.86 -19959790.60 0.0088 0.0027
 Neptune -59359-01-29 04:33 J -19959423.54 -19959423.31 -19959423.06 0.0088 0.0039
 Neptune -59358-01-31 17:30 J -19959055.97 -19959055.77 -19959055.54 0.0088 0.0051
 Jupiter -59358-02-20 00:42 J -19959036.68 -19959036.47 -19959036.25 0.0506 0.0228
 Neptune -59357-02-03 06:42 J -19958688.39 -19958688.22 -19958688.02 0.0088 0.0063
 Neptune -59356-02-04 19:40 J -19958320.79 -19958320.68 -19958320.51 0.0088 0.0075
 Neptune -59355-02-07 08:52 J -19957953.15 -19957953.13 -19957953.04 0.0088 0.0087
 Saturn -59353-01-08 22:18 J -19957252.80 -19957252.57 -19957252.34 0.0261 0.0092
 Saturn -59352-01-19 12:28 J -19956876.20 -19956875.98 -19956875.74 0.0260 0.0095
 Jupiter -59346-02-24 21:49 J -19954648.82 -19954648.59 -19954648.36 0.0508 0.0127
 Jupiter -59341-08-20 15:21 J -19952645.03 -19952644.86 -19952644.67 0.0520 0.0327
 Saturn -59338-07-16 17:01 J -19951585.02 -19951584.79 -19951584.54 0.0301 0.0051
 Saturn -59337-07-30 13:25 J -19951205.08 -19951204.94 -19951204.79 0.0302 0.0238
 Jupiter -59334-03-01 20:52 J -19950260.69 -19950260.63 -19950260.57 0.0509 0.0492
 Jupiter -59329-08-25 07:25 J -19948257.41 -19948257.19 -19948256.96 0.0519 0.0037
 Saturn -59324-01-02 21:21 J -19946665.78 -19946665.61 -19946665.43 0.0262 0.0182
 Uranus -59324-08-16 13:54 J -19946440.13 -19946439.92 -19946439.69 0.0137 0.0066
 Saturn -59323-01-14 13:11 J -19946289.20 -19946288.95 -19946288.70 0.0260 0.0006
 Uranus -59323-08-20 23:16 J -19946070.77 -19946070.53 -19946070.29 0.0138 0.0032

Saturn -59322-01-26 03:35 J -19945912.52 -19945912.35 -19945912.18 0.0259 0.0191
 Uranus -59322-08-25 08:52 J -19945701.19 -19945701.13 -19945701.04 0.0138 0.0132
 Jupiter -59317-08-29 21:49 J -19943869.73 -19943869.59 -19943869.44 0.0518 0.0392
 Mars -59316-01-03 16:33 J -19943743.00 -19943742.81 -19943742.62 0.1635 0.0327
 Saturn -59309-07-09 08:37 J -19940999.32 -19940999.14 -19940998.94 0.0300 0.0183
 Saturn -59308-07-24 04:47 J -19940619.53 -19940619.30 -19940619.07 0.0302 0.0105
 Saturn -59294-01-09 18:42 J -19935701.95 -19935701.72 -19935701.48 0.0261 0.0077
 Saturn -59293-01-21 09:49 J -19935325.32 -19935325.09 -19935324.87 0.0260 0.0110
 Neptune -59287-07-11 04:33 J -19932962.40 -19932962.31 -19932962.21 0.0089 0.0082
 Neptune -59286-07-13 14:52 J -19932595.01 -19932594.88 -19932594.71 0.0089 0.0071
 Neptune -59285-07-15 01:40 J -19932227.60 -19932227.43 -19932227.23 0.0089 0.0059
 Uranus -59284-02-15 00:57 J -19932012.71 -19932012.46 -19932012.21 0.0141 0.0037
 Neptune -59284-07-17 12:13 J -19931860.20 -19931859.99 -19931859.77 0.0089 0.0047
 Uranus -59283-02-19 23:45 J -19931642.71 -19931642.51 -19931642.27 0.0141 0.0075
 Neptune -59283-07-19 23:01 J -19931492.77 -19931492.54 -19931492.30 0.0089 0.0035
 Neptune -59282-07-22 09:49 J -19931125.34 -19931125.09 -19931124.85 0.0089 0.0023
 Neptune -59281-07-23 20:23 J -19930757.90 -19930757.65 -19930757.40 0.0089 0.0011
 Pluto -59280-06-08 22:47 J -19930437.70 -19930437.55 -19930437.35 0.0080 0.0059
 Neptune -59280-07-26 06:42 J -19930390.47 -19930390.22 -19930389.96 0.0089 0.0001
 Saturn -59279-07-17 15:21 J -19930034.10 -19930033.86 -19930033.61 0.0301 0.0032
 Neptune -59279-07-28 17:01 J -19930023.04 -19930022.79 -19930022.53 0.0089 0.0013
 Neptune -59278-07-31 03:21 J -19929655.59 -19929655.36 -19929655.11 0.0089 0.0025
 Saturn -59278-08-01 11:16 J -19929654.14 -19929654.03 -19929653.90 0.0302 0.0258
 Neptune -59277-08-01 13:25 J -19929288.16 -19929287.94 -19929287.69 0.0089 0.0037
 Neptune -59276-08-03 23:30 J -19928920.71 -19928920.52 -19928920.29 0.0089 0.0049
 Jupiter -59275-02-19 12:13 J -19928721.19 -19928720.99 -19928720.78 0.0506 0.0251
 Neptune -59275-08-06 10:04 J -19928553.26 -19928553.08 -19928552.89 0.0089 0.0060
 Neptune -59274-08-08 20:09 J -19928185.79 -19928185.66 -19928185.49 0.0089 0.0072
 Neptune -59273-08-10 05:59 J -19927818.31 -19927818.25 -19927818.14 0.0089 0.0084
 Saturn -59265-01-04 18:42 J -19925114.90 -19925114.72 -19925114.52 0.0262 0.0167

Saturn -59264-01-15 10:47 J -19924738.29 -19924738.05 -19924737.80 0.0260 0.0022
 Saturn -59263-01-27 01:25 J -19924361.57 -19924361.44 -19924361.28 0.0260 0.0208
 Jupiter -59263-02-24 09:06 J -19924333.35 -19924333.12 -19924332.88 0.0507 0.0107
 Jupiter -59258-08-20 22:47 J -19922329.71 -19922329.55 -19922329.38 0.0521 0.0368
 Jupiter -59251-03-01 05:16 J -19919945.37 -19919945.28 -19919945.18 0.0508 0.0462
 Saturn -59250-07-11 09:06 J -19919448.32 -19919448.12 -19919447.92 0.0300 0.0162
 Saturn -59249-07-25 04:33 J -19919068.53 -19919068.31 -19919068.09 0.0302 0.0126
 Jupiter -59246-08-25 17:01 J -19917942.01 -19917941.79 -19917941.56 0.0519 0.0011
 Mars -59244-07-08 21:49 J -19917258.79 -19917258.59 -19917258.40 0.1907 0.0238
 Uranus -59240-08-16 21:21 J -19915758.83 -19915758.61 -19915758.39 0.0137 0.0064
 Uranus -59239-08-21 06:28 J -19915389.47 -19915389.23 -19915388.99 0.0137 0.0034
 Uranus -59238-08-25 15:49 J -19915019.88 -19915019.84 -19915019.76 0.0138 0.0133
 Mars -59237-01-06 21:06 J -19914885.71 -19914885.62 -19914885.54 0.1631 0.1460
 Saturn -59237-12-29 23:59 J -19914527.57 -19914527.50 -19914527.42 0.0264 0.0250
 Saturn -59235-01-10 17:30 J -19914151.01 -19914150.77 -19914150.52 0.0262 0.0060
 Saturn -59234-01-22 08:52 J -19913774.34 -19913774.13 -19913773.91 0.0260 0.0128
 Jupiter -59234-08-30 11:01 J -19913554.20 -19913554.04 -19913553.88 0.0518 0.0371
 Saturn -59221-07-04 01:40 J -19908862.47 -19908862.43 -19908862.37 0.0298 0.0290
 Saturn -59220-07-18 19:25 J -19908482.93 -19908482.69 -19908482.45 0.0301 0.0008
 Saturn -59219-08-02 14:37 J -19908102.97 -19908102.89 -19908102.79 0.0302 0.0280
 Saturn -59206-01-05 18:28 J -19903563.93 -19903563.73 -19903563.52 0.0262 0.0151
 Neptune -59205-01-06 05:30 J -19903198.30 -19903198.27 -19903198.16 0.0089 0.0086
 Saturn -59205-01-17 11:01 J -19903187.29 -19903187.04 -19903186.79 0.0261 0.0039
 Neptune -59204-01-07 18:28 J -19902830.84 -19902830.73 -19902830.56 0.0089 0.0074
 Saturn -59204-01-28 02:09 J -19902810.51 -19902810.41 -19902810.27 0.0260 0.0226
 Neptune -59203-01-10 07:40 J -19902463.35 -19902463.18 -19902462.97 0.0089 0.0062
 Neptune -59202-01-12 20:23 J -19902095.85 -19902095.65 -19902095.42 0.0089 0.0050
 Neptune -59201-01-15 09:49 J -19901728.33 -19901728.09 -19901727.85 0.0089 0.0037
 Neptune -59200-01-16 22:33 J -19901360.81 -19901360.56 -19901360.31 0.0089 0.0025
 Uranus -59200-02-15 05:59 J -19901331.50 -19901331.25 -19901331.00 0.0141 0.0037

Neptune -59199-01-19 11:16 J -19900993.28 -19900993.03 -19900992.76 0.0089 0.0013
 Uranus -59199-02-20 04:47 J -19900961.50 -19900961.30 -19900961.07 0.0141 0.0075
 Neptune -59198-01-22 00:28 J -19900625.74 -19900625.48 -19900625.22 0.0088 0.0001
 Neptune -59197-01-24 12:57 J -19900258.21 -19900257.96 -19900257.69 0.0088 0.0013
 Neptune -59196-01-26 01:54 J -19899890.65 -19899890.42 -19899890.15 0.0088 0.0025
 Neptune -59195-01-28 15:06 J -19899523.10 -19899522.87 -19899522.62 0.0088 0.0037
 Neptune -59194-01-31 04:18 J -19899155.53 -19899155.32 -19899155.10 0.0088 0.0049
 Neptune -59193-02-02 17:30 J -19898787.96 -19898787.77 -19898787.58 0.0088 0.0061
 Neptune -59192-02-04 06:13 J -19898420.36 -19898420.24 -19898420.06 0.0088 0.0074
 Jupiter -59192-02-18 19:25 J -19898405.88 -19898405.69 -19898405.49 0.0505 0.0287
 Neptune -59191-02-06 19:11 J -19898052.73 -19898052.70 -19898052.60 0.0088 0.0086
 Saturn -59191-07-12 13:54 J -19897897.12 -19897896.92 -19897896.69 0.0300 0.0138
 Saturn -59190-07-27 09:21 J -19897517.32 -19897517.11 -19897516.90 0.0302 0.0151
 Jupiter -59180-02-23 10:04 J -19894018.31 -19894018.08 -19894017.84 0.0506 0.0051
 Saturn -59177-01-01 00:57 J -19892976.56 -19892976.46 -19892976.34 0.0264 0.0234
 Saturn -59176-01-11 18:57 J -19892599.95 -19892599.71 -19892599.46 0.0262 0.0043
 Saturn -59175-01-23 10:47 J -19892223.25 -19892223.05 -19892222.84 0.0261 0.0146
 Jupiter -59175-08-20 08:09 J -19892014.30 -19892014.16 -19892014.01 0.0521 0.0404
 Jupiter -59168-02-28 05:45 J -19889630.39 -19889630.26 -19889630.11 0.0508 0.0406
 Jupiter -59163-08-25 00:42 J -19887626.70 -19887626.47 -19887626.24 0.0520 0.0035
 Saturn -59162-07-06 10:18 J -19887311.16 -19887311.07 -19887310.94 0.0298 0.0265
 Saturn -59161-07-20 03:49 J -19886931.58 -19886931.34 -19886931.10 0.0301 0.0019
 Uranus -59156-08-17 04:47 J -19885077.50 -19885077.30 -19885077.06 0.0137 0.0063
 Uranus -59155-08-21 14:23 J -19884708.14 -19884707.90 -19884707.66 0.0137 0.0036
 Uranus -59154-08-25 23:59 J -19884338.54 -19884338.50 -19884338.45 0.0138 0.0135
 Jupiter -59151-08-29 16:04 J -19883239.00 -19883238.83 -19883238.65 0.0518 0.0324
 Saturn -59147-01-06 21:06 J -19882012.83 -19882012.62 -19882012.40 0.0262 0.0132
 Saturn -59146-01-18 14:09 J -19881636.15 -19881635.91 -19881635.67 0.0261 0.0058
 Saturn -59145-01-30 05:59 J -19881259.32 -19881259.25 -19881259.16 0.0260 0.0245
 Saturn -59132-07-14 01:25 J -19876345.66 -19876345.44 -19876345.21 0.0300 0.0108

Saturn -59131-07-28 20:09 J -19875965.84 -19875965.66 -19875965.46 0.0302 0.0181
 Neptune -59123-07-10 16:33 J -19873061.83 -19873061.81 -19873061.72 0.0089 0.0087
 Pluto -59123-12-04 04:47 J -19872915.53 -19872915.30 -19872915.08 0.0063 0.0031
 Neptune -59122-07-13 03:35 J -19872694.47 -19872694.35 -19872694.19 0.0089 0.0075
 Pluto -59122-12-05 16:04 J -19872548.98 -19872548.83 -19872548.64 0.0064 0.0048
 Neptune -59121-07-14 13:54 J -19872327.08 -19872326.92 -19872326.72 0.0089 0.0063
 Neptune -59120-07-17 00:42 J -19871959.66 -19871959.47 -19871959.25 0.0089 0.0051
 Neptune -59119-07-19 11:16 J -19871592.25 -19871592.03 -19871591.79 0.0089 0.0039
 Saturn -59118-01-02 05:01 J -19871425.42 -19871425.29 -19871425.14 0.0264 0.0216
 Neptune -59118-07-21 21:49 J -19871224.82 -19871224.59 -19871224.34 0.0089 0.0027
 Saturn -59117-01-13 23:16 J -19871048.78 -19871048.53 -19871048.28 0.0262 0.0023
 Neptune -59117-07-23 08:37 J -19870857.39 -19870857.14 -19870856.89 0.0089 0.0014
 Saturn -59116-01-24 15:21 J -19870672.04 -19870671.86 -19870671.66 0.0261 0.0167
 Uranus -59116-02-15 11:30 J -19870650.26 -19870650.02 -19870649.76 0.0142 0.0037
 Neptune -59116-07-25 18:57 J -19870489.96 -19870489.71 -19870489.45 0.0089 0.0003
 Uranus -59115-02-20 10:47 J -19870280.27 -19870280.05 -19870279.83 0.0141 0.0075
 Neptune -59115-07-28 05:30 J -19870122.52 -19870122.27 -19870122.01 0.0089 0.0010
 Neptune -59114-07-30 15:35 J -19869755.08 -19869754.85 -19869754.59 0.0089 0.0023
 Neptune -59113-08-01 01:54 J -19869387.64 -19869387.42 -19869387.17 0.0089 0.0035
 Neptune -59112-08-03 11:59 J -19869020.20 -19869020.00 -19869019.76 0.0089 0.0047
 Mars -59111-01-02 12:13 J -19868868.16 -19868867.99 -19868867.81 0.1644 0.0595
 Neptune -59111-08-05 22:18 J -19868652.74 -19868652.57 -19868652.36 0.0089 0.0059
 Neptune -59110-08-08 08:23 J -19868285.28 -19868285.15 -19868284.97 0.0089 0.0071
 Jupiter -59109-02-18 18:57 J -19868090.87 -19868090.71 -19868090.53 0.0505 0.0347
 Neptune -59109-08-09 18:28 J -19867917.79 -19867917.73 -19867917.61 0.0089 0.0083
 Saturn -59103-07-08 00:57 J -19865759.60 -19865759.46 -19865759.31 0.0298 0.0235
 Saturn -59102-07-22 17:59 J -19865379.98 -19865379.75 -19865379.50 0.0301 0.0051
 Jupiter -59097-02-23 14:09 J -19863703.14 -19863702.91 -19863702.67 0.0506 0.0010
 Jupiter -59092-08-19 11:01 J -19861699.15 -19861699.04 -19861698.94 0.0521 0.0459
 Saturn -59088-01-08 02:52 J -19860461.60 -19860461.38 -19860461.15 0.0262 0.0113

Saturn -59087-01-19 20:09 J -19860084.89 -19860084.66 -19860084.42 0.0261 0.0079
 Jupiter -59085-02-28 10:18 J -19859315.23 -19859315.07 -19859314.90 0.0508 0.0365
 Jupiter -59080-08-24 01:11 J -19857311.68 -19857311.45 -19857311.23 0.0520 0.0099
 Saturn -59073-07-15 17:16 J -19854794.01 -19854793.78 -19854793.54 0.0300 0.0076
 Saturn -59072-07-30 11:45 J -19854414.18 -19854414.01 -19854413.84 0.0301 0.0213
 Uranus -59072-08-17 13:54 J -19854396.13 -19854395.92 -19854395.68 0.0137 0.0060
 Uranus -59071-08-21 23:16 J -19854026.76 -19854026.53 -19854026.28 0.0137 0.0039
 Jupiter -59068-08-28 17:16 J -19852923.98 -19852923.78 -19852923.58 0.0519 0.0265
 Saturn -59059-01-03 11:59 J -19849874.16 -19849874.00 -19849873.83 0.0264 0.0195
 Saturn -59058-01-15 06:13 J -19849497.49 -19849497.24 -19849496.99 0.0262 0.0002
 Saturn -59057-01-26 22:47 J -19849120.71 -19849120.55 -19849120.37 0.0261 0.0188
 Saturn -59044-07-09 19:54 J -19844207.84 -19844207.67 -19844207.49 0.0298 0.0202
 Saturn -59043-07-24 13:11 J -19843828.18 -19843827.95 -19843827.72 0.0301 0.0085
 Neptune -59040-01-07 05:01 J -19842930.39 -19842930.29 -19842930.14 0.0089 0.0078
 Neptune -59039-01-09 17:45 J -19842562.91 -19842562.76 -19842562.57 0.0089 0.0066
 Neptune -59038-01-12 06:42 J -19842195.41 -19842195.22 -19842194.99 0.0089 0.0054
 Neptune -59037-01-14 19:54 J -19841827.90 -19841827.67 -19841827.44 0.0089 0.0041
 Neptune -59036-01-16 08:37 J -19841460.38 -19841460.14 -19841459.88 0.0089 0.0028
 Neptune -59035-01-18 21:49 J -19841092.85 -19841092.59 -19841092.33 0.0089 0.0016
 Neptune -59034-01-21 10:33 J -19840725.32 -19840725.06 -19840724.80 0.0088 0.0003
 Neptune -59033-01-23 23:30 J -19840357.78 -19840357.52 -19840357.26 0.0088 0.0009
 Pluto -59033-06-09 19:40 J -19840219.91 -19840219.68 -19840219.42 0.0081 0.0026
 Mars -59032-01-04 17:45 J -19840010.94 -19840010.76 -19840010.58 0.1640 0.0577
 Neptune -59032-01-25 12:28 J -19839990.23 -19839989.98 -19839989.73 0.0088 0.0022
 Uranus -59032-02-15 19:25 J -19839968.93 -19839968.69 -19839968.43 0.0142 0.0034
 Neptune -59031-01-28 00:57 J -19839622.68 -19839622.46 -19839622.20 0.0088 0.0035
 Uranus -59031-02-20 18:13 J -19839598.94 -19839598.74 -19839598.51 0.0141 0.0078
 Neptune -59030-01-30 14:09 J -19839255.12 -19839254.91 -19839254.68 0.0088 0.0047
 Saturn -59029-01-10 11:30 J -19838910.25 -19838910.02 -19838909.78 0.0262 0.0091
 Neptune -59029-02-02 02:52 J -19838887.54 -19838887.38 -19838887.16 0.0088 0.0060

Saturn	-59028-01-21 04:47 J	-19838533.53	-19838533.30	-19838533.07	0.0261	0.0101
Neptune	-59028-02-03 16:04 J	-19838519.96	-19838519.83	-19838519.65	0.0088	0.0072
Neptune	-59027-02-06 05:30 J	-19838152.34	-19838152.27	-19838152.17	0.0088	0.0084
Jupiter	-59026-02-17 21:06 J	-19837775.76	-19837775.62	-19837775.47	0.0505	0.0396
Jupiter	-59014-02-22 15:21 J	-19833388.10	-19833387.86	-19833387.62	0.0506	0.0048
Saturn	-59014-07-18 13:11 J	-19833242.19	-19833241.95	-19833241.71	0.0300	0.0040
Saturn	-59013-08-01 07:11 J	-19832862.32	-19832862.20	-19832862.05	0.0301	0.0249
Jupiter	-59002-02-27 06:42 J	-19829000.40	-19829000.22	-19829000.02	0.0507	0.0298

59TH MILLENNIUM BCE

This is a list of transits of Earth in the 59th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-59000-01-04 21:21 J	-19828322.79	-19828322.61	-19828322.42	0.0263	0.0174		
Saturn	-58999-01-16 15:35 J	-19827946.10	-19827945.85	-19827945.60	0.0262	0.0020		
Saturn	-58998-01-28 08:23 J	-19827569.29	-19827569.15	-19827569.00	0.0261	0.0210		
Jupiter	-58997-08-23 01:11 J	-19826996.67	-19826996.45	-19826996.23	0.0521	0.0162		
Uranus	-58988-08-17 23:01 J	-19823714.75	-19823714.54	-19823714.30	0.0137	0.0057		
Uranus	-58987-08-22 08:37 J	-19823345.37	-19823345.14	-19823344.90	0.0137	0.0043		
Saturn	-58985-07-11 16:47 J	-19822655.99	-19822655.80	-19822655.59	0.0299	0.0167		
Jupiter	-58985-08-27 17:16 J	-19822608.99	-19822608.78	-19822608.57	0.0519	0.0206		
Saturn	-58984-07-26 10:18 J	-19822276.29	-19822276.07	-19822275.85	0.0301	0.0122		
Saturn	-58972-12-31 03:06 J	-19817735.40	-19817735.37	-19817735.33	0.0264	0.0260		
Saturn	-58970-01-11 21:49 J	-19817358.82	-19817358.59	-19817358.34	0.0262	0.0068		

Saturn -58969-01-23 15:06 J -19816982.09 -19816981.87 -19816981.65 0.0261 0.0124
 Mars -58960-07-08 05:59 J -19813528.43 -19813528.25 -19813528.07 0.1897 0.0718
 Neptune -58958-07-12 15:35 J -19812793.95 -19812793.85 -19812793.72 0.0089 0.0079
 Neptune -58957-07-14 02:09 J -19812426.56 -19812426.41 -19812426.23 0.0089 0.0067
 Saturn -58956-07-05 18:13 J -19812069.80 -19812069.74 -19812069.68 0.0298 0.0287
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 Saturn -58145-01-19 18:28 J -19516019.98 -19516019.73 -19516019.48 0.0263 0.0008
 Saturn -58144-01-30 13:25 J -19515643.10 -19515642.94 -19515642.79 0.0262 0.0204
 Jupiter -58143-08-27 22:04 J -19515068.80 -19515068.58 -19515068.35 0.0522 0.0130
 Neptune -58136-07-13 14:23 J -19512556.97 -19512556.90 -19512556.76 0.0089 0.0081
 Neptune -58135-07-16 01:54 J -19512189.57 -19512189.42 -19512189.24 0.0089 0.0067
 Neptune -58134-07-18 12:28 J -19511822.17 -19511821.98 -19511821.76 0.0089 0.0054
 Neptune -58133-07-19 23:30 J -19511454.74 -19511454.52 -19511454.29 0.0089 0.0040
 Pluto -58133-12-10 04:18 J -19511311.56 -19511311.32 -19511311.06 0.0063 0.0016
 Neptune -58132-07-22 10:04 J -19511087.31 -19511087.08 -19511086.82 0.0089 0.0027
 Pluto -58132-12-11 15:06 J -19510944.88 -19510944.87 -19510944.78 0.0064 0.0063
 Saturn -58131-07-12 14:52 J -19510732.03 -19510731.88 -19510731.72 0.0296 0.0228
 Neptune -58131-07-24 21:06 J -19510719.87 -19510719.62 -19510719.37 0.0089 0.0013
 Jupiter -58131-09-01 14:52 J -19510680.91 -19510680.88 -19510680.83 0.0520 0.0510
 Saturn -58130-07-27 04:33 J -19510352.54 -19510352.31 -19510352.07 0.0299 0.0059
 Neptune -58130-07-27 07:54 J -19510352.43 -19510352.17 -19510351.92 0.0089 0.0002 *
 Neptune -58129-07-28 18:13 J -19509984.99 -19509984.74 -19509984.49 0.0089 0.0015
 Neptune -58128-07-31 04:18 J -19509617.54 -19509617.32 -19509617.06 0.0089 0.0029
 Neptune -58127-08-02 14:52 J -19509250.09 -19509249.88 -19509249.64 0.0089 0.0042
 Neptune -58126-08-05 01:11 J -19508882.63 -19508882.45 -19508882.23 0.0089 0.0056

Neptune -58125-08-06 11:16 J -19508515.17 -19508515.03 -19508514.85 0.0089 0.0069
 Neptune -58124-08-08 21:49 J -19508147.67 -19508147.59 -19508147.48 0.0089 0.0082
 Saturn -58116-01-13 21:49 J -19505432.82 -19505432.59 -19505432.35 0.0264 0.0085
 Saturn -58115-01-25 17:30 J -19505055.99 -19505055.77 -19505055.54 0.0262 0.0114
 Uranus -58109-02-16 15:35 J -19502843.04 -19502842.85 -19502842.64 0.0142 0.0091
 Uranus -58108-02-20 16:04 J -19502473.08 -19502472.83 -19502472.57 0.0142 0.0026
 Uranus -58107-02-25 14:52 J -19502102.88 -19502102.88 -19502102.84 0.0141 0.0141
 Saturn -58101-07-20 04:47 J -19499766.54 -19499766.30 -19499766.07 0.0298 0.0067
 Saturn -58100-08-03 20:09 J -19499386.81 -19499386.66 -19499386.49 0.0300 0.0224
 Jupiter -58089-02-21 06:28 J -19495533.45 -19495533.23 -19495533.01 0.0503 0.0196
 Saturn -58087-01-09 06:42 J -19494845.41 -19494845.22 -19494845.03 0.0265 0.0171
 Saturn -58086-01-21 03:35 J -19494468.60 -19494468.35 -19494468.10 0.0263 0.0030
 Saturn -58085-02-01 22:04 J -19494091.69 -19494091.58 -19494091.44 0.0262 0.0227
 Jupiter -58077-02-25 22:33 J -19491145.78 -19491145.56 -19491145.33 0.0504 0.0157
 Saturn -58072-07-14 10:33 J -19489180.23 -19489180.06 -19489179.87 0.0297 0.0194
 Jupiter -58072-08-22 04:33 J -19489141.49 -19489141.31 -19489141.13 0.0523 0.0320
 Saturn -58071-07-29 00:42 J -19488800.69 -19488800.47 -19488800.24 0.0299 0.0095
 Uranus -58065-08-18 00:42 J -19486588.58 -19486588.47 -19486588.30 0.0136 0.0114
 Uranus -58064-08-22 09:21 J -19486219.36 -19486219.11 -19486218.86 0.0137 0.0014
 Uranus -58063-08-26 18:13 J -19485849.93 -19485849.74 -19485849.54 0.0137 0.0087
 Jupiter -58060-08-26 22:47 J -19484753.78 -19484753.55 -19484753.32 0.0522 0.0067
 Saturn -58058-01-04 10:18 J -19484258.10 -19484258.07 -19484258.02 0.0266 0.0262
 Saturn -58057-01-16 08:23 J -19483881.39 -19483881.15 -19483880.91 0.0264 0.0061
 Saturn -58056-01-27 03:49 J -19483504.55 -19483504.34 -19483504.13 0.0262 0.0138
 Mars -58054-01-04 03:21 J -19482797.51 -19482797.36 -19482797.21 0.1674 0.1029
 Neptune -58054-01-08 07:54 J -19482793.23 -19482793.17 -19482793.08 0.0089 0.0085
 Neptune -58053-01-10 20:09 J -19482425.78 -19482425.66 -19482425.47 0.0089 0.0072
 Neptune -58052-01-12 09:06 J -19482058.30 -19482058.12 -19482057.90 0.0089 0.0058
 Neptune -58051-01-14 21:49 J -19481690.80 -19481690.59 -19481690.35 0.0089 0.0044
 Neptune -58050-01-17 10:33 J -19481323.30 -19481323.06 -19481322.81 0.0089 0.0030

Neptune -58049-01-19 23:16 J -19480955.78 -19480955.53 -19480955.27 0.0089 0.0016
 Neptune -58048-01-21 11:59 J -19480588.26 -19480588.00 -19480587.73 0.0089 0.0002
 Jupiter -58048-08-31 12:57 J -19480366.08 -19480365.96 -19480365.83 0.0520 0.0437
 Neptune -58047-01-24 00:28 J -19480220.73 -19480220.48 -19480220.21 0.0088 0.0013
 Neptune -58046-01-26 13:25 J -19479853.19 -19479852.94 -19479852.69 0.0088 0.0026
 Neptune -58045-01-29 01:40 J -19479485.64 -19479485.43 -19479485.17 0.0088 0.0041
 Neptune -58044-01-30 15:06 J -19479118.07 -19479117.87 -19479117.65 0.0088 0.0054
 Neptune -58043-02-02 03:49 J -19478750.49 -19478750.34 -19478750.16 0.0088 0.0068
 Pluto -58043-06-16 16:47 J -19478616.00 -19478615.80 -19478615.57 0.0081 0.0044
 Neptune -58042-02-04 16:33 J -19478382.88 -19478382.81 -19478382.68 0.0088 0.0082
 Saturn -58042-07-23 01:40 J -19478214.67 -19478214.43 -19478214.19 0.0299 0.0031
 Saturn -58041-08-05 17:30 J -19477834.89 -19477834.77 -19477834.65 0.0300 0.0261
 Mars -58029-07-10 05:30 J -19473478.46 -19473478.27 -19473478.08 0.1872 0.0492
 Saturn -58028-01-10 17:45 J -19473293.96 -19473293.76 -19473293.55 0.0265 0.0147
 Saturn -58027-01-22 14:23 J -19472917.15 -19472916.90 -19472916.66 0.0263 0.0054
 Saturn -58026-02-03 08:52 J -19472540.19 -19472540.13 -19472540.05 0.0262 0.0250
 Uranus -58025-02-17 00:57 J -19472161.66 -19472161.46 -19472161.25 0.0142 0.0087
 Uranus -58024-02-21 01:11 J -19471791.70 -19471791.45 -19471791.19 0.0142 0.0030
 Saturn -58013-07-16 07:54 J -19467628.37 -19467628.17 -19467627.96 0.0297 0.0157
 Saturn -58012-07-30 22:18 J -19467248.79 -19467248.57 -19467248.36 0.0299 0.0133
 Jupiter -58006-02-20 04:33 J -19465218.51 -19465218.31 -19465218.11 0.0503 0.0260

58TH MILLENNIUM BCE

This is a list of transits of Earth in the 58th millennium BCE.

FROM MAX- C START MAX END SUNRAD DEPTH S

TRANSIT

TIME

Saturn -57999-01-05 22:47 J -19462706.65 -19462706.55 -19462706.43 0.0266 0.0237

Saturn -57998-01-17 20:23 J -19462329.90 -19462329.65 -19462329.40 0.0263 0.0035

Saturn -57997-01-29 15:21 J -19461953.04 -19461952.86 -19461952.65 0.0262 0.0163

Jupiter -57994-02-24 22:18 J -19460830.80 -19460830.57 -19460830.34 0.0504 0.0098

Jupiter -57989-08-21 02:09 J -19458826.55 -19458826.41 -19458826.26 0.0523 0.0397

Saturn -57984-07-10 09:06 J -19457042.20 -19457042.12 -19457042.04 0.0296 0.0279

Saturn -57983-07-24 22:18 J -19456662.81 -19456662.57 -19456662.32 0.0299 0.0008

Jupiter -57982-03-01 16:18 J -19456442.91 -19456442.82 -19456442.72 0.0506 0.0460

Saturn -57982-08-08 14:09 J -19456282.93 -19456282.91 -19456282.87 0.0301 0.0298

Uranus -57981-08-18 12:13 J -19455907.13 -19455906.99 -19455906.83 0.0136 0.0107

Uranus -57980-08-22 20:37 J -19455537.89 -19455537.64 -19455537.39 0.0137 0.0008

Uranus -57979-08-27 05:16 J -19455168.45 -19455168.28 -19455168.09 0.0137 0.0093

Jupiter -57977-08-25 18:42 J -19454438.94 -19454438.72 -19454438.49 0.0522 0.0017

Mars -57975-01-06 10:47 J -19453940.23 -19453940.05 -19453939.86 0.1670 0.0265

Neptune -57972-07-12 22:33 J -19452656.59 -19452656.56 -19452656.49 0.0089 0.0087

Neptune -57971-07-15 08:52 J -19452289.24 -19452289.13 -19452288.95 0.0089 0.0074

Neptune -57970-07-17 19:54 J -19451921.84 -19451921.67 -19451921.46 0.0089 0.0060

Saturn -57969-01-13 05:30 J -19451742.49 -19451742.27 -19451742.05 0.0264 0.0122

Neptune -57969-07-19 06:42 J -19451554.42 -19451554.22 -19451553.99 0.0089 0.0046

Saturn -57968-01-24 01:25 J -19451365.67 -19451365.44 -19451365.19 0.0263 0.0079

Neptune -57968-07-21 17:45 J -19451187.00 -19451186.76 -19451186.52 0.0089 0.0032

Neptune -57967-07-24 04:33 J -19450819.56 -19450819.31 -19450819.06 0.0089 0.0018

Neptune -57966-07-26 15:06 J -19450452.12 -19450451.87 -19450451.62 0.0089 0.0004

Neptune -57965-07-28 01:40 J -19450084.68 -19450084.43 -19450084.17 0.0089 0.0010

Jupiter -57965-08-30 10:18 J -19450051.23 -19450051.07 -19450050.90 0.0521 0.0367

Neptune -57964-07-30 11:59 J -19449717.23 -19449717.00 -19449716.74 0.0089 0.0024

Neptune -57963-08-01 22:33 J -19449349.77 -19449349.56 -19449349.31 0.0089 0.0038

Neptune -57962-08-04 08:52 J -19448982.33 -19448982.13 -19448981.91 0.0089 0.0051

Neptune -57961-08-05 19:11 J -19448614.86 -19448614.70 -19448614.51 0.0089 0.0065
 Neptune -57960-08-08 05:16 J -19448247.37 -19448247.28 -19448247.13 0.0089 0.0079
 Saturn -57954-07-19 04:47 J -19446076.52 -19446076.30 -19446076.08 0.0297 0.0120
 Saturn -57953-08-01 19:25 J -19445696.88 -19445696.69 -19445696.49 0.0300 0.0170
 Uranus -57941-02-17 11:30 J -19441480.22 -19441480.02 -19441479.80 0.0143 0.0082
 Saturn -57940-01-07 11:30 J -19441155.16 -19441155.02 -19441154.86 0.0265 0.0210
 Uranus -57940-02-21 12:13 J -19441110.24 -19441109.99 -19441109.74 0.0142 0.0036
 Saturn -57939-01-19 08:23 J -19440778.40 -19440778.15 -19440777.90 0.0263 0.0010
 Saturn -57938-01-31 02:52 J -19440401.54 -19440401.38 -19440401.20 0.0261 0.0188
 Saturn -57925-07-12 03:21 J -19435490.49 -19435490.36 -19435490.22 0.0297 0.0245
 Saturn -57924-07-26 17:16 J -19435111.02 -19435110.78 -19435110.54 0.0299 0.0043
 Jupiter -57923-02-19 05:45 J -19434903.44 -19434903.26 -19434903.07 0.0503 0.0317
 Jupiter -57911-02-23 22:33 J -19430515.80 -19430515.56 -19430515.33 0.0503 0.0041
 Saturn -57910-01-14 16:18 J -19430191.04 -19430190.82 -19430190.58 0.0264 0.0098
 Saturn -57909-01-26 11:59 J -19429814.22 -19429814.00 -19429813.76 0.0262 0.0103
 Jupiter -57906-08-20 22:33 J -19428511.65 -19428511.56 -19428511.46 0.0524 0.0476
 Jupiter -57899-02-28 14:52 J -19426128.02 -19426127.88 -19426127.73 0.0505 0.0398
 Uranus -57897-08-19 01:25 J -19425225.59 -19425225.44 -19425225.25 0.0136 0.0101
 Mars -57896-01-08 17:59 J -19425082.82 -19425082.75 -19425082.68 0.1665 0.1537
 Uranus -57896-08-23 10:18 J -19424856.32 -19424856.07 -19424855.82 0.0137 0.0002
 Saturn -57895-07-20 22:04 J -19424524.81 -19424524.58 -19424524.35 0.0298 0.0086
 Uranus -57895-08-27 18:57 J -19424486.87 -19424486.71 -19424486.53 0.0137 0.0100
 Saturn -57894-08-04 12:57 J -19424145.12 -19424144.96 -19424144.77 0.0300 0.0206
 Jupiter -57894-08-25 17:59 J -19424123.98 -19424123.75 -19424123.52 0.0523 0.0080
 Neptune -57889-01-10 01:40 J -19422525.54 -19422525.43 -19422525.30 0.0089 0.0078
 Neptune -57888-01-11 13:54 J -19422158.08 -19422157.92 -19422157.72 0.0089 0.0065
 Neptune -57887-01-14 02:37 J -19421790.58 -19421790.39 -19421790.16 0.0089 0.0051
 Neptune -57886-01-16 15:06 J -19421423.09 -19421422.87 -19421422.61 0.0089 0.0037
 Neptune -57885-01-19 04:18 J -19421055.57 -19421055.32 -19421055.06 0.0089 0.0022
 Pluto -57885-12-12 03:49 J -19420727.59 -19420727.34 -19420727.08 0.0064 0.0010

Neptune -57884-01-20 17:01 J -19420688.05 -19420687.79 -19420687.53 0.0088 0.0008
 Neptune -57883-01-23 05:30 J -19420320.53 -19420320.27 -19420320.00 0.0088 0.0007
 Neptune -57882-01-25 18:13 J -19419952.99 -19419952.74 -19419952.48 0.0088 0.0021
 Jupiter -57882-08-30 12:57 J -19419736.14 -19419735.96 -19419735.77 0.0521 0.0311
 Saturn -57881-01-09 22:47 J -19419603.71 -19419603.55 -19419603.36 0.0265 0.0185
 Neptune -57881-01-28 07:11 J -19419585.44 -19419585.20 -19419584.96 0.0088 0.0035
 Saturn -57880-01-20 19:11 J -19419226.95 -19419226.70 -19419226.45 0.0263 0.0016
 Neptune -57880-01-29 19:54 J -19419217.89 -19419217.67 -19419217.46 0.0088 0.0049
 Neptune -57879-02-01 08:09 J -19418850.32 -19418850.16 -19418849.96 0.0088 0.0063
 Saturn -57879-02-01 12:57 J -19418850.10 -19418849.96 -19418849.81 0.0261 0.0212 *
 Neptune -57878-02-03 20:52 J -19418482.72 -19418482.63 -19418482.47 0.0088 0.0078
 Saturn -57866-07-14 18:13 J -19413938.91 -19413938.74 -19413938.58 0.0297 0.0213
 Saturn -57865-07-28 08:23 J -19413559.38 -19413559.15 -19413558.91 0.0300 0.0076
 Uranus -57857-02-18 00:42 J -19410798.67 -19410798.47 -19410798.23 0.0143 0.0074
 Uranus -57856-02-22 01:11 J -19410428.69 -19410428.45 -19410428.19 0.0142 0.0044
 Saturn -57851-01-16 01:25 J -19408639.67 -19408639.44 -19408639.19 0.0263 0.0074
 Saturn -57850-01-27 20:52 J -19408262.85 -19408262.63 -19408262.41 0.0262 0.0126
 Jupiter -57840-02-18 07:25 J -19404588.35 -19404588.19 -19404588.03 0.0502 0.0370
 Saturn -57836-07-22 11:01 J -19402973.27 -19402973.04 -19402972.80 0.0298 0.0054
 Saturn -57835-08-06 02:37 J -19402593.53 -19402593.39 -19402593.24 0.0300 0.0238
 Jupiter -57828-02-22 20:37 J -19400200.88 -19400200.64 -19400200.41 0.0504 0.0027
 Saturn -57822-01-11 07:40 J -19398052.37 -19398052.18 -19398051.97 0.0264 0.0161
 Saturn -57821-01-23 03:21 J -19397675.60 -19397675.36 -19397675.11 0.0262 0.0040
 Saturn -57820-02-02 20:37 J -19397298.73 -19397298.64 -19397298.52 0.0261 0.0235
 Jupiter -57816-02-27 14:52 J -19395813.04 -19395812.88 -19395812.69 0.0505 0.0340
 Uranus -57813-08-19 14:52 J -19394544.06 -19394543.88 -19394543.69 0.0136 0.0092
 Uranus -57812-08-23 23:16 J -19394174.78 -19394174.53 -19394174.28 0.0137 0.0007
 Jupiter -57811-08-24 21:35 J -19393808.82 -19393808.60 -19393808.38 0.0523 0.0138
 Uranus -57811-08-28 08:09 J -19393805.30 -19393805.16 -19393805.00 0.0137 0.0108
 Neptune -57807-07-14 15:49 J -19392388.94 -19392388.84 -19392388.72 0.0089 0.0080

Saturn -57807-07-16 03:35 J -19392387.53 -19392387.35 -19392387.15 0.0297 0.0186
 Neptune -57806-07-17 02:09 J -19392021.55 -19392021.41 -19392021.22 0.0089 0.0067
 Saturn -57806-07-30 18:28 J -19392007.96 -19392007.73 -19392007.51 0.0300 0.0105
 Neptune -57805-07-18 12:57 J -19391654.14 -19391653.96 -19391653.73 0.0089 0.0053
 Neptune -57804-07-20 23:59 J -19391286.72 -19391286.50 -19391286.26 0.0089 0.0039
 Neptune -57803-07-23 10:33 J -19390919.29 -19390919.06 -19390918.80 0.0089 0.0025
 Neptune -57802-07-25 21:21 J -19390551.85 -19390551.61 -19390551.35 0.0089 0.0011
 Neptune -57801-07-27 08:09 J -19390184.41 -19390184.16 -19390183.90 0.0089 0.0004
 Neptune -57800-07-29 18:57 J -19389816.95 -19389816.71 -19389816.45 0.0089 0.0018
 Neptune -57799-08-01 05:30 J -19389449.50 -19389449.27 -19389449.03 0.0089 0.0032
 Jupiter -57799-08-29 14:09 J -19389421.11 -19389420.91 -19389420.71 0.0522 0.0246
 Neptune -57798-08-03 16:04 J -19389082.04 -19389081.83 -19389081.60 0.0089 0.0046
 Neptune -57797-08-05 02:09 J -19388714.57 -19388714.41 -19388714.20 0.0089 0.0061
 Pluto -57796-06-16 13:54 J -19388399.02 -19388398.92 -19388398.77 0.0081 0.0071
 Neptune -57796-08-07 12:57 J -19388347.09 -19388346.96 -19388346.81 0.0089 0.0074
 Neptune -57795-08-09 23:16 J -19387979.55 -19387979.53 -19387979.49 0.0089 0.0088
 Saturn -57793-01-06 10:18 J -19387465.13 -19387465.07 -19387464.98 0.0265 0.0253
 Saturn -57792-01-17 07:40 J -19387088.42 -19387088.18 -19387087.93 0.0263 0.0051
 Saturn -57791-01-29 02:23 J -19386711.60 -19386711.40 -19386711.19 0.0262 0.0148
 Saturn -57777-07-23 18:42 J -19381421.96 -19381421.72 -19381421.48 0.0298 0.0027
 Saturn -57776-08-07 10:47 J -19381042.15 -19381042.05 -19381041.93 0.0300 0.0266
 Uranus -57773-02-18 16:33 J -19380117.04 -19380116.81 -19380116.57 0.0143 0.0063
 Uranus -57772-02-22 17:01 J -19379747.02 -19379746.79 -19379746.55 0.0142 0.0055
 Mars -57770-01-04 23:59 J -19379065.66 -19379065.50 -19379065.33 0.1681 0.0889
 Saturn -57763-01-12 13:25 J -19376501.14 -19376500.94 -19376500.72 0.0264 0.0138
 Saturn -57762-01-24 08:37 J -19376124.38 -19376124.14 -19376123.90 0.0262 0.0062
 Saturn -57761-02-05 01:54 J -19375747.47 -19375747.42 -19375747.37 0.0261 0.0255
 Jupiter -57757-02-18 08:52 J -19374273.25 -19374273.13 -19374273.01 0.0502 0.0428
 Saturn -57748-07-17 08:37 J -19370836.34 -19370836.14 -19370835.93 0.0297 0.0161
 Saturn -57747-07-31 23:45 J -19370456.73 -19370456.51 -19370456.29 0.0300 0.0131

Jupiter -57745-02-23 03:35 J -19369885.58 -19369885.35 -19369885.11 0.0503 0.0065
 Mars -57745-07-09 22:47 J -19369747.71 -19369747.55 -19369747.40 0.1862 0.1128
 Saturn -57734-01-07 14:09 J -19365914.03 -19365913.91 -19365913.79 0.0265 0.0231
 Saturn -57733-01-19 11:01 J -19365537.28 -19365537.04 -19365536.79 0.0263 0.0030
 Jupiter -57733-02-27 22:18 J -19365497.76 -19365497.57 -19365497.38 0.0504 0.0304
 Saturn -57732-01-30 05:30 J -19365160.46 -19365160.27 -19365160.08 0.0261 0.0168
 Uranus -57729-08-20 04:47 J -19363862.48 -19363862.30 -19363862.09 0.0136 0.0085
 Jupiter -57728-08-24 00:13 J -19363493.70 -19363493.49 -19363493.27 0.0523 0.0197
 Uranus -57728-08-24 13:40 J -19363493.18 -19363492.93 -19363492.69 0.0137 0.0016
 Uranus -57727-08-28 22:04 J -19363123.69 -19363123.58 -19363123.43 0.0137 0.0117
 Neptune -57725-01-09 05:59 J -19362625.29 -19362625.25 -19362625.15 0.0089 0.0086
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 Saturn -57305-08-02 10:04 J -19209014.29 -19209014.08 -19209013.86 0.0298 0.0138
 Neptune -57305-08-02 17:01 J -19209014.00 -19209013.79 -19209013.56 0.0089 0.0043 *
 Neptune -57304-08-05 03:35 J -19208646.53 -19208646.35 -19208646.14 0.0089 0.0058
 Neptune -57303-08-07 13:54 J -19208279.04 -19208278.92 -19208278.75 0.0089 0.0073
 Neptune -57302-08-10 00:57 J -19207911.49 -19207911.46 -19207911.40 0.0089 0.0087
 Jupiter -57301-08-26 20:09 J -19207528.89 -19207528.66 -19207528.43 0.0524 0.0019

Pluto -57300-06-20 07:25 J -19207231.43 -19207231.19 -19207230.93 0.0081 0.0022
 Saturn -57292-01-10 01:25 J -19204470.58 -19204470.44 -19204470.28 0.0267 0.0213
 Saturn -57291-01-22 02:09 J -19204093.66 -19204093.41 -19204093.16 0.0265 0.0003
 Saturn -57290-02-02 23:16 J -19203716.69 -19203716.53 -19203716.37 0.0263 0.0200
 Jupiter -57289-08-31 14:37 J -19203141.02 -19203140.89 -19203140.74 0.0523 0.0419
 Saturn -57277-07-13 01:11 J -19198807.52 -19198807.45 -19198807.38 0.0294 0.0281
 Saturn -57276-07-27 10:04 J -19198428.33 -19198428.08 -19198427.84 0.0297 0.0004
 Saturn -57275-08-10 22:33 J -19198048.58 -19198048.56 -19198048.51 0.0299 0.0297
 Uranus -57270-02-16 21:21 J -19196397.69 -19196397.61 -19196397.51 0.0143 0.0134
 Uranus -57269-02-21 23:16 J -19196027.79 -19196027.53 -19196027.27 0.0143 0.0013
 Uranus -57268-02-25 23:59 J -19195657.65 -19195657.50 -19195657.32 0.0142 0.0108
 Saturn -57262-01-17 00:42 J -19193506.70 -19193506.47 -19193506.24 0.0266 0.0101
 Saturn -57261-01-28 23:16 J -19193129.75 -19193129.53 -19193129.30 0.0263 0.0106
 Jupiter -57247-02-20 02:09 J -19187993.60 -19187993.41 -19187993.21 0.0501 0.0288
 Saturn -57247-07-21 10:18 J -19187842.28 -19187842.07 -19187841.84 0.0296 0.0125
 Saturn -57246-08-04 21:49 J -19187462.78 -19187462.59 -19187462.38 0.0299 0.0167
 Jupiter -57235-02-24 15:49 J -19183606.07 -19183605.84 -19183605.60 0.0502 0.0069
 Saturn -57233-01-12 05:30 J -19182919.43 -19182919.27 -19182919.09 0.0267 0.0195
 Saturn -57232-01-23 06:28 J -19182542.48 -19182542.23 -19182541.99 0.0265 0.0016
 Neptune -57231-01-10 19:11 J -19182189.78 -19182189.70 -19182189.56 0.0089 0.0080
 Saturn -57231-02-04 03:21 J -19182165.48 -19182165.36 -19182165.21 0.0263 0.0220
 Neptune -57230-01-13 07:54 J -19181822.34 -19181822.17 -19181821.98 0.0089 0.0065
 Jupiter -57230-08-22 03:06 J -19181601.48 -19181601.37 -19181601.24 0.0526 0.0443
 Neptune -57229-01-15 20:09 J -19181454.87 -19181454.66 -19181454.44 0.0088 0.0050
 Neptune -57228-01-17 08:37 J -19181087.37 -19181087.14 -19181086.90 0.0088 0.0035
 Neptune -57227-01-19 21:06 J -19180719.87 -19180719.62 -19180719.36 0.0088 0.0020
 Neptune -57226-01-22 09:35 J -19180352.36 -19180352.10 -19180351.84 0.0088 0.0005
 Uranus -57226-08-20 08:37 J -19180142.17 -19180142.14 -19180142.06 0.0135 0.0133
 Neptune -57225-01-24 22:04 J -19179984.83 -19179984.58 -19179984.31 0.0088 0.0011
 Uranus -57225-08-23 15:49 J -19179773.07 -19179772.84 -19179772.58 0.0136 0.0034

Neptune -57224-01-26 10:47 J -19179617.29 -19179617.05 -19179616.79 0.0088 0.0026
 Uranus -57224-08-27 23:30 J -19179403.72 -19179403.52 -19179403.28 0.0136 0.0068
 Neptune -57223-01-28 23:30 J -19179249.75 -19179249.52 -19179249.29 0.0088 0.0041
 Jupiter -57223-03-01 07:54 J -19179218.28 -19179218.17 -19179218.04 0.0503 0.0430
 Neptune -57222-01-31 12:13 J -19178882.19 -19178881.99 -19178881.78 0.0088 0.0056
 Neptune -57221-02-03 00:13 J -19178514.61 -19178514.49 -19178514.30 0.0088 0.0072
 Neptune -57220-02-04 13:25 J -19178146.99 -19178146.94 -19178146.87 0.0088 0.0086
 Saturn -57218-07-15 15:35 J -19177255.97 -19177255.85 -19177255.72 0.0294 0.0251
 Jupiter -57218-08-26 23:16 J -19177213.76 -19177213.53 -19177213.30 0.0524 0.0036
 Saturn -57217-07-29 00:28 J -19176876.72 -19176876.48 -19176876.24 0.0297 0.0035
 Jupiter -57206-08-31 17:59 J -19172825.91 -19172825.75 -19172825.58 0.0523 0.0362
 Saturn -57203-01-18 06:42 J -19171955.45 -19171955.22 -19171954.98 0.0266 0.0081
 Mars -57202-01-06 13:25 J -19171602.11 -19171601.94 -19171601.77 0.1697 0.0702
 Saturn -57202-01-30 05:30 J -19171578.49 -19171578.27 -19171578.05 0.0263 0.0127
 Saturn -57188-07-23 02:09 J -19166290.64 -19166290.41 -19166290.18 0.0296 0.0092
 Saturn -57187-08-06 13:40 J -19165911.10 -19165910.93 -19165910.74 0.0299 0.0201
 Uranus -57186-02-17 14:23 J -19165716.03 -19165715.90 -19165715.76 0.0143 0.0122
 Uranus -57185-02-22 16:18 J -19165346.08 -19165345.82 -19165345.56 0.0143 0.0001
 Uranus -57184-02-26 17:01 J -19164975.92 -19164975.79 -19164975.64 0.0142 0.0120
 Saturn -57174-01-13 13:11 J -19161368.13 -19161367.95 -19161367.75 0.0267 0.0173
 Saturn -57173-01-25 13:40 J -19160991.18 -19160990.93 -19160990.68 0.0265 0.0038
 Saturn -57172-02-05 11:01 J -19160614.13 -19160614.04 -19160613.94 0.0263 0.0241
 Jupiter -57164-02-19 02:23 J -19157678.57 -19157678.40 -19157678.23 0.0500 0.0347
 Saturn -57159-07-17 09:49 J -19155704.25 -19155704.09 -19155703.93 0.0294 0.0218
 Saturn -57158-07-31 19:11 J -19155324.93 -19155324.70 -19155324.46 0.0297 0.0070
 Jupiter -57152-02-23 16:47 J -19153291.04 -19153290.80 -19153290.57 0.0502 0.0013
 Neptune -57149-07-15 05:59 J -19152053.30 -19152053.25 -19152053.13 0.0089 0.0084
 Neptune -57148-07-17 17:16 J -19151685.92 -19151685.78 -19151685.60 0.0089 0.0069
 Neptune -57147-07-20 04:18 J -19151318.50 -19151318.32 -19151318.09 0.0089 0.0054
 Jupiter -57147-08-21 04:33 J -19151286.36 -19151286.31 -19151286.24 0.0526 0.0507

Neptune -57146-07-22 15:35 J -19150951.07 -19150950.85 -19150950.61 0.0089 0.0039
 Saturn -57145-01-08 14:23 J -19150780.91 -19150780.90 -19150780.89 0.0268 0.0267
 Neptune -57145-07-24 02:23 J -19150583.64 -19150583.40 -19150583.14 0.0089 0.0024
 Saturn -57144-01-19 16:04 J -19150404.07 -19150403.83 -19150403.58 0.0265 0.0057
 Neptune -57144-07-26 13:11 J -19150216.20 -19150215.95 -19150215.69 0.0089 0.0009
 Saturn -57143-01-31 14:23 J -19150027.10 -19150026.90 -19150026.69 0.0263 0.0150
 Neptune -57143-07-28 23:59 J -19149848.75 -19149848.50 -19149848.24 0.0089 0.0007
 Neptune -57142-07-31 10:18 J -19149481.30 -19149481.07 -19149480.81 0.0089 0.0022
 Uranus -57142-08-20 23:30 J -19149460.62 -19149460.52 -19149460.41 0.0135 0.0123
 Pluto -57142-12-16 18:28 J -19149342.90 -19149342.73 -19149342.53 0.0063 0.0045
 Neptune -57141-08-01 21:06 J -19149113.84 -19149113.62 -19149113.38 0.0089 0.0037
 Uranus -57141-08-24 06:28 J -19149091.47 -19149091.23 -19149090.98 0.0136 0.0024
 Pluto -57141-12-17 05:45 J -19148976.46 -19148976.26 -19148976.01 0.0064 0.0033
 Jupiter -57140-02-28 09:49 J -19148903.24 -19148903.09 -19148902.93 0.0503 0.0377
 Neptune -57140-08-04 07:25 J -19148746.38 -19148746.19 -19148745.97 0.0089 0.0052
 Uranus -57140-08-28 14:09 J -19148722.11 -19148721.91 -19148721.69 0.0136 0.0077
 Neptune -57139-08-06 17:59 J -19148378.90 -19148378.75 -19148378.56 0.0089 0.0067
 Neptune -57138-08-09 04:18 J -19148011.39 -19148011.32 -19148011.19 0.0089 0.0082
 Jupiter -57135-08-25 21:49 J -19146898.82 -19146898.59 -19146898.37 0.0525 0.0112
 Saturn -57129-07-24 21:06 J -19144738.86 -19144738.62 -19144738.38 0.0296 0.0057
 Saturn -57128-08-08 08:52 J -19144359.27 -19144359.13 -19144358.97 0.0299 0.0236
 Mars -57123-01-08 22:33 J -19142744.73 -19142744.56 -19142744.38 0.1691 0.0676
 Jupiter -57123-08-30 15:06 J -19142511.06 -19142510.87 -19142510.68 0.0523 0.0284
 Saturn -57115-01-14 23:16 J -19139816.73 -19139816.53 -19139816.31 0.0267 0.0149
 Saturn -57114-01-26 23:16 J -19139439.77 -19139439.53 -19139439.29 0.0264 0.0062
 Uranus -57102-02-18 04:47 J -19135034.44 -19135034.30 -19135034.12 0.0143 0.0112
 Uranus -57101-02-23 06:57 J -19134664.46 -19134664.21 -19134663.95 0.0143 0.0011
 Uranus -57100-02-27 07:40 J -19134294.27 -19134294.18 -19134294.07 0.0142 0.0131
 Saturn -57100-07-19 05:30 J -19134152.45 -19134152.27 -19134152.07 0.0295 0.0183
 Saturn -57099-08-02 15:49 J -19133773.07 -19133772.84 -19133772.61 0.0297 0.0107

Mars -57098-07-13 15:35 J -19133428.04 -19133427.85 -19133427.66 0.1848 0.0020
 Saturn -57086-01-10 02:37 J -19129229.49 -19129229.39 -19129229.28 0.0268 0.0241
 Saturn -57085-01-22 03:49 J -19128852.59 -19128852.34 -19128852.09 0.0265 0.0031
 Saturn -57084-02-02 01:40 J -19128475.61 -19128475.43 -19128475.24 0.0263 0.0174
 Jupiter -57081-02-19 01:40 J -19127363.55 -19127363.43 -19127363.28 0.0500 0.0410
 Saturn -57070-07-27 17:16 J -19123187.02 -19123186.78 -19123186.53 0.0297 0.0021
 Jupiter -57069-02-23 17:59 J -19122975.98 -19122975.75 -19122975.51 0.0502 0.0049
 Saturn -57069-08-10 05:30 J -19122807.36 -19122807.27 -19122807.16 0.0299 0.0273
 Neptune -57067-01-09 23:30 J -19122289.53 -19122289.52 -19122289.46 0.0089 0.0088
 Neptune -57066-01-12 11:30 J -19121922.14 -19121922.02 -19121921.84 0.0089 0.0073
 Neptune -57065-01-14 23:59 J -19121554.67 -19121554.50 -19121554.28 0.0089 0.0058
 Neptune -57064-01-16 12:13 J -19121187.20 -19121186.99 -19121186.74 0.0088 0.0043
 Neptune -57063-01-19 00:57 J -19120819.70 -19120819.46 -19120819.21 0.0088 0.0027
 Neptune -57062-01-21 13:11 J -19120452.20 -19120451.95 -19120451.68 0.0088 0.0012
 Neptune -57061-01-24 01:54 J -19120084.68 -19120084.42 -19120084.16 0.0088 0.0004
 Neptune -57060-01-25 14:09 J -19119717.15 -19119716.91 -19119716.65 0.0088 0.0019
 Neptune -57059-01-28 02:52 J -19119349.61 -19119349.38 -19119349.13 0.0088 0.0034
 Neptune -57058-01-30 15:35 J -19118982.06 -19118981.85 -19118981.63 0.0088 0.0050
 Uranus -57058-08-21 13:11 J -19118779.07 -19118778.95 -19118778.80 0.0135 0.0115
 Neptune -57057-02-02 03:49 J -19118614.49 -19118614.34 -19118614.14 0.0088 0.0065
 Jupiter -57057-02-28 09:06 J -19118588.30 -19118588.12 -19118587.93 0.0502 0.0316
 Uranus -57057-08-24 20:09 J -19118409.90 -19118409.66 -19118409.40 0.0136 0.0016
 Saturn -57056-01-16 11:16 J -19118265.25 -19118265.03 -19118264.81 0.0266 0.0122
 Neptune -57056-02-03 16:33 J -19118246.89 -19118246.81 -19118246.67 0.0088 0.0081
 Uranus -57056-08-29 03:35 J -19118040.52 -19118040.35 -19118040.13 0.0136 0.0086
 Saturn -57055-01-28 10:33 J -19117888.29 -19117888.06 -19117887.82 0.0264 0.0087
 Pluto -57052-06-21 20:37 J -19116647.88 -19116647.64 -19116647.38 0.0081 0.0021
 Jupiter -57052-08-24 17:16 J -19116583.99 -19116583.78 -19116583.56 0.0526 0.0196
 Saturn -57041-07-21 01:54 J -19112600.62 -19112600.42 -19112600.20 0.0295 0.0146
 Saturn -57040-08-04 12:42 J -19112221.18 -19112220.97 -19112220.75 0.0298 0.0145

Jupiter	-57040-08-29 12:57 J	-19112196.16	-19112195.96	-19112195.75	0.0524	0.0213
Saturn	-57027-01-11 15:49 J	-19107677.97	-19107677.84	-19107677.68	0.0267	0.0215
Saturn	-57026-01-23 16:18 J	-19107301.07	-19107300.82	-19107300.57	0.0265	0.0005
Saturn	-57025-02-04 13:40 J	-19106924.09	-19106923.93	-19106923.77	0.0263	0.0200
Uranus	-57018-02-18 18:28 J	-19104352.89	-19104352.73	-19104352.53	0.0144	0.0103
Uranus	-57017-02-23 20:37 J	-19103982.89	-19103982.64	-19103982.38	0.0143	0.0020
Uranus	-57016-02-27 21:06 J	-19103612.64	-19103612.62	-19103612.55	0.0142	0.0141
Saturn	-57012-07-15 02:37 J	-19102014.48	-19102014.39	-19102014.29	0.0294	0.0270
Saturn	-57011-07-29 11:59 J	-19101635.24	-19101635.00	-19101634.76	0.0297	0.0016

57TH MILLENNIUM BCE

This is a list of transits of Earth in the 57th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-56998-02-18 03:21 J	-19097048.44	-19097048.36	-19097048.27	0.0500	0.0465		
Saturn	-56997-01-18 23:30 J	-19096713.75	-19096713.52	-19096713.28	0.0266	0.0096		
Saturn	-56996-01-29 22:18 J	-19096336.79	-19096336.57	-19096336.34	0.0264	0.0113		
Jupiter	-56986-02-22 17:45 J	-19092661.00	-19092660.76	-19092660.53	0.0501	0.0110		
Neptune	-56984-07-16 20:52 J	-19091785.74	-19091785.63	-19091785.49	0.0089	0.0077		
Neptune	-56983-07-19 07:54 J	-19091418.33	-19091418.17	-19091417.97	0.0089	0.0062		
Neptune	-56982-07-21 18:57 J	-19091050.91	-19091050.71	-19091050.47	0.0089	0.0047		
Saturn	-56982-07-23 19:54 J	-19091048.89	-19091048.67	-19091048.44	0.0295	0.0111		
Neptune	-56981-07-23 06:13 J	-19090683.47	-19090683.24	-19090682.99	0.0089	0.0031		
Saturn	-56981-08-06 07:25 J	-19090669.38	-19090669.19	-19090668.99	0.0298	0.0182		

Neptune -56980-07-25 17:16 J -19090316.02 -19090315.78 -19090315.52 0.0089 0.0016
 Neptune -56979-07-28 04:18 J -19089948.58 -19089948.32 -19089948.07 0.0089 0.0001
 Neptune -56978-07-30 15:06 J -19089581.12 -19089580.87 -19089580.62 0.0089 0.0015
 Neptune -56977-08-01 01:11 J -19089213.67 -19089213.45 -19089213.19 0.0089 0.0031
 Neptune -56976-08-03 11:59 J -19088846.20 -19088846.00 -19088845.76 0.0089 0.0046
 Neptune -56975-08-05 22:33 J -19088478.72 -19088478.56 -19088478.35 0.0089 0.0061
 Jupiter -56974-02-27 06:13 J -19088273.45 -19088273.24 -19088273.03 0.0502 0.0244
 Neptune -56974-08-08 08:52 J -19088111.24 -19088111.13 -19088110.97 0.0089 0.0076
 Uranus -56974-08-22 02:37 J -19088097.53 -19088097.39 -19088097.22 0.0135 0.0106
 Uranus -56973-08-25 09:49 J -19087728.34 -19087728.09 -19087727.84 0.0136 0.0007
 Uranus -56972-08-29 17:16 J -19087358.95 -19087358.78 -19087358.59 0.0136 0.0093
 Jupiter -56969-08-23 19:25 J -19086268.88 -19086268.69 -19086268.48 0.0526 0.0259
 Saturn -56968-01-13 05:01 J -19086126.46 -19086126.29 -19086126.10 0.0267 0.0186
 Saturn -56967-01-25 04:33 J -19085749.56 -19085749.31 -19085749.06 0.0264 0.0023
 Saturn -56966-02-06 01:11 J -19085372.57 -19085372.45 -19085372.32 0.0263 0.0226
 Jupiter -56957-08-28 13:11 J -19081881.17 -19081880.95 -19081880.73 0.0524 0.0142
 Saturn -56953-07-16 18:42 J -19080462.86 -19080462.72 -19080462.58 0.0295 0.0237
 Saturn -56952-07-31 04:33 J -19080083.54 -19080083.31 -19080083.07 0.0298 0.0052
 Saturn -56938-01-20 10:18 J -19075162.30 -19075162.07 -19075161.82 0.0265 0.0070
 Saturn -56937-02-01 08:37 J -19074785.35 -19074785.14 -19074784.92 0.0263 0.0138
 Uranus -56934-02-19 03:49 J -19073671.53 -19073671.34 -19073671.16 0.0144 0.0098
 Uranus -56933-02-24 05:45 J -19073301.52 -19073301.26 -19073301.01 0.0143 0.0024
 Saturn -56923-07-25 10:18 J -19069497.31 -19069497.07 -19069496.84 0.0296 0.0077
 Saturn -56922-08-08 22:04 J -19069117.74 -19069117.58 -19069117.41 0.0298 0.0216
 Mars -56918-01-07 06:57 J -19067870.39 -19067870.21 -19067870.03 0.1704 0.0639
 Saturn -56909-01-15 16:18 J -19064575.02 -19064574.82 -19064574.62 0.0266 0.0159
 Saturn -56908-01-26 15:06 J -19064198.11 -19064197.87 -19064197.63 0.0264 0.0050
 Saturn -56907-02-07 11:01 J -19063821.10 -19063821.04 -19063820.96 0.0262 0.0251
 Jupiter -56903-02-21 16:47 J -19062346.02 -19062345.80 -19062345.57 0.0501 0.0176
 Neptune -56902-01-11 16:18 J -19062021.89 -19062021.82 -19062021.68 0.0089 0.0081

Neptune -56901-01-14 05:16 J -19061654.45 -19061654.28 -19061654.10 0.0089 0.0065
 Neptune -56900-01-15 17:16 J -19061286.98 -19061286.78 -19061286.55 0.0089 0.0050
 Neptune -56899-01-18 05:30 J -19060919.49 -19060919.27 -19060919.01 0.0088 0.0034
 Neptune -56898-01-20 17:59 J -19060551.99 -19060551.75 -19060551.48 0.0088 0.0019
 Neptune -56897-01-23 06:28 J -19060184.49 -19060184.23 -19060183.97 0.0088 0.0003
 Neptune -56896-01-24 18:57 J -19059816.97 -19059816.71 -19059816.45 0.0088 0.0013
 Neptune -56895-01-27 06:57 J -19059449.44 -19059449.21 -19059448.95 0.0088 0.0029
 Neptune -56894-01-29 19:40 J -19059081.90 -19059081.68 -19059081.44 0.0088 0.0044
 Saturn -56894-07-19 05:45 J -19058911.43 -19058911.26 -19058911.09 0.0295 0.0207
 Pluto -56894-12-18 04:33 J -19058759.44 -19058759.31 -19058759.18 0.0063 0.0055
 Neptune -56893-02-01 08:09 J -19058714.33 -19058714.16 -19058713.95 0.0088 0.0059
 Saturn -56893-08-01 16:18 J -19058532.05 -19058531.82 -19058531.59 0.0298 0.0083
 Pluto -56893-12-18 15:35 J -19058393.07 -19058392.85 -19058392.58 0.0064 0.0022
 Neptune -56892-02-02 20:52 J -19058346.76 -19058346.63 -19058346.48 0.0088 0.0075
 Jupiter -56891-02-26 10:18 J -19057958.29 -19057958.07 -19057957.85 0.0502 0.0193
 Uranus -56890-08-22 16:33 J -19057415.97 -19057415.81 -19057415.62 0.0135 0.0098
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 Uranus -56888-08-30 06:57 J -19056677.36 -19056677.21 -19056677.03 0.0136 0.0102
 Jupiter -56886-08-23 19:11 J -19055953.88 -19055953.70 -19055953.52 0.0526 0.0332
 Saturn -56880-01-09 17:59 J -19053987.81 -19053987.75 -19053987.67 0.0267 0.0254
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 Saturn -56878-02-02 16:18 J -19053234.00 -19053233.82 -19053233.61 0.0263 0.0163
 Jupiter -56874-08-28 11:59 J -19051566.23 -19051566.00 -19051565.77 0.0525 0.0068
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 Saturn -56863-08-10 08:37 J -19047566.27 -19047566.14 -19047566.00 0.0299 0.0247
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 Jupiter -56447-08-31 06:42 J -18895601.41 -18895601.22 -18895601.03 0.0525 0.0287
 Saturn -56438-01-13 08:23 J -18892544.26 -18892544.15 -18892544.01 0.0269 0.0234
 Saturn -56437-01-25 12:42 J -18892167.22 -18892166.97 -18892166.72 0.0266 0.0016

Saturn -56436-02-05 12:13 J -18891790.14 -18891789.99 -18891789.81 0.0264 0.0196
 Uranus -56430-02-22 03:49 J -18889582.57 -18889582.34 -18889582.09 0.0144 0.0055
 Uranus -56429-02-27 06:13 J -18889212.47 -18889212.24 -18889212.01 0.0143 0.0068
 Saturn -56422-07-29 04:47 J -18886503.54 -18886503.30 -18886503.06 0.0295 0.0046
 Saturn -56421-08-11 13:25 J -18886124.06 -18886123.94 -18886123.80 0.0297 0.0250
 Neptune -56409-01-11 21:49 J -18881953.59 -18881953.59 -18881953.57 0.0089 0.0089
 Neptune -56408-01-13 09:49 J -18881586.22 -18881586.09 -18881585.92 0.0089 0.0073
 Saturn -56408-01-19 06:57 J -18881580.43 -18881580.21 -18881579.98 0.0268 0.0119
 Neptune -56407-01-15 22:18 J -18881218.75 -18881218.57 -18881218.35 0.0089 0.0057
 Saturn -56407-01-31 09:06 J -18881203.35 -18881203.12 -18881202.89 0.0265 0.0096
 Neptune -56406-01-18 10:47 J -18880851.27 -18880851.05 -18880850.80 0.0089 0.0041
 Neptune -56405-01-20 23:30 J -18880483.77 -18880483.52 -18880483.27 0.0089 0.0024
 Jupiter -56405-02-19 18:42 J -18880453.86 -18880453.72 -18880453.58 0.0499 0.0399
 Neptune -56404-01-22 11:59 J -18880116.25 -18880116.00 -18880115.73 0.0089 0.0008
 Neptune -56403-01-25 00:28 J -18879748.74 -18879748.48 -18879748.22 0.0088 0.0009
 Neptune -56402-01-27 12:42 J -18879381.20 -18879380.97 -18879380.70 0.0088 0.0026
 Neptune -56401-01-30 01:11 J -18879013.67 -18879013.45 -18879013.21 0.0088 0.0042
 Neptune -56400-01-31 13:54 J -18878646.11 -18878645.92 -18878645.72 0.0088 0.0058
 Neptune -56399-02-03 02:23 J -18878278.53 -18878278.40 -18878278.25 0.0088 0.0074
 Pluto -56397-12-20 23:45 J -18877226.72 -18877226.51 -18877226.27 0.0063 0.0031
 Pluto -56396-12-22 11:01 J -18876860.19 -18876860.04 -18876859.84 0.0064 0.0046
 Jupiter -56393-02-24 10:18 J -18876066.31 -18876066.07 -18876065.83 0.0500 0.0033
 Saturn -56393-07-22 04:47 J -18875917.49 -18875917.30 -18875917.10 0.0293 0.0174
 Saturn -56392-08-05 11:59 J -18875538.22 -18875538.00 -18875537.77 0.0297 0.0117
 Uranus -56386-08-26 03:06 J -18873326.60 -18873326.37 -18873326.13 0.0135 0.0049
 Uranus -56385-08-29 09:49 J -18872957.31 -18872957.09 -18872956.85 0.0135 0.0051
 Jupiter -56381-02-28 23:01 J -18871678.71 -18871678.54 -18871678.35 0.0501 0.0329
 Saturn -56379-01-14 08:52 J -18870993.27 -18870993.13 -18870992.98 0.0269 0.0217
 Saturn -56378-01-26 13:11 J -18870616.20 -18870615.95 -18870615.70 0.0266 0.0004
 Saturn -56377-02-07 12:57 J -18870239.09 -18870238.96 -18870238.80 0.0264 0.0214

Jupiter -56376-08-25 16:33 J -18869674.03 -18869673.81 -18869673.59 0.0527 0.0177
 Jupiter -56364-08-30 13:54 J -18865286.12 -18865285.92 -18865285.72 0.0526 0.0245
 Saturn -56363-07-30 12:57 J -18864952.20 -18864951.96 -18864951.71 0.0295 0.0020
 Saturn -56362-08-13 22:04 J -18864572.67 -18864572.58 -18864572.49 0.0297 0.0276
 Mars -56350-01-08 15:49 J -18860407.02 -18860406.84 -18860406.65 0.1721 0.0575
 Saturn -56349-01-21 09:06 J -18860029.35 -18860029.12 -18860028.89 0.0268 0.0101
 Saturn -56348-02-01 11:16 J -18859652.25 -18859652.03 -18859651.80 0.0265 0.0115
 Uranus -56346-02-22 12:28 J -18858901.21 -18858900.98 -18858900.73 0.0144 0.0053
 Uranus -56345-02-27 14:52 J -18858531.10 -18858530.88 -18858530.65 0.0143 0.0072
 Saturn -56334-07-24 14:09 J -18854366.12 -18854365.91 -18854365.70 0.0293 0.0147
 Saturn -56333-08-06 21:06 J -18853986.82 -18853986.62 -18853986.40 0.0297 0.0145
 Neptune -56326-07-18 18:13 J -18851449.84 -18851449.74 -18851449.60 0.0089 0.0078
 Neptune -56325-07-20 05:01 J -18851082.45 -18851082.29 -18851082.09 0.0089 0.0062
 Neptune -56324-07-22 16:04 J -18850715.03 -18850714.83 -18850714.60 0.0089 0.0046
 Neptune -56323-07-25 02:52 J -18850347.60 -18850347.38 -18850347.12 0.0089 0.0030
 Jupiter -56322-02-18 23:01 J -18850138.64 -18850138.54 -18850138.43 0.0498 0.0446
 Neptune -56322-07-27 14:09 J -18849980.16 -18849979.91 -18849979.66 0.0089 0.0013
 Neptune -56321-07-29 00:57 J -18849612.71 -18849612.46 -18849612.20 0.0089 0.0003
 Saturn -56320-01-15 12:13 J -18849442.15 -18849441.99 -18849441.82 0.0269 0.0198
 Neptune -56320-07-31 11:16 J -18849245.26 -18849245.03 -18849244.77 0.0089 0.0020
 Saturn -56319-01-27 16:33 J -18849065.06 -18849064.81 -18849064.56 0.0266 0.0022
 Neptune -56319-08-02 22:18 J -18848877.79 -18848877.57 -18848877.33 0.0089 0.0036
 Saturn -56318-02-08 16:47 J -18848687.91 -18848687.80 -18848687.68 0.0264 0.0233
 Neptune -56318-08-05 09:06 J -18848510.31 -18848510.12 -18848509.90 0.0089 0.0052
 Neptune -56317-08-06 19:54 J -18848142.82 -18848142.67 -18848142.50 0.0089 0.0068
 Neptune -56316-08-09 06:28 J -18847775.29 -18847775.23 -18847775.13 0.0089 0.0084
 Jupiter -56310-02-23 12:57 J -18845751.19 -18845750.96 -18845750.72 0.0499 0.0087
 Pluto -56307-06-27 00:28 J -18844531.74 -18844531.48 -18844531.22 0.0081 0.0003
 Saturn -56305-07-17 21:06 J -18843779.69 -18843779.62 -18843779.53 0.0291 0.0273
 Saturn -56304-08-01 01:25 J -18843400.68 -18843400.44 -18843400.20 0.0295 0.0012

Uranus -56302-08-26 15:21 J -18842645.09 -18842644.86 -18842644.61 0.0135 0.0043
 Uranus -56301-08-29 22:04 J -18842275.80 -18842275.58 -18842275.35 0.0135 0.0058
 Jupiter -56298-02-28 03:35 J -18841363.54 -18841363.35 -18841363.15 0.0501 0.0281
 Jupiter -56293-08-24 20:52 J -18839358.84 -18839358.63 -18839358.42 0.0527 0.0233
 Saturn -56290-01-22 14:37 J -18838478.12 -18838477.89 -18838477.65 0.0267 0.0080
 Saturn -56289-02-03 16:33 J -18838101.02 -18838100.81 -18838100.59 0.0265 0.0136
 Jupiter -56281-08-29 14:52 J -18834971.10 -18834970.88 -18834970.67 0.0526 0.0176
 Saturn -56275-07-26 04:18 J -18832814.54 -18832814.32 -18832814.09 0.0294 0.0116
 Saturn -56274-08-09 11:45 J -18832435.20 -18832435.01 -18832434.82 0.0297 0.0177
 Mars -56271-01-11 03:35 J -18831549.51 -18831549.35 -18831549.19 0.1715 0.0937
 Uranus -56262-02-22 19:40 J -18828219.91 -18828219.68 -18828219.42 0.0144 0.0051
 Saturn -56261-01-17 18:57 J -18827890.90 -18827890.71 -18827890.53 0.0269 0.0176
 Uranus -56261-02-27 22:04 J -18827849.79 -18827849.58 -18827849.35 0.0143 0.0074
 Saturn -56260-01-28 23:01 J -18827513.78 -18827513.54 -18827513.29 0.0266 0.0043
 Saturn -56259-02-09 23:16 J -18827136.58 -18827136.53 -18827136.45 0.0264 0.0255
 Mars -56246-07-13 16:47 J -18822234.94 -18822234.80 -18822234.66 0.1816 0.1223
 Saturn -56246-07-20 13:40 J -18822228.06 -18822227.93 -18822227.79 0.0291 0.0241
 Saturn -56245-08-02 18:13 J -18821848.98 -18821848.74 -18821848.50 0.0295 0.0045
 Neptune -56244-01-12 16:47 J -18821685.88 -18821685.80 -18821685.66 0.0089 0.0081
 Neptune -56243-01-15 05:45 J -18821318.44 -18821318.26 -18821318.08 0.0089 0.0064
 Neptune -56242-01-17 17:45 J -18820950.97 -18820950.76 -18820950.53 0.0089 0.0048
 Neptune -56241-01-20 05:59 J -18820583.47 -18820583.25 -18820582.99 0.0089 0.0032
 Neptune -56240-01-21 18:42 J -18820215.97 -18820215.72 -18820215.46 0.0089 0.0015
 Neptune -56239-01-24 07:25 J -18819848.45 -18819848.19 -18819847.93 0.0089 0.0002
 Neptune -56238-01-26 19:40 J -18819480.93 -18819480.68 -18819480.42 0.0089 0.0019
 Neptune -56237-01-29 08:09 J -18819113.38 -18819113.16 -18819112.91 0.0088 0.0036
 Neptune -56236-01-30 21:06 J -18818745.83 -18818745.62 -18818745.41 0.0088 0.0052
 Neptune -56235-02-02 08:52 J -18818378.26 -18818378.13 -18818377.94 0.0088 0.0069
 Neptune -56234-02-04 21:49 J -18818010.65 -18818010.59 -18818010.50 0.0088 0.0085
 Saturn -56231-01-23 23:16 J -18816926.77 -18816926.53 -18816926.29 0.0267 0.0056

Saturn -56230-02-05 00:42 J -18816549.66 -18816549.47 -18816549.26 0.0265 0.0160
 Jupiter -56227-02-22 15:35 J -18815436.08 -18815435.85 -18815435.62 0.0499 0.0141
 Uranus -56218-08-27 03:21 J -18811963.60 -18811963.36 -18811963.12 0.0135 0.0036
 Uranus -56217-08-30 09:49 J -18811594.30 -18811594.09 -18811593.86 0.0136 0.0065
 Saturn -56216-07-27 21:06 J -18811262.85 -18811262.62 -18811262.38 0.0294 0.0082
 Jupiter -56215-02-27 06:57 J -18811048.42 -18811048.21 -18811048.00 0.0501 0.0228
 Saturn -56215-08-11 04:47 J -18810883.46 -18810883.30 -18810883.12 0.0297 0.0212
 Jupiter -56210-08-24 17:45 J -18809043.93 -18809043.76 -18809043.57 0.0528 0.0319
 Saturn -56202-01-19 04:18 J -18806339.52 -18806339.32 -18806339.11 0.0269 0.0152
 Saturn -56201-01-31 08:09 J -18805962.40 -18805962.16 -18805961.92 0.0266 0.0067
 Jupiter -56198-08-29 11:59 J -18804656.23 -18804656.00 -18804655.77 0.0527 0.0097
 Saturn -56187-07-22 08:23 J -18800676.31 -18800676.15 -18800675.97 0.0292 0.0206
 Saturn -56186-08-05 13:54 J -18800297.15 -18800296.92 -18800296.69 0.0295 0.0083
 Jupiter -56186-09-03 08:23 J -18800268.19 -18800268.15 -18800268.11 0.0525 0.0516
 Uranus -56178-02-23 05:59 J -18797538.49 -18797538.25 -18797538.00 0.0144 0.0046
 Uranus -56177-02-28 07:54 J -18797168.37 -18797168.17 -18797167.94 0.0143 0.0079
 Saturn -56173-01-14 05:01 J -18795752.37 -18795752.29 -18795752.19 0.0270 0.0249
 Saturn -56172-01-25 10:04 J -18795375.32 -18795375.08 -18795374.83 0.0267 0.0030
 Saturn -56171-02-06 11:16 J -18794998.20 -18794998.03 -18794997.85 0.0265 0.0185
 Mars -56167-07-16 13:40 J -18793377.10 -18793376.93 -18793376.76 0.1824 0.0835
 Neptune -56162-07-18 02:09 J -18791549.45 -18791549.41 -18791549.32 0.0089 0.0086
 Neptune -56161-07-19 13:11 J -18791182.08 -18791181.95 -18791181.76 0.0089 0.0070
 Neptune -56160-07-22 00:28 J -18790814.67 -18790814.48 -18790814.26 0.0089 0.0053
 Neptune -56159-07-24 11:16 J -18790447.24 -18790447.03 -18790446.77 0.0089 0.0037
 Neptune -56158-07-26 22:33 J -18790079.80 -18790079.56 -18790079.30 0.0089 0.0020
 Neptune -56157-07-28 09:21 J -18789712.36 -18789712.11 -18789711.85 0.0089 0.0004
 Saturn -56157-07-29 16:18 J -18789711.06 -18789710.82 -18789710.58 0.0294 0.0045
 Neptune -56156-07-30 20:23 J -18789344.90 -18789344.65 -18789344.40 0.0089 0.0013
 Saturn -56156-08-13 00:13 J -18789331.61 -18789331.49 -18789331.35 0.0297 0.0249
 Neptune -56155-08-02 06:42 J -18788977.44 -18788977.22 -18788976.96 0.0089 0.0030

Neptune -56154-08-04 17:45 J -18788609.97 -18788609.76 -18788609.53 0.0089 0.0046
 Neptune -56153-08-06 04:04 J -18788242.48 -18788242.33 -18788242.12 0.0089 0.0063
 Neptune -56152-08-08 14:52 J -18787874.97 -18787874.88 -18787874.74 0.0089 0.0079
 Pluto -56148-12-23 11:16 J -18786277.27 -18786277.03 -18786276.76 0.0063 0.0010
 Jupiter -56144-02-21 17:01 J -18785121.01 -18785120.79 -18785120.57 0.0499 0.0198
 Saturn -56143-01-20 15:35 J -18784788.06 -18784787.85 -18784787.63 0.0268 0.0125
 Saturn -56142-02-01 18:42 J -18784410.95 -18784410.72 -18784410.48 0.0266 0.0093
 Uranus -56135-08-23 08:37 J -18781651.19 -18781651.14 -18781651.05 0.0135 0.0130
 Uranus -56134-08-27 15:21 J -18781282.10 -18781281.86 -18781281.61 0.0135 0.0030
 Uranus -56133-08-30 22:04 J -18780912.79 -18780912.58 -18780912.36 0.0136 0.0071
 Jupiter -56132-02-26 06:28 J -18780733.45 -18780733.23 -18780733.00 0.0500 0.0165
 Saturn -56128-07-24 03:49 J -18779124.54 -18779124.34 -18779124.14 0.0292 0.0170
 Saturn -56127-08-07 09:35 J -18778745.31 -18778745.10 -18778744.87 0.0296 0.0121
 Jupiter -56127-08-23 14:37 J -18778729.04 -18778728.89 -18778728.74 0.0528 0.0401
 Jupiter -56115-08-28 13:11 J -18774341.18 -18774340.95 -18774340.72 0.0527 0.0029
 Saturn -56114-01-15 17:59 J -18774200.88 -18774200.75 -18774200.60 0.0269 0.0221
 Saturn -56113-01-27 22:33 J -18773823.81 -18773823.56 -18773823.31 0.0267 0.0004
 Saturn -56112-02-07 22:47 J -18773446.68 -18773446.55 -18773446.39 0.0264 0.0212
 Jupiter -56103-09-02 06:57 J -18769953.33 -18769953.21 -18769953.08 0.0525 0.0439
 Saturn -56098-08-01 11:01 J -18768159.28 -18768159.04 -18768158.80 0.0295 0.0009
 Saturn -56097-08-14 19:40 J -18767779.73 -18767779.68 -18767779.61 0.0298 0.0286
 Uranus -56094-02-23 16:47 J -18766857.04 -18766856.80 -18766856.55 0.0144 0.0040
 Uranus -56093-02-28 18:13 J -18766486.93 -18766486.74 -18766486.51 0.0143 0.0085
 Saturn -56084-01-22 03:35 J -18763236.57 -18763236.35 -18763236.11 0.0268 0.0098
 Saturn -56083-02-03 05:59 J -18762859.47 -18762859.25 -18762859.02 0.0265 0.0120
 Neptune -56080-01-12 01:25 J -18761785.45 -18761785.44 -18761785.39 0.0089 0.0088
 Neptune -56079-01-14 13:25 J -18761418.07 -18761417.94 -18761417.76 0.0089 0.0072
 Neptune -56078-01-17 01:54 J -18761050.61 -18761050.42 -18761050.20 0.0089 0.0055
 Neptune -56077-01-19 14:09 J -18760683.13 -18760682.91 -18760682.66 0.0089 0.0039
 Neptune -56076-01-21 02:52 J -18760315.62 -18760315.38 -18760315.12 0.0089 0.0022

Neptune -56075-01-23 15:21 J -18759948.12 -18759947.86 -18759947.60 0.0089 0.0005
 Neptune -56074-01-26 03:49 J -18759580.59 -18759580.34 -18759580.08 0.0089 0.0012
 Neptune -56073-01-28 16:18 J -18759213.05 -18759212.82 -18759212.56 0.0089 0.0029
 Neptune -56072-01-30 05:01 J -18758845.51 -18758845.29 -18758845.06 0.0089 0.0046
 Neptune -56071-02-01 17:30 J -18758477.94 -18758477.77 -18758477.57 0.0088 0.0063
 Neptune -56070-02-04 05:45 J -18758110.35 -18758110.26 -18758110.12 0.0088 0.0080
 Saturn -56069-07-25 21:35 J -18757572.81 -18757572.60 -18757572.38 0.0293 0.0134
 Saturn -56068-08-09 04:18 J -18757193.51 -18757193.32 -18757193.10 0.0296 0.0159
 Mars -56066-01-09 06:42 J -18756675.40 -18756675.22 -18756675.04 0.1729 0.0592
 Jupiter -56061-02-21 14:09 J -18754806.10 -18754805.91 -18754805.71 0.0498 0.0273
 Pluto -56059-06-27 15:06 J -18753948.93 -18753948.87 -18753948.81 0.0081 0.0078
 Pluto -56058-06-29 20:09 J -18753581.69 -18753581.66 -18753581.57 0.0080 0.0079
 Saturn -56055-01-17 07:11 J -18752649.36 -18752649.20 -18752649.02 0.0269 0.0192
 Saturn -56054-01-29 10:47 J -18752272.30 -18752272.05 -18752271.80 0.0266 0.0027
 Saturn -56053-02-10 10:33 J -18751895.15 -18751895.06 -18751894.94 0.0264 0.0238
 Uranus -56051-08-23 19:54 J -18750969.75 -18750969.67 -18750969.55 0.0135 0.0124
 Uranus -56050-08-28 02:37 J -18750600.63 -18750600.39 -18750600.14 0.0135 0.0024
 Jupiter -56049-02-26 05:16 J -18750418.52 -18750418.28 -18750418.05 0.0500 0.0095
 Uranus -56049-08-31 09:35 J -18750231.30 -18750231.10 -18750230.89 0.0136 0.0077
 Jupiter -56044-08-22 14:37 J -18748413.98 -18748413.89 -18748413.79 0.0528 0.0476
 Saturn -56040-07-19 22:33 J -18746986.66 -18746986.56 -18746986.45 0.0292 0.0260
 Saturn -56039-08-03 03:35 J -18746607.59 -18746607.35 -18746607.11 0.0295 0.0027
 Jupiter -56037-03-01 21:06 J -18746030.70 -18746030.62 -18746030.54 0.0501 0.0470
 Jupiter -56032-08-27 09:49 J -18744026.31 -18744026.09 -18744025.86 0.0527 0.0058
 Saturn -56025-01-24 14:52 J -18741685.11 -18741684.88 -18741684.64 0.0267 0.0070
 Saturn -56024-02-04 16:33 J -18741308.01 -18741307.81 -18741307.60 0.0265 0.0146
 Jupiter -56020-09-01 02:52 J -18739638.55 -18739638.38 -18739638.21 0.0526 0.0354
 Uranus -56010-02-24 05:16 J -18736175.53 -18736175.28 -18736175.03 0.0144 0.0032
 Saturn -56010-07-28 12:28 J -18736021.21 -18736020.98 -18736020.75 0.0294 0.0100
 Uranus -56009-02-29 06:57 J -18735805.40 -18735805.21 -18735805.01 0.0143 0.0092

Saturn -56009-08-10 19:54 J -18735641.84 -18735641.67 -18735641.48 0.0296 0.0194

56TH MILLENNIUM BCE

This is a list of transits of Earth in the 56th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Neptune	-55997-07-18 22:47 J	-18731281.66	-18731281.55	-18731281.41	0.0089	0.0077		
Saturn	-55996-01-18 19:11 J	-18731097.89	-18731097.70	-18731097.49	0.0268	0.0164		
Neptune	-55996-07-21 10:04 J	-18730914.26	-18730914.08	-18730913.88	0.0089	0.0060		
Saturn	-55995-01-30 22:04 J	-18730720.82	-18730720.58	-18730720.34	0.0266	0.0055		
Neptune	-55995-07-23 21:06 J	-18730546.83	-18730546.62	-18730546.38	0.0089	0.0044		
Neptune	-55994-07-26 07:54 J	-18730179.40	-18730179.17	-18730178.92	0.0089	0.0027		
Neptune	-55993-07-27 18:57 J	-18729811.96	-18729811.71	-18729811.45	0.0089	0.0010		
Neptune	-55992-07-30 05:45 J	-18729444.51	-18729444.26	-18729444.00	0.0089	0.0007		
Neptune	-55991-08-01 16:18 J	-18729077.05	-18729076.82	-18729076.56	0.0089	0.0024		
Neptune	-55990-08-04 03:21 J	-18728709.59	-18728709.36	-18728709.13	0.0089	0.0040		
Neptune	-55989-08-05 13:40 J	-18728342.11	-18728341.93	-18728341.72	0.0089	0.0057		
Neptune	-55988-08-08 00:13 J	-18727974.60	-18727974.49	-18727974.32	0.0089	0.0074		
Mars	-55987-01-11 19:11 J	-18727817.85	-18727817.70	-18727817.54	0.1723	0.0977		
Saturn	-55981-07-21 10:47 J	-18725435.19	-18725435.05	-18725434.89	0.0292	0.0230		
Saturn	-55980-08-04 16:33 J	-18725056.04	-18725055.81	-18725055.56	0.0296	0.0061		
Jupiter	-55978-02-20 17:45 J	-18724490.93	-18724490.76	-18724490.57	0.0498	0.0328		
Saturn	-55967-01-13 19:11 J	-18720510.74	-18720510.70	-18720510.64	0.0270	0.0264		
Uranus	-55967-08-24 06:42 J	-18720288.33	-18720288.22	-18720288.10	0.0135	0.0119		

Saturn -55966-01-26 00:13 J -18720133.73 -18720133.49 -18720133.24 0.0267 0.0044
 Jupiter -55966-02-25 09:21 J -18720103.34 -18720103.11 -18720102.87 0.0499 0.0046
 Uranus -55966-08-28 13:11 J -18719919.19 -18719918.95 -18719918.70 0.0135 0.0019
 Saturn -55965-02-07 01:25 J -18719756.62 -18719756.44 -18719756.25 0.0265 0.0172
 Uranus -55965-08-31 19:54 J -18719549.85 -18719549.67 -18719549.46 0.0136 0.0083
 Mars -55962-07-13 20:37 J -18718503.74 -18718503.64 -18718503.54 0.1806 0.1519
 Jupiter -55954-03-01 23:45 J -18715715.64 -18715715.51 -18715715.38 0.0500 0.0414
 Saturn -55951-07-29 23:16 J -18714469.76 -18714469.53 -18714469.29 0.0294 0.0069
 Saturn -55950-08-13 07:25 J -18714090.34 -18714090.19 -18714090.03 0.0297 0.0227
 Jupiter -55949-08-26 09:21 J -18713711.33 -18713711.11 -18713710.88 0.0528 0.0133
 Saturn -55937-01-21 04:33 J -18709546.51 -18709546.31 -18709546.09 0.0268 0.0137
 Jupiter -55937-08-31 08:37 J -18709323.32 -18709323.14 -18709322.95 0.0526 0.0302
 Saturn -55936-02-01 06:42 J -18709169.45 -18709169.22 -18709168.98 0.0266 0.0081
 Uranus -55926-02-24 15:06 J -18705494.12 -18705493.87 -18705493.61 0.0144 0.0027
 Uranus -55925-02-29 16:33 J -18705123.98 -18705123.81 -18705123.61 0.0143 0.0098
 Saturn -55922-07-23 18:42 J -18703883.89 -18703883.72 -18703883.54 0.0293 0.0202
 Saturn -55921-08-06 00:42 J -18703504.69 -18703504.47 -18703504.23 0.0296 0.0090
 Neptune -55915-01-13 22:33 J -18701517.66 -18701517.56 -18701517.43 0.0089 0.0079
 Neptune -55914-01-16 10:18 J -18701150.23 -18701150.07 -18701149.86 0.0089 0.0063
 Neptune -55913-01-18 22:47 J -18700782.75 -18700782.55 -18700782.30 0.0089 0.0046
 Neptune -55912-01-20 11:16 J -18700415.26 -18700415.03 -18700414.77 0.0089 0.0029
 Neptune -55911-01-22 23:45 J -18700047.76 -18700047.51 -18700047.24 0.0089 0.0012
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 Saturn -55908-01-15 02:52 J -18698959.49 -18698959.38 -18698959.26 0.0269 0.0239
 Neptune -55908-01-29 13:25 J -18698945.16 -18698944.94 -18698944.70 0.0089 0.0040
 Saturn -55907-01-27 07:25 J -18698582.44 -18698582.19 -18698581.94 0.0266 0.0018
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Pluto -55900-12-24 09:21 J -18695694.31 -18695694.11 -18695693.86 0.0063 0.0032
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 Saturn -55891-08-14 14:09 J -18692539.03 -18692538.91 -18692538.78 0.0297 0.0255
 Jupiter -55883-02-24 09:21 J -18689788.35 -18689788.11 -18689787.87 0.0499 0.0022
 Mars -55883-07-16 17:01 J -18689645.98 -18689645.79 -18689645.60 0.1813 0.0481
 Uranus -55883-08-24 15:49 J -18689606.95 -18689606.84 -18689606.70 0.0135 0.0115
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 Saturn -55878-01-22 11:01 J -18687995.26 -18687995.04 -18687994.81 0.0268 0.0113
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 Jupiter -55866-08-26 17:01 J -18683396.01 -18683395.79 -18683395.57 0.0528 0.0180
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 Saturn -55849-01-17 06:57 J -18677408.35 -18677408.21 -18677408.06 0.0269 0.0217
 Saturn -55848-01-28 11:16 J -18677031.28 -18677031.03 -18677030.78 0.0266 0.0004
 Saturn -55847-02-09 11:45 J -18676654.15 -18676654.01 -18676653.87 0.0264 0.0218
 Uranus -55842-02-24 22:33 J -18674812.81 -18674812.56 -18674812.30 0.0144 0.0024
 Uranus -55841-02-29 23:45 J -18674442.67 -18674442.51 -18674442.30 0.0143 0.0101
 Neptune -55833-07-18 08:23 J -18671381.20 -18671381.15 -18671381.04 0.0089 0.0085
 Saturn -55833-08-01 06:42 J -18671367.46 -18671367.22 -18671366.98 0.0294 0.0018
 Neptune -55832-07-20 19:54 J -18671013.81 -18671013.67 -18671013.48 0.0089 0.0068
 Saturn -55832-08-15 15:35 J -18670987.92 -18670987.85 -18670987.76 0.0297 0.0279
 Neptune -55831-07-23 06:57 J -18670646.40 -18670646.21 -18670645.98 0.0089 0.0051
 Neptune -55830-07-25 18:13 J -18670278.96 -18670278.74 -18670278.48 0.0089 0.0034
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 Saturn -55818-02-04 16:04 J -18666067.05 -18666066.83 -18666066.62 0.0265 0.0127
 Jupiter -55812-02-19 02:52 J -18663860.49 -18663860.38 -18663860.26 0.0498 0.0432
 Pluto -55810-06-30 05:59 J -18662999.50 -18662999.25 -18662998.99 0.0081 0.0015
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 Jupiter -55783-08-25 20:52 J -18653080.83 -18653080.63 -18653080.42 0.0528 0.0242
 Mars -55782-01-09 19:25 J -18652943.87 -18652943.69 -18652943.51 0.1738 0.0665
 Saturn -55775-07-20 00:57 J -18650195.50 -18650195.46 -18650195.39 0.0291 0.0283
 Saturn -55774-08-03 05:16 J -18649816.52 -18649816.28 -18649816.03 0.0295 0.0006
 Jupiter -55771-08-30 19:11 J -18648692.91 -18648692.70 -18648692.48 0.0527 0.0192
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 Saturn -55759-02-05 15:49 J -18644516.04 -18644515.84 -18644515.63 0.0265 0.0146
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 Neptune -55750-01-15 20:23 J -18641249.78 -18641249.65 -18641249.47 0.0089 0.0070

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 Neptune -55744-01-28 22:47 J -18639044.79 -18639044.55 -18639044.31 0.0089 0.0034
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 Neptune -55742-02-02 23:30 J -18638309.66 -18638309.52 -18638309.33 0.0089 0.0069
 Neptune -55741-02-05 12:13 J -18637942.03 -18637941.99 -18637941.90 0.0088 0.0086
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 Saturn -55730-01-31 10:33 J -18633929.30 -18633929.06 -18633928.81 0.0266 0.0043
 Saturn -55729-02-12 10:47 J -18633552.10 -18633552.05 -18633551.98 0.0264 0.0256
 Jupiter -55729-02-19 14:52 J -18633544.96 -18633544.88 -18633544.78 0.0498 0.0457
 Jupiter -55717-02-24 05:45 J -18629157.49 -18629157.26 -18629157.03 0.0499 0.0088
 Saturn -55716-07-20 21:21 J -18628644.70 -18628644.61 -18628644.51 0.0291 0.0265
 Saturn -55715-08-04 01:11 J -18628265.69 -18628265.45 -18628265.20 0.0295 0.0022
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 Mars -55703-01-12 09:06 J -18624086.28 -18624086.12 -18624085.96 0.1732 0.0959
 Saturn -55701-01-26 11:45 J -18623342.25 -18623342.01 -18623341.77 0.0268 0.0055
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 Jupiter -55688-08-30 08:23 J -18618377.37 -18618377.15 -18618376.93 0.0527 0.0167
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 Saturn -55685-08-10 23:59 J -18617300.69 -18617300.50 -18617300.30 0.0296 0.0176
 Mars -55678-07-14 01:25 J -18614772.46 -18614772.44 -18614772.42 0.1796 0.1782

Uranus -55674-02-25 09:35 J -18613450.35 -18613450.10 -18613449.84 0.0144 0.0024
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 Saturn -55672-01-20 02:23 J -18612755.59 -18612755.40 -18612755.20 0.0269 0.0165
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 Saturn -55656-08-04 21:06 J -18606714.86 -18606714.62 -18606714.38 0.0294 0.0039
 Pluto -55651-12-26 19:54 J -18604744.92 -18604744.67 -18604744.40 0.0063 0.0004
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 Jupiter -55634-02-23 12:42 J -18598842.20 -18598841.97 -18598841.74 0.0498 0.0130
 Uranus -55631-08-25 19:40 J -18597562.82 -18597562.68 -18597562.50 0.0135 0.0105
 Uranus -55630-08-30 02:52 J -18597193.63 -18597193.38 -18597193.13 0.0135 0.0004
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 Saturn -55627-07-29 15:21 J -18596129.09 -18596128.86 -18596128.63 0.0292 0.0101
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 Jupiter -55622-02-28 04:33 J -18594454.51 -18594454.31 -18594454.10 0.0499 0.0248
 Jupiter -55617-08-24 20:09 J -18592449.85 -18592449.66 -18592449.47 0.0529 0.0308
 Saturn -55613-01-21 21:49 J -18591204.79 -18591204.59 -18591204.38 0.0269 0.0151
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 Saturn -55598-07-23 15:06 J -18585543.01 -18585542.87 -18585542.72 0.0291 0.0231
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 Uranus -55590-02-25 17:16 J -18582769.03 -18582768.78 -18582768.52 0.0144 0.0022
 Uranus -55589-03-01 18:28 J -18582398.89 -18582398.73 -18582398.53 0.0143 0.0104
 Neptune -55586-01-15 06:42 J -18581349.33 -18581349.22 -18581349.08 0.0089 0.0077
 Neptune -55585-01-17 18:57 J -18580981.88 -18580981.71 -18580981.50 0.0089 0.0060
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 Neptune -55584-01-19 07:40 J -18580614.41 -18580614.18 -18580613.95 0.0089 0.0042
 Neptune -55583-01-21 19:40 J -18580246.92 -18580246.68 -18580246.42 0.0089 0.0025
 Saturn -55583-01-28 03:35 J -18580240.59 -18580240.35 -18580240.10 0.0268 0.0026
 Neptune -55582-01-24 08:23 J -18579879.41 -18579879.15 -18579878.89 0.0089 0.0007
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 Neptune -55577-02-04 22:04 J -18578041.66 -18578041.58 -18578041.44 0.0089 0.0081
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 Pluto -55561-07-02 00:42 J -18572049.64 -18572049.47 -18572049.29 0.0080 0.0059
 Saturn -55554-01-22 17:45 J -18569653.97 -18569653.76 -18569653.54 0.0270 0.0137
 Saturn -55553-02-03 23:30 J -18569276.75 -18569276.52 -18569276.28 0.0267 0.0089
 Jupiter -55551-02-23 00:42 J -18568526.70 -18568526.47 -18568526.25 0.0498 0.0155
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 Uranus -55546-08-30 12:13 J -18566512.24 -18566511.99 -18566511.73 0.0135 0.0003
 Uranus -55545-09-02 19:25 J -18566142.84 -18566142.69 -18566142.52 0.0136 0.0103
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Saturn -55538-08-07 17:16 J -18563613.01 -18563612.78 -18563612.54 0.0294 0.0078
 Jupiter -55534-08-25 02:09 J -18562134.57 -18562134.41 -18562134.24 0.0529 0.0363
 Saturn -55525-01-17 16:04 J -18559066.93 -18559066.83 -18559066.71 0.0271 0.0240
 Saturn -55524-01-29 00:13 J -18558689.73 -18558689.49 -18558689.24 0.0268 0.0012
 Saturn -55523-02-10 03:35 J -18558312.49 -18558312.35 -18558312.18 0.0266 0.0210
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 Jupiter -55510-09-03 23:16 J -18553358.57 -18553358.53 -18553358.49 0.0527 0.0517
 Saturn -55509-07-31 17:01 J -18553027.03 -18553026.79 -18553026.55 0.0292 0.0061
 Saturn -55508-08-14 21:21 J -18552647.75 -18552647.61 -18552647.46 0.0295 0.0234
 Uranus -55507-02-21 00:42 J -18552457.48 -18552457.47 -18552457.43 0.0144 0.0143
 Uranus -55506-02-26 03:06 J -18552087.62 -18552087.37 -18552087.11 0.0143 0.0017
 Uranus -55505-03-02 04:33 J -18551717.46 -18551717.31 -18551717.13 0.0143 0.0109
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Saturn -55405-02-13 05:01 J -18515210.37 -18515210.29 -18515210.18 0.0266 0.0245
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 Saturn -55318-01-28 04:04 J -18483449.56 -18483449.33 -18483449.08 0.0269 0.0059
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 Jupiter -55273-08-27 05:30 J -18466801.49 -18466801.27 -18466801.04 0.0530 0.0123
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Saturn -55111-02-09 00:57 J -18407830.65 -18407830.46 -18407830.25 0.0267 0.0154
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 Neptune -55085-02-03 06:28 J -18398340.38 -18398340.23 -18398340.02 0.0089 0.0065
 Uranus -55085-03-03 18:13 J -18398310.85 -18398310.74 -18398310.59 0.0143 0.0123
 Neptune -55084-02-04 18:57 J -18397972.77 -18397972.71 -18397972.58 0.0089 0.0083
 Saturn -55083-01-22 22:33 J -18397620.74 -18397620.56 -18397620.36 0.0271 0.0170
 Saturn -55082-02-04 05:16 J -18397243.52 -18397243.28 -18397243.03 0.0268 0.0059
 Saturn -55068-07-24 22:18 J -18391958.69 -18391958.57 -18391958.44 0.0290 0.0247
 Saturn -55067-08-07 22:47 J -18391579.79 -18391579.55 -18391579.31 0.0293 0.0042
 Pluto -55064-07-05 06:42 J -18390517.44 -18390517.22 -18390517.01 0.0080 0.0044
 Saturn -55053-01-30 06:13 J -18386656.48 -18386656.24 -18386655.99 0.0269 0.0044
 Jupiter -55053-02-19 22:04 J -18386635.64 -18386635.58 -18386635.52 0.0496 0.0480
 Saturn -55052-02-10 11:01 J -18386279.21 -18386279.04 -18386278.85 0.0266 0.0182
 Uranus -55043-08-28 07:40 J -18382793.36 -18382793.18 -18382792.97 0.0135 0.0084
 Uranus -55042-09-01 14:23 J -18382424.14 -18382423.90 -18382423.65 0.0135 0.0018
 Jupiter -55041-02-24 10:04 J -18382248.31 -18382248.08 -18382247.85 0.0497 0.0115
 Uranus -55041-09-04 21:35 J -18382054.71 -18382054.60 -18382054.49 0.0136 0.0121

Saturn -55038-08-02 08:37 J -18380993.37 -18380993.14 -18380992.90 0.0292 0.0086

Saturn -55037-08-15 12:13 J -18380614.15 -18380613.99 -18380613.81 0.0295 0.0210

Mars -55031-07-17 09:49 J -18378452.28 -18378452.09 -18378451.91 0.1783 0.0338

Jupiter -55029-02-28 19:11 J -18377860.90 -18377860.70 -18377860.49 0.0498 0.0244

Saturn -55024-01-24 09:21 J -18376069.32 -18376069.11 -18376068.90 0.0270 0.0141

Jupiter -55024-08-25 02:52 J -18375856.54 -18375856.38 -18375856.20 0.0531 0.0366

Saturn -55023-02-05 15:35 J -18375692.09 -18375691.85 -18375691.62 0.0267 0.0087

Jupiter -55012-08-30 01:25 J -18371468.66 -18371468.44 -18371468.21 0.0529 0.0082

Neptune -55011-07-20 17:16 J -18371143.81 -18371143.78 -18371143.70 0.0089 0.0087

Neptune -55010-07-23 04:33 J -18370776.45 -18370776.31 -18370776.12 0.0089 0.0069

Neptune -55009-07-24 15:35 J -18370409.04 -18370408.85 -18370408.62 0.0089 0.0051

Saturn -55009-07-26 07:54 J -18370407.33 -18370407.17 -18370407.01 0.0290 0.0217

Neptune -55008-07-27 03:06 J -18370041.60 -18370041.37 -18370041.13 0.0089 0.0032

Saturn -55008-08-09 08:52 J -18370028.36 -18370028.13 -18370027.89 0.0294 0.0073

Neptune -55007-07-29 14:09 J -18369674.16 -18369673.91 -18369673.65 0.0089 0.0014

Neptune -55006-08-01 00:57 J -18369306.71 -18369306.46 -18369306.20 0.0089 0.0004

Neptune -55005-08-02 11:45 J -18368939.25 -18368939.01 -18368938.75 0.0089 0.0023

Neptune -55004-08-04 22:18 J -18368571.77 -18368571.57 -18368571.32 0.0089 0.0041

Uranus -55003-02-22 23:16 J -18368369.64 -18368369.53 -18368369.42 0.0144 0.0128

Neptune -55003-08-07 09:21 J -18368204.28 -18368204.11 -18368203.90 0.0089 0.0059

Uranus -55002-02-28 01:25 J -18367999.69 -18367999.44 -18367999.18 0.0143 0.0002

Neptune -55002-08-09 19:54 J -18367836.77 -18367836.67 -18367836.51 0.0089 0.0077

Uranus -55001-03-04 02:23 J -18367629.50 -18367629.40 -18367629.26 0.0143 0.0126

55TH MILLENNIUM BCE

This is a list of transits of Earth in the 55th millennium BCE.

	FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
	TRANSIT								
	TIME								
Jupiter	-55000-09-03	21:49	J	-18367080.63	-18367080.59	-18367080.54	0.0528	0.0516	
Saturn	-54995-01-19	05:16	J	-18365482.36	-18365482.28	-18365482.17	0.0272	0.0249	
Saturn	-54994-01-31	14:23	J	-18365105.15	-18365104.90	-18365104.65	0.0269	0.0017	
Saturn	-54993-02-12	18:42	J	-18364727.87	-18364727.72	-18364727.56	0.0266	0.0207	
Saturn	-54979-08-03	16:04	J	-18359442.06	-18359441.83	-18359441.59	0.0292	0.0057	
Saturn	-54978-08-17	19:54	J	-18359062.79	-18359062.67	-18359062.52	0.0295	0.0240	
Saturn	-54965-01-26	16:33	J	-18354518.03	-18354517.81	-18354517.58	0.0270	0.0116	
Saturn	-54964-02-06	22:33	J	-18354140.78	-18354140.56	-18354140.33	0.0267	0.0112	
Uranus	-54959-08-28	16:33	J	-18352111.99	-18352111.81	-18352111.59	0.0135	0.0081	
Jupiter	-54958-02-23	11:30	J	-18351933.24	-18351933.02	-18351932.80	0.0496	0.0180	
Uranus	-54958-09-01	23:30	J	-18351742.77	-18351742.52	-18351742.27	0.0135	0.0022	
Uranus	-54957-09-05	06:28	J	-18351373.31	-18351373.23	-18351373.12	0.0136	0.0125	
Mars	-54952-07-20	02:52	J	-18349594.47	-18349594.38	-18349594.28	0.1790	0.1552	
Saturn	-54950-07-28	12:57	J	-18348856.14	-18348855.96	-18348855.77	0.0290	0.0192	
Saturn	-54949-08-10	14:09	J	-18348477.13	-18348476.91	-18348476.68	0.0294	0.0100	
Jupiter	-54946-02-28	01:54	J	-18347545.63	-18347545.42	-18347545.20	0.0498	0.0199	
Jupiter	-54941-08-24	06:28	J	-18345541.36	-18345541.23	-18345541.10	0.0531	0.0431	
Saturn	-54936-01-20	10:18	J	-18343931.19	-18343931.07	-18343930.92	0.0271	0.0226	
Saturn	-54935-02-01	19:11	J	-18343553.95	-18343553.70	-18343553.45	0.0268	0.0007	
Saturn	-54934-02-13	22:47	J	-18343176.65	-18343176.55	-18343176.41	0.0266	0.0231	
Mars	-54930-01-10	23:45	J	-18341749.65	-18341749.51	-18341749.37	0.1766	0.1190	
Jupiter	-54929-08-29	01:40	J	-18341153.66	-18341153.43	-18341153.20	0.0530	0.0011	
Neptune	-54928-01-17	03:06	J	-18341012.49	-18341012.37	-18341012.19	0.0089	0.0072	
Neptune	-54927-01-19	15:35	J	-18340645.05	-18340644.85	-18340644.63	0.0089	0.0053	
Neptune	-54926-01-22	03:49	J	-18340277.57	-18340277.34	-18340277.09	0.0089	0.0035	
Neptune	-54925-01-24	16:33	J	-18339910.07	-18339909.81	-18339909.56	0.0089	0.0016	

Neptune -54924-01-26 04:47 J -18339542.56 -18339542.30 -18339542.04 0.0089 0.0003
 Neptune -54923-01-28 17:16 J -18339175.03 -18339174.78 -18339174.52 0.0089 0.0021
 Neptune -54922-01-31 05:30 J -18338807.49 -18338807.27 -18338807.03 0.0089 0.0040
 Neptune -54921-02-02 17:45 J -18338439.93 -18338439.76 -18338439.54 0.0089 0.0059
 Neptune -54920-02-04 06:13 J -18338072.34 -18338072.24 -18338072.09 0.0089 0.0077
 Saturn -54920-08-04 18:57 J -18337890.95 -18337890.71 -18337890.46 0.0292 0.0032
 Uranus -54919-02-23 09:35 J -18337688.22 -18337688.10 -18337687.96 0.0144 0.0122
 Saturn -54919-08-18 23:30 J -18337511.62 -18337511.52 -18337511.41 0.0295 0.0265
 Uranus -54918-02-28 11:59 J -18337318.26 -18337318.00 -18337317.75 0.0143 0.0006
 Uranus -54917-03-04 13:11 J -18336948.05 -18336947.95 -18336947.85 0.0143 0.0131
 Jupiter -54917-09-03 00:13 J -18336765.60 -18336765.49 -18336765.36 0.0528 0.0451
 Saturn -54906-01-27 20:37 J -18332966.86 -18332966.64 -18332966.40 0.0270 0.0093
 Pluto -54906-12-31 01:40 J -18332629.57 -18332629.43 -18332629.23 0.0063 0.0049
 Saturn -54905-02-09 02:23 J -18332589.60 -18332589.40 -18332589.18 0.0267 0.0135
 Pluto -54905-12-31 13:25 J -18332263.16 -18332262.94 -18332262.68 0.0064 0.0027
 Saturn -54891-07-29 14:37 J -18327305.07 -18327304.89 -18327304.68 0.0290 0.0170
 Saturn -54890-08-12 16:04 J -18326926.05 -18326925.83 -18326925.61 0.0294 0.0123
 Saturn -54877-01-22 12:13 J -18322380.15 -18322379.99 -18322379.83 0.0271 0.0205
 Saturn -54876-02-02 20:37 J -18322002.88 -18322002.64 -18322002.39 0.0268 0.0028
 Saturn -54875-02-15 00:42 J -18321625.55 -18321625.47 -18321625.39 0.0266 0.0251
 Jupiter -54875-02-22 21:21 J -18321617.82 -18321617.61 -18321617.40 0.0496 0.0214
 Uranus -54875-08-29 00:57 J -18321430.65 -18321430.46 -18321430.24 0.0135 0.0078
 Uranus -54874-09-02 07:40 J -18321061.42 -18321061.18 -18321060.93 0.0135 0.0025
 Uranus -54873-09-05 14:52 J -18320691.95 -18320691.88 -18320691.79 0.0136 0.0128
 Jupiter -54863-02-27 11:01 J -18317230.26 -18317230.04 -18317229.82 0.0497 0.0161
 Saturn -54861-08-05 18:28 J -18316339.98 -18316339.73 -18316339.49 0.0292 0.0011
 Saturn -54860-08-19 22:47 J -18315960.59 -18315960.55 -18315960.49 0.0295 0.0287
 Jupiter -54858-08-24 10:18 J -18315226.14 -18315226.07 -18315225.99 0.0531 0.0497
 Mars -54851-01-13 16:18 J -18312892.00 -18312891.82 -18312891.64 0.1759 0.0602
 Saturn -54847-01-28 21:21 J -18311415.85 -18311415.61 -18311415.37 0.0270 0.0073

Saturn -54846-02-10 03:06 J -18311038.56 -18311038.37 -18311038.16 0.0267 0.0155
 Neptune -54846-07-22 16:33 J -18310875.93 -18310875.81 -18310875.67 0.0089 0.0076
 Jupiter -54846-08-29 11:59 J -18310838.23 -18310838.00 -18310837.77 0.0530 0.0034
 Neptune -54845-07-24 03:35 J -18310508.52 -18310508.35 -18310508.14 0.0089 0.0058
 Neptune -54844-07-26 14:37 J -18310141.10 -18310140.89 -18310140.64 0.0089 0.0040
 Neptune -54843-07-29 01:54 J -18309773.66 -18309773.42 -18309773.16 0.0089 0.0021
 Neptune -54842-07-31 12:57 J -18309406.21 -18309405.96 -18309405.70 0.0089 0.0003
 Neptune -54841-08-01 23:45 J -18309038.76 -18309038.51 -18309038.25 0.0089 0.0016
 Neptune -54840-08-04 10:33 J -18308671.28 -18308671.06 -18308670.81 0.0089 0.0035
 Neptune -54839-08-06 21:06 J -18308303.80 -18308303.62 -18308303.39 0.0089 0.0053
 Neptune -54838-08-09 08:09 J -18307936.30 -18307936.16 -18307936.00 0.0089 0.0071
 Uranus -54835-02-23 20:23 J -18307006.79 -18307006.65 -18307006.49 0.0144 0.0116
 Uranus -54834-02-28 22:33 J -18306636.81 -18306636.56 -18306636.30 0.0143 0.0012
 Jupiter -54834-09-03 11:45 J -18306450.15 -18306450.01 -18306449.87 0.0529 0.0418
 Uranus -54833-03-04 23:16 J -18306266.58 -18306266.53 -18306266.44 0.0143 0.0138
 Saturn -54832-07-30 13:40 J -18305754.14 -18305753.93 -18305753.72 0.0290 0.0150
 Saturn -54831-08-13 14:37 J -18305375.10 -18305374.89 -18305374.68 0.0294 0.0143
 Saturn -54818-01-23 11:01 J -18300829.21 -18300829.04 -18300828.85 0.0271 0.0187
 Saturn -54817-02-04 19:54 J -18300451.92 -18300451.67 -18300451.43 0.0268 0.0047
 Pluto -54816-07-05 16:47 J -18299934.99 -18299934.80 -18299934.57 0.0081 0.0047
 Saturn -54803-07-24 16:33 J -18295167.87 -18295167.81 -18295167.74 0.0289 0.0278
 Saturn -54802-08-07 15:35 J -18294789.09 -18294788.85 -18294788.61 0.0292 0.0008
 Jupiter -54792-02-22 03:06 J -18291302.56 -18291302.37 -18291302.16 0.0496 0.0263
 Uranus -54791-08-29 09:21 J -18290749.31 -18290749.11 -18290748.89 0.0135 0.0075
 Uranus -54790-09-02 16:04 J -18290380.08 -18290379.83 -18290379.58 0.0135 0.0028
 Uranus -54789-09-05 23:16 J -18290010.58 -18290010.53 -18290010.46 0.0136 0.0131
 Saturn -54788-01-29 19:25 J -18289864.93 -18289864.69 -18289864.44 0.0270 0.0056
 Saturn -54787-02-11 01:25 J -18289487.62 -18289487.44 -18289487.24 0.0267 0.0173
 Jupiter -54780-02-26 17:01 J -18286915.02 -18286914.79 -18286914.56 0.0497 0.0114
 Jupiter -54775-08-23 22:18 J -18284910.59 -18284910.57 -18284910.55 0.0532 0.0528

Saturn -54773-07-31 11:01 J -18284203.25 -18284203.04 -18284202.81 0.0290 0.0132
 Saturn -54772-08-14 11:45 J -18283824.20 -18283824.01 -18283823.80 0.0294 0.0163
 Jupiter -54768-03-03 08:23 J -18282527.16 -18282527.15 -18282527.14 0.0498 0.0498
 Neptune -54764-01-16 14:09 J -18281112.01 -18281111.91 -18281111.77 0.0089 0.0079
 Neptune -54763-01-19 02:09 J -18280744.57 -18280744.41 -18280744.20 0.0089 0.0061
 Jupiter -54763-08-28 22:04 J -18280522.81 -18280522.58 -18280522.35 0.0530 0.0074
 Neptune -54762-01-21 14:52 J -18280377.10 -18280376.88 -18280376.65 0.0089 0.0042
 Neptune -54761-01-24 02:52 J -18280009.62 -18280009.38 -18280009.12 0.0089 0.0024
 Neptune -54760-01-25 15:35 J -18279642.11 -18279641.85 -18279641.59 0.0089 0.0004
 Saturn -54759-01-24 07:40 J -18279278.36 -18279278.18 -18279277.98 0.0271 0.0172
 Neptune -54759-01-28 03:35 J -18279274.60 -18279274.35 -18279274.08 0.0089 0.0015
 Neptune -54758-01-30 16:04 J -18278907.06 -18278906.83 -18278906.58 0.0089 0.0034
 Saturn -54758-02-05 17:01 J -18278901.03 -18278900.79 -18278900.55 0.0268 0.0063
 Neptune -54757-02-02 04:47 J -18278539.51 -18278539.30 -18278539.09 0.0089 0.0052
 Neptune -54756-02-03 17:01 J -18278171.93 -18278171.79 -18278171.62 0.0089 0.0071
 Uranus -54751-02-24 05:16 J -18276325.43 -18276325.28 -18276325.11 0.0144 0.0112
 Jupiter -54751-09-02 17:59 J -18276134.91 -18276134.75 -18276134.58 0.0529 0.0364
 Uranus -54750-03-01 07:40 J -18275955.44 -18275955.18 -18275954.93 0.0144 0.0016
 Uranus -54749-03-05 08:37 J -18275585.15 -18275585.14 -18275585.11 0.0143 0.0142
 Mars -54747-07-17 18:42 J -18274720.90 -18274720.72 -18274720.53 0.1774 0.0501
 Saturn -54744-07-25 12:42 J -18273617.06 -18273616.97 -18273616.86 0.0289 0.0262
 Saturn -54743-08-08 11:16 J -18273238.27 -18273238.03 -18273237.78 0.0292 0.0026
 Saturn -54729-01-31 16:18 J -18268314.06 -18268313.82 -18268313.57 0.0270 0.0041
 Saturn -54728-02-11 22:33 J -18267936.72 -18267936.56 -18267936.38 0.0267 0.0189
 Saturn -54714-08-02 08:23 J -18262652.37 -18262652.15 -18262651.92 0.0290 0.0115
 Saturn -54713-08-15 08:52 J -18262273.31 -18262273.13 -18262272.93 0.0293 0.0180
 Jupiter -54709-02-22 15:06 J -18260987.05 -18260986.87 -18260986.67 0.0496 0.0290
 Uranus -54707-08-29 16:47 J -18260068.00 -18260067.80 -18260067.58 0.0135 0.0073
 Uranus -54706-09-02 23:30 J -18259698.76 -18259698.52 -18259698.27 0.0135 0.0030
 Uranus -54705-09-06 06:28 J -18259329.25 -18259329.23 -18259329.17 0.0136 0.0134

Saturn -54700-01-25 03:49 J -18257727.53 -18257727.34 -18257727.13 0.0272 0.0156
 Saturn -54699-02-06 13:11 J -18257350.18 -18257349.95 -18257349.70 0.0268 0.0080
 Jupiter -54697-02-27 05:45 J -18256599.49 -18256599.26 -18256599.03 0.0497 0.0090
 Jupiter -54685-03-02 20:09 J -18252211.73 -18252211.66 -18252211.58 0.0498 0.0470
 Saturn -54685-07-26 10:33 J -18252066.18 -18252066.06 -18252065.93 0.0288 0.0244
 Saturn -54684-08-09 08:37 J -18251687.38 -18251687.14 -18251686.90 0.0292 0.0044
 Neptune -54682-07-22 03:49 J -18250975.40 -18250975.34 -18250975.24 0.0089 0.0084
 Neptune -54681-07-23 14:52 J -18250608.02 -18250607.88 -18250607.68 0.0089 0.0066
 Neptune -54680-07-26 02:23 J -18250240.60 -18250240.40 -18250240.17 0.0089 0.0047
 Jupiter -54680-08-28 04:47 J -18250207.53 -18250207.30 -18250207.08 0.0531 0.0128
 Neptune -54679-07-28 13:54 J -18249873.16 -18249872.92 -18249872.67 0.0089 0.0028
 Neptune -54678-07-31 00:42 J -18249505.71 -18249505.47 -18249505.20 0.0089 0.0010
 Neptune -54677-08-01 11:59 J -18249138.25 -18249138.00 -18249137.74 0.0089 0.0010
 Neptune -54676-08-03 22:33 J -18248770.79 -18248770.56 -18248770.30 0.0089 0.0029
 Neptune -54675-08-06 09:21 J -18248403.31 -18248403.11 -18248402.88 0.0089 0.0047
 Neptune -54674-08-08 19:54 J -18248035.82 -18248035.67 -18248035.47 0.0089 0.0066
 Neptune -54673-08-10 06:42 J -18247668.27 -18247668.22 -18247668.11 0.0089 0.0084
 Saturn -54671-01-20 00:28 J -18247140.54 -18247140.48 -18247140.42 0.0273 0.0265
 Saturn -54670-02-01 12:13 J -18246763.23 -18246762.99 -18246762.74 0.0270 0.0027
 Saturn -54669-02-13 19:11 J -18246385.85 -18246385.70 -18246385.53 0.0267 0.0205
 Mars -54668-07-20 11:45 J -18245863.13 -18245863.01 -18245862.88 0.1781 0.1349
 Jupiter -54668-09-02 04:33 J -18245819.49 -18245819.31 -18245819.13 0.0530 0.0330
 Uranus -54667-02-24 11:59 J -18245644.14 -18245644.00 -18245643.82 0.0144 0.0111
 Uranus -54666-03-01 14:37 J -18245274.15 -18245273.89 -18245273.63 0.0144 0.0018
 Pluto -54656-01-01 12:42 J -18241680.21 -18241679.97 -18241679.71 0.0063 0.0014
 Pluto -54655-01-02 23:59 J -18241313.53 -18241313.50 -18241313.41 0.0064 0.0062
 Saturn -54655-08-03 06:57 J -18241101.43 -18241101.21 -18241100.97 0.0290 0.0097
 Saturn -54654-08-17 07:11 J -18240722.37 -18240722.20 -18240722.02 0.0293 0.0199
 Mars -54646-01-11 07:40 J -18238018.29 -18238018.18 -18238018.07 0.1775 0.1425
 Saturn -54641-01-27 00:28 J -18236176.69 -18236176.48 -18236176.27 0.0272 0.0141

Saturn -54640-02-07 10:04 J -18235799.31 -18235799.08 -18235798.85 0.0269 0.0095
 Jupiter -54626-02-22 03:06 J -18230671.55 -18230671.37 -18230671.19 0.0495 0.0318
 Saturn -54626-07-28 09:21 J -18230515.25 -18230515.11 -18230514.95 0.0288 0.0226
 Saturn -54625-08-10 07:11 J -18230136.43 -18230136.20 -18230135.96 0.0292 0.0063
 Uranus -54623-08-30 01:25 J -18229386.65 -18229386.44 -18229386.22 0.0135 0.0070
 Uranus -54622-09-03 08:09 J -18229017.40 -18229017.16 -18229016.91 0.0135 0.0033
 Jupiter -54614-02-26 13:40 J -18226284.16 -18226283.93 -18226283.69 0.0496 0.0051
 Saturn -54612-01-20 20:37 J -18225589.72 -18225589.64 -18225589.53 0.0273 0.0251
 Saturn -54611-02-02 09:21 J -18225212.36 -18225212.11 -18225211.87 0.0270 0.0011
 Saturn -54610-02-14 16:33 J -18224834.94 -18224834.81 -18224834.67 0.0268 0.0221
 Jupiter -54602-03-03 03:06 J -18221896.48 -18221896.37 -18221896.24 0.0497 0.0429
 Neptune -54600-01-16 01:11 J -18221211.48 -18221211.45 -18221211.39 0.0089 0.0087
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 Jupiter -54597-08-27 14:09 J -18219892.12 -18219891.91 -18219891.69 0.0531 0.0165
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Pluto -54567-07-08 13:11 J -18208985.17 -18208984.95 -18208984.70 0.0080 0.0031
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 Jupiter -54543-02-21 10:47 J -18200356.22 -18200356.05 -18200355.89 0.0494 0.0357
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 Jupiter -54531-02-25 22:18 J -18195968.81 -18195968.57 -18195968.33 0.0496 0.0015
 Saturn -54523-01-28 22:04 J -18193074.80 -18193074.58 -18193074.35 0.0272 0.0107
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 Neptune -54516-07-25 12:57 J -18190340.14 -18190339.96 -18190339.74 0.0089 0.0055
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 Jupiter -54514-08-27 18:28 J -18189576.93 -18189576.73 -18189576.52 0.0531 0.0228
 Neptune -54513-07-31 23:01 J -18189237.80 -18189237.54 -18189237.28 0.0089 0.0002
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 Jupiter -54502-09-01 16:47 J -18185189.01 -18185188.80 -18185188.59 0.0530 0.0224
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 Uranus -54498-03-02 04:33 J -18183911.56 -18183911.31 -18183911.05 0.0144 0.0021

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 Saturn -54463-02-11 11:01 J -18171146.24 -18171146.04 -18171145.83 0.0269 0.0150
 Mars -54463-07-18 05:59 J -18170989.43 -18170989.25 -18170989.07 0.1765 0.0614
 Jupiter -54460-02-20 17:16 J -18170040.92 -18170040.78 -18170040.65 0.0495 0.0403
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 Saturn -54449-08-01 04:04 J -18165861.53 -18165861.33 -18165861.12 0.0289 0.0152
 Jupiter -54448-02-25 05:45 J -18165653.50 -18165653.26 -18165653.02 0.0496 0.0029
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 Jupiter -54436-03-01 17:30 J -18161265.93 -18161265.77 -18161265.60 0.0496 0.0346
 Neptune -54435-01-17 23:01 J -18160943.65 -18160943.54 -18160943.39 0.0089 0.0077
 Saturn -54435-01-25 00:13 J -18160936.66 -18160936.49 -18160936.31 0.0273 0.0195
 Neptune -54434-01-20 11:16 J -18160576.20 -18160576.03 -18160575.81 0.0089 0.0058
 Saturn -54434-02-06 12:42 J -18160559.22 -18160558.97 -18160558.73 0.0270 0.0047
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 Neptune -54430-01-29 12:28 J -18159106.23 -18159105.98 -18159105.72 0.0089 0.0019
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 Uranus -54414-03-02 14:37 J -18153230.15 -18153229.89 -18153229.64 0.0144 0.0026
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 Saturn -54389-08-16 15:21 J -18143931.05 -18143930.86 -18143930.66 0.0292 0.0174
 Mars -54384-07-20 22:04 J -18142131.72 -18142131.58 -18142131.44 0.1771 0.1191
 Jupiter -54377-02-20 22:18 J -18139725.66 -18139725.57 -18139725.48 0.0494 0.0450
 Saturn -54376-01-26 07:25 J -18139385.38 -18139385.19 -18139384.99 0.0273 0.0170
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 Jupiter -54365-02-25 09:06 J -18135338.35 -18135338.12 -18135337.88 0.0495 0.0084
 Mars -54362-01-11 14:37 J -18134286.95 -18134286.89 -18134286.84 0.1785 0.1710
 Saturn -54361-07-28 08:52 J -18133723.26 -18133723.13 -18133723.00 0.0287 0.0241
 Saturn -54360-08-11 03:49 J -18133344.58 -18133344.34 -18133344.09 0.0290 0.0045
 Jupiter -54353-02-29 18:57 J -18130950.90 -18130950.71 -18130950.51 0.0496 0.0283
 Neptune -54353-07-22 12:28 J -18130807.06 -18130806.98 -18130806.86 0.0089 0.0082
 Neptune -54352-07-24 23:30 J -18130439.68 -18130439.52 -18130439.32 0.0089 0.0063
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 Mars -54283-01-14 07:54 J -18105429.36 -18105429.17 -18105428.98 0.1778 0.0175
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 Uranus -54246-03-03 14:37 J -18091867.12 -18091866.89 -18091866.63 0.0144 0.0042
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 Saturn -54242-08-15 15:21 J -18090241.08 -18090240.86 -18090240.64 0.0291 0.0120
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 Saturn -54229-01-25 06:28 J -18085695.37 -18085695.23 -18085695.07 0.0273 0.0215
 Saturn -54228-02-05 18:42 J -18085317.97 -18085317.72 -18085317.48 0.0270 0.0026
 Saturn -54227-02-18 01:54 J -18084940.48 -18084940.42 -18084940.35 0.0268 0.0257
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 Saturn -54212-08-22 18:42 J -18079275.77 -18079275.72 -18079275.65 0.0294 0.0285
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 Uranus -54202-09-05 06:42 J -18075610.45 -18075610.22 -18075609.98 0.0135 0.0052
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 Neptune -54182-08-07 04:18 J -18068334.53 -18068334.32 -18068334.09 0.0089 0.0045

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 Neptune -54180-08-11 01:54 J -18067599.48 -18067599.42 -18067599.31 0.0089 0.0084
 Mars -54179-07-18 18:28 J -18067257.90 -18067257.73 -18067257.55 0.1756 0.0690
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 Jupiter -54170-08-29 12:57 J -18063929.19 -18063928.96 -18063928.73 0.0532 0.0100
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 Saturn -54140-02-02 07:11 J -18053179.44 -18053179.20 -18053178.95 0.0271 0.0049
 Saturn -54139-02-14 16:04 J -18052802.01 -18052801.83 -18052801.65 0.0268 0.0187
 Saturn -54125-08-04 21:35 J -18047516.82 -18047516.60 -18047516.36 0.0289 0.0103
 Saturn -54124-08-18 20:37 J -18047137.81 -18047137.64 -18047137.45 0.0292 0.0193
 Uranus -54119-09-01 10:04 J -18045298.31 -18045298.08 -18045297.84 0.0134 0.0047
 Uranus -54118-09-05 16:18 J -18044929.03 -18044928.82 -18044928.58 0.0135 0.0057
 Jupiter -54116-02-22 11:45 J -18044393.21 -18044393.01 -18044392.82 0.0494 0.0285
 Saturn -54111-01-28 09:06 J -18042592.32 -18042592.12 -18042591.91 0.0273 0.0152
 Saturn -54110-02-09 19:25 J -18042214.91 -18042214.69 -18042214.45 0.0270 0.0089
 Neptune -54106-01-19 04:33 J -18040775.42 -18040775.31 -18040775.15 0.0089 0.0076
 Neptune -54105-01-21 16:47 J -18040407.98 -18040407.80 -18040407.58 0.0089 0.0057
 Neptune -54104-01-23 05:01 J -18040040.50 -18040040.29 -18040040.03 0.0089 0.0037
 Jupiter -54104-02-26 23:30 J -18040005.75 -18040005.52 -18040005.28 0.0495 0.0090
 Neptune -54103-01-25 17:45 J -18039673.01 -18039672.76 -18039672.50 0.0089 0.0017
 Neptune -54102-01-28 05:45 J -18039305.51 -18039305.26 -18039304.99 0.0089 0.0004
 Neptune -54101-01-30 17:59 J -18038937.99 -18038937.75 -18038937.49 0.0089 0.0023
 Neptune -54100-02-01 05:59 J -18038570.46 -18038570.25 -18038570.00 0.0089 0.0043

Mars -54100-07-21 09:35 J -18038400.25 -18038400.10 -18038399.95 0.1762 0.1065
 Neptune -54099-02-03 18:42 J -18038202.90 -18038202.72 -18038202.54 0.0089 0.0062
 Neptune -54098-02-06 06:28 J -18037835.31 -18037835.23 -18037835.11 0.0089 0.0082
 Saturn -54096-07-29 23:59 J -18036930.63 -18036930.50 -18036930.35 0.0287 0.0233
 Saturn -54095-08-12 20:09 J -18036551.90 -18036551.66 -18036551.42 0.0291 0.0056
 Jupiter -54092-03-03 12:42 J -18035618.03 -18035617.97 -18035617.89 0.0496 0.0472
 Jupiter -54087-08-28 12:57 J -18033614.18 -18033613.96 -18033613.75 0.0532 0.0181
 Saturn -54082-01-23 03:49 J -18032005.40 -18032005.34 -18032005.27 0.0274 0.0263
 Saturn -54081-02-04 17:01 J -18031628.03 -18031627.79 -18031627.54 0.0271 0.0020
 Saturn -54080-02-16 01:11 J -18031250.58 -18031250.45 -18031250.29 0.0268 0.0215
 Uranus -54079-02-27 07:25 J -18030874.38 -18030874.19 -18030873.95 0.0144 0.0080
 Uranus -54078-03-04 10:04 J -18030504.31 -18030504.08 -18030503.83 0.0144 0.0052
 Jupiter -54075-09-02 08:09 J -18029226.35 -18029226.16 -18029225.95 0.0531 0.0267
 Pluto -54070-07-11 19:54 J -18027452.92 -18027452.67 -18027452.41 0.0080 0.0016
 Saturn -54066-08-07 05:59 J -18025965.48 -18025965.25 -18025965.01 0.0289 0.0072
 Saturn -54065-08-20 05:16 J -18025586.42 -18025586.28 -18025586.11 0.0293 0.0225
 Saturn -54052-01-29 18:42 J -18021040.93 -18021040.72 -18021040.49 0.0272 0.0124
 Saturn -54051-02-11 05:01 J -18020663.51 -18020663.29 -18020663.07 0.0269 0.0116
 Saturn -54037-07-31 06:42 J -18015379.38 -18015379.22 -18015379.05 0.0288 0.0206
 Saturn -54036-08-14 02:52 J -18015000.60 -18015000.38 -18015000.14 0.0291 0.0086
 Uranus -54035-09-01 19:25 J -18014616.92 -18014616.69 -18014616.44 0.0134 0.0043
 Uranus -54034-09-06 01:25 J -18014247.64 -18014247.44 -18014247.20 0.0135 0.0061
 Jupiter -54033-02-22 17:45 J -18014077.93 -18014077.76 -18014077.58 0.0494 0.0335
 Neptune -54024-07-23 18:13 J -18010638.82 -18010638.74 -18010638.61 0.0089 0.0081
 Saturn -54023-01-24 10:47 J -18010454.15 -18010454.05 -18010453.91 0.0274 0.0238
 Neptune -54023-07-26 05:59 J -18010271.44 -18010271.25 -18010271.07 0.0089 0.0061
 Saturn -54022-02-05 23:59 J -18010076.74 -18010076.50 -18010076.25 0.0270 0.0008
 Neptune -54022-07-28 16:33 J -18009904.02 -18009903.81 -18009903.56 0.0089 0.0042
 Saturn -54021-02-18 07:54 J -18009699.26 -18009699.17 -18009699.05 0.0268 0.0241
 Jupiter -54021-02-27 06:57 J -18009690.44 -18009690.21 -18009689.97 0.0495 0.0045

Neptune	-54021-07-30 04:04 J	-18009536.58	-18009536.33	-18009536.08	0.0089	0.0022
Neptune	-54020-08-01 15:06 J	-18009169.12	-18009168.87	-18009168.61	0.0089	0.0003
Neptune	-54019-08-04 02:09 J	-18008801.66	-18008801.41	-18008801.16	0.0089	0.0017
Neptune	-54018-08-06 12:57 J	-18008434.18	-18008433.96	-18008433.72	0.0089	0.0037
Neptune	-54017-08-07 23:30 J	-18008066.69	-18008066.52	-18008066.30	0.0089	0.0057
Neptune	-54016-08-10 11:01 J	-18007699.15	-18007699.04	-18007698.89	0.0089	0.0076
Jupiter	-54009-03-02 19:25 J	-18005302.81	-18005302.69	-18005302.57	0.0496	0.0423
Saturn	-54007-08-08 11:16 J	-18004414.27	-18004414.03	-18004413.79	0.0290	0.0045
Saturn	-54006-08-22 11:01 J	-18004035.16	-18004035.04	-18004034.92	0.0293	0.0252
Jupiter	-54004-08-27 12:57 J	-18003299.15	-18003298.96	-18003298.75	0.0533	0.0263

54TH MILLENNIUM BCE

This is a list of transits of Earth in the 54th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Mars	-53999-01-14 12:57 J	-18001698.15	-18001697.96	-18001697.76	0.1787	0.0139		
Uranus	-53995-02-27 16:33 J	-18000193.02	-18000192.81	-18000192.58	0.0144	0.0075		
Uranus	-53994-03-04 18:57 J	-17999822.93	-17999822.71	-17999822.46	0.0144	0.0056		
Saturn	-53993-02-01 00:57 J	-17999489.69	-17999489.46	-17999489.23	0.0272	0.0098		
Saturn	-53992-02-12 10:47 J	-17999112.26	-17999112.05	-17999111.84	0.0269	0.0141		
Jupiter	-53992-09-01 15:35 J	-17998911.06	-17998910.85	-17998910.64	0.0532	0.0215		
Saturn	-53978-08-02 09:49 J	-17993828.26	-17993828.09	-17993827.89	0.0288	0.0183		
Saturn	-53977-08-15 06:13 J	-17993449.46	-17993449.24	-17993449.01	0.0291	0.0110		
Saturn	-53964-01-25 14:52 J	-17988903.03	-17988902.88	-17988902.73	0.0274	0.0215		

Saturn -53963-02-07 03:35 J -17988525.59 -17988525.35 -17988525.10 0.0270 0.0031
 Saturn -53962-02-19 11:30 J -17988148.05 -17988148.02 -17988147.96 0.0268 0.0264
 Uranus -53951-09-02 06:42 J -17983935.46 -17983935.22 -17983934.98 0.0134 0.0037
 Jupiter -53950-02-22 02:37 J -17983762.54 -17983762.39 -17983762.24 0.0494 0.0376
 Uranus -53950-09-06 12:57 J -17983566.17 -17983565.96 -17983565.73 0.0135 0.0066
 Saturn -53948-08-09 12:13 J -17982863.23 -17982862.99 -17982862.75 0.0290 0.0022
 Saturn -53947-08-23 11:45 J -17982484.08 -17982484.01 -17982483.92 0.0293 0.0276
 Neptune -53942-01-18 11:45 J -17980875.05 -17980875.01 -17980874.92 0.0089 0.0086
 Neptune -53941-01-21 00:13 J -17980507.65 -17980507.49 -17980507.31 0.0089 0.0066
 Neptune -53940-01-22 12:28 J -17980140.19 -17980139.98 -17980139.75 0.0089 0.0046
 Neptune -53939-01-25 00:42 J -17979772.72 -17979772.47 -17979772.22 0.0089 0.0026
 Neptune -53938-01-27 12:57 J -17979405.21 -17979404.96 -17979404.70 0.0089 0.0006
 Jupiter -53938-02-26 10:47 J -17979375.29 -17979375.05 -17979374.82 0.0494 0.0013
 Neptune -53937-01-30 01:11 J -17979037.70 -17979037.45 -17979037.19 0.0089 0.0014
 Neptune -53936-01-31 13:25 J -17978670.17 -17978669.94 -17978669.69 0.0089 0.0034
 Neptune -53935-02-03 01:40 J -17978302.63 -17978302.43 -17978302.22 0.0089 0.0054
 Saturn -53934-02-02 03:21 J -17977938.59 -17977938.36 -17977938.12 0.0272 0.0077
 Neptune -53934-02-05 13:54 J -17977935.05 -17977934.92 -17977934.76 0.0089 0.0074
 Saturn -53933-02-14 13:25 J -17977561.13 -17977560.94 -17977560.74 0.0269 0.0163
 Jupiter -53926-03-02 23:45 J -17974987.67 -17974987.51 -17974987.35 0.0495 0.0368
 Jupiter -53921-08-26 22:47 J -17972983.74 -17972983.55 -17972983.36 0.0533 0.0303
 Mars -53920-01-17 06:57 J -17972840.24 -17972840.21 -17972840.19 0.1780 0.1760
 Saturn -53919-08-03 10:33 J -17972277.25 -17972277.06 -17972276.84 0.0288 0.0162
 Saturn -53918-08-17 06:57 J -17971898.42 -17971898.21 -17971897.99 0.0291 0.0132
 Uranus -53911-02-28 02:37 J -17969511.61 -17969511.39 -17969511.16 0.0144 0.0070
 Pluto -53910-01-07 05:59 J -17969198.51 -17969198.25 -17969197.99 0.0064 0.0005
 Uranus -53910-03-05 05:16 J -17969141.51 -17969141.28 -17969141.04 0.0144 0.0060
 Jupiter -53909-08-31 23:01 J -17968595.75 -17968595.54 -17968595.32 0.0532 0.0166
 Saturn -53905-01-27 15:06 J -17967352.03 -17967351.87 -17967351.69 0.0274 0.0195
 Saturn -53904-02-08 04:04 J -17966974.57 -17966974.33 -17966974.08 0.0270 0.0051

Mars -53895-07-19 07:11 J -17963526.37 -17963526.20 -17963526.03 0.1747 0.0758
 Saturn -53889-08-10 10:33 J -17961312.30 -17961312.06 -17961311.81 0.0290 0.0006
 Saturn -53875-02-03 02:37 J -17956387.63 -17956387.39 -17956387.15 0.0272 0.0058
 Saturn -53874-02-15 12:57 J -17956010.14 -17956009.96 -17956009.77 0.0269 0.0182
 Uranus -53868-08-29 11:16 J -17953623.04 -17953623.03 -17953622.98 0.0134 0.0133
 Jupiter -53867-02-21 09:06 J -17953447.23 -17953447.12 -17953446.99 0.0493 0.0422
 Uranus -53867-09-02 17:16 J -17953254.01 -17953253.78 -17953253.52 0.0134 0.0032
 Uranus -53866-09-06 23:30 J -17952884.72 -17952884.52 -17952884.29 0.0135 0.0072
 Saturn -53860-08-04 09:21 J -17950726.31 -17950726.11 -17950725.89 0.0287 0.0142
 Neptune -53859-07-25 13:25 J -17950371.07 -17950370.94 -17950370.77 0.0089 0.0071
 Saturn -53859-08-18 05:01 J -17950347.48 -17950347.29 -17950347.07 0.0291 0.0152
 Neptune -53858-07-28 00:57 J -17950003.67 -17950003.46 -17950003.25 0.0089 0.0051
 Neptune -53857-07-29 11:45 J -17949636.23 -17949636.01 -17949635.75 0.0089 0.0032
 Neptune -53856-07-31 23:16 J -17949268.78 -17949268.53 -17949268.27 0.0089 0.0011
 Jupiter -53855-02-25 21:35 J -17949059.84 -17949059.60 -17949059.36 0.0494 0.0044
 Neptune -53855-08-03 10:18 J -17948901.32 -17948901.07 -17948900.81 0.0089 0.0009
 Neptune -53854-08-05 21:06 J -17948533.85 -17948533.62 -17948533.36 0.0089 0.0029
 Neptune -53853-08-07 08:23 J -17948166.36 -17948166.15 -17948165.93 0.0089 0.0048
 Neptune -53852-08-09 19:11 J -17947798.85 -17947798.70 -17947798.52 0.0089 0.0068
 Neptune -53851-08-12 05:59 J -17947431.26 -17947431.25 -17947431.19 0.0089 0.0088
 Saturn -53846-01-28 12:57 J -17945801.15 -17945800.96 -17945800.77 0.0274 0.0179
 Saturn -53845-02-10 02:09 J -17945423.65 -17945423.41 -17945423.17 0.0270 0.0067
 Jupiter -53843-03-02 11:30 J -17944672.19 -17944672.02 -17944671.85 0.0496 0.0341
 Jupiter -53838-08-27 04:04 J -17942668.50 -17942668.33 -17942668.16 0.0533 0.0365
 Saturn -53831-07-29 14:09 J -17940139.98 -17940139.91 -17940139.83 0.0286 0.0271
 Saturn -53830-08-12 07:40 J -17939761.42 -17939761.18 -17939760.94 0.0290 0.0016
 Uranus -53827-02-28 15:35 J -17938830.08 -17938829.85 -17938829.61 0.0144 0.0062
 Uranus -53826-03-05 17:45 J -17938459.97 -17938459.76 -17938459.52 0.0144 0.0069
 Jupiter -53826-09-01 04:33 J -17938280.54 -17938280.31 -17938280.09 0.0532 0.0106
 Pluto -53822-07-12 06:13 J -17936870.31 -17936870.24 -17936870.12 0.0081 0.0075

Pluto -53821-07-13 11:45 J -17936503.04 -17936503.01 -17936502.92 0.0080 0.0078
 Saturn -53816-02-03 23:45 J -17934836.75 -17934836.51 -17934836.27 0.0272 0.0042
 Mars -53816-07-21 21:49 J -17934668.75 -17934668.59 -17934668.43 0.1753 0.0954
 Saturn -53815-02-16 10:04 J -17934459.23 -17934459.08 -17934458.90 0.0269 0.0200
 Saturn -53801-08-05 07:40 J -17929175.39 -17929175.18 -17929174.95 0.0287 0.0124
 Saturn -53800-08-19 03:21 J -17928796.56 -17928796.36 -17928796.16 0.0291 0.0170
 Saturn -53787-01-29 08:37 J -17924250.33 -17924250.14 -17924249.93 0.0274 0.0164
 Saturn -53786-02-10 22:18 J -17923872.80 -17923872.57 -17923872.33 0.0270 0.0083
 Jupiter -53784-02-20 21:21 J -17923131.70 -17923131.61 -17923131.51 0.0493 0.0449
 Uranus -53784-08-29 23:45 J -17922941.57 -17922941.51 -17922941.41 0.0134 0.0126
 Uranus -53783-09-03 05:59 J -17922572.50 -17922572.25 -17922572.00 0.0134 0.0024
 Uranus -53782-09-07 12:28 J -17922203.18 -17922202.98 -17922202.78 0.0135 0.0079
 Neptune -53777-01-20 07:11 J -17920607.32 -17920607.20 -17920607.05 0.0089 0.0076
 Neptune -53776-01-21 19:11 J -17920239.89 -17920239.70 -17920239.49 0.0089 0.0056
 Neptune -53775-01-24 07:11 J -17919872.42 -17919872.20 -17919871.95 0.0089 0.0036
 Neptune -53774-01-26 19:25 J -17919504.94 -17919504.69 -17919504.43 0.0089 0.0016
 Neptune -53773-01-29 07:54 J -17919137.43 -17919137.17 -17919136.91 0.0089 0.0005
 Neptune -53772-01-30 19:54 J -17918769.91 -17918769.67 -17918769.42 0.0089 0.0025
 Jupiter -53772-02-25 09:35 J -17918744.33 -17918744.10 -17918743.86 0.0494 0.0074
 Saturn -53772-07-30 11:45 J -17918589.12 -17918589.01 -17918588.90 0.0286 0.0253
 Neptune -53771-02-02 08:09 J -17918402.37 -17918402.16 -17918401.93 0.0089 0.0045
 Saturn -53771-08-13 04:47 J -17918210.55 -17918210.30 -17918210.06 0.0290 0.0034
 Neptune -53770-02-04 20:37 J -17918034.82 -17918034.64 -17918034.47 0.0089 0.0065
 Neptune -53769-02-07 08:09 J -17917667.19 -17917667.16 -17917667.06 0.0089 0.0086
 Jupiter -53760-03-01 19:25 J -17914356.88 -17914356.69 -17914356.50 0.0495 0.0301
 Saturn -53757-02-05 19:40 J -17913285.92 -17913285.68 -17913285.43 0.0272 0.0027
 Saturn -53756-02-17 06:28 J -17912908.36 -17912908.23 -17912908.07 0.0269 0.0215
 Jupiter -53755-08-26 11:59 J -17912353.13 -17912353.00 -17912352.84 0.0534 0.0412
 Uranus -53743-03-01 05:45 J -17908148.49 -17908148.26 -17908148.01 0.0144 0.0052
 Jupiter -53743-08-31 15:21 J -17907965.09 -17907964.86 -17907964.63 0.0533 0.0073

Uranus -53742-03-06 08:09 J -17907778.37 -17907778.16 -17907777.94 0.0144 0.0079
 Saturn -53742-08-07 06:13 J -17907624.46 -17907624.24 -17907624.01 0.0287 0.0106
 Saturn -53741-08-20 01:25 J -17907245.62 -17907245.44 -17907245.25 0.0291 0.0189
 Saturn -53728-01-30 04:33 J -17902699.50 -17902699.31 -17902699.09 0.0274 0.0149
 Saturn -53727-02-11 18:42 J -17902321.95 -17902321.72 -17902321.49 0.0271 0.0099
 Mars -53715-01-14 15:35 J -17897967.04 -17897966.85 -17897966.67 0.1797 0.0536
 Saturn -53713-07-31 10:33 J -17897038.19 -17897038.06 -17897037.92 0.0286 0.0235
 Saturn -53712-08-14 03:21 J -17896659.60 -17896659.36 -17896659.12 0.0290 0.0053
 Jupiter -53701-02-21 06:57 J -17892816.25 -17892816.21 -17892816.17 0.0492 0.0483
 Uranus -53700-08-30 11:30 J -17892260.13 -17892260.02 -17892259.91 0.0134 0.0119
 Saturn -53699-01-24 22:47 J -17892112.60 -17892112.55 -17892112.47 0.0276 0.0265
 Uranus -53699-09-03 17:16 J -17891891.03 -17891890.78 -17891890.53 0.0134 0.0017
 Saturn -53698-02-06 15:49 J -17891735.09 -17891734.84 -17891734.59 0.0272 0.0012
 Uranus -53698-09-07 23:30 J -17891521.70 -17891521.52 -17891521.31 0.0135 0.0086
 Saturn -53697-02-19 03:06 J -17891357.49 -17891357.37 -17891357.23 0.0269 0.0230
 Neptune -53695-07-24 19:40 J -17890470.75 -17890470.68 -17890470.55 0.0089 0.0082
 Neptune -53694-07-27 07:11 J -17890103.36 -17890103.20 -17890102.99 0.0089 0.0062
 Neptune -53693-07-28 18:28 J -17889735.93 -17889735.73 -17889735.48 0.0089 0.0042
 Neptune -53692-07-31 06:13 J -17889368.49 -17889368.24 -17889367.99 0.0089 0.0021
 Neptune -53691-08-02 17:16 J -17889001.04 -17889000.78 -17889000.52 0.0089 0.0001
 Neptune -53690-08-05 04:18 J -17888633.57 -17888633.32 -17888633.07 0.0089 0.0019
 Jupiter -53689-02-25 18:42 J -17888428.95 -17888428.72 -17888428.49 0.0493 0.0109
 Neptune -53689-08-06 15:21 J -17888266.09 -17888265.86 -17888265.63 0.0089 0.0039
 Neptune -53688-08-09 02:09 J -17887898.59 -17887898.41 -17887898.21 0.0089 0.0059
 Neptune -53687-08-11 12:57 J -17887531.06 -17887530.96 -17887530.83 0.0089 0.0079
 Saturn -53683-08-08 06:57 J -17886073.44 -17886073.21 -17886072.97 0.0287 0.0086
 Saturn -53682-08-22 01:54 J -17885694.58 -17885694.42 -17885694.25 0.0291 0.0210
 Jupiter -53677-03-01 05:59 J -17884041.44 -17884041.25 -17884041.05 0.0495 0.0270
 Jupiter -53672-08-25 22:04 J -17882037.69 -17882037.58 -17882037.45 0.0534 0.0453
 Saturn -53669-02-01 01:40 J -17881148.64 -17881148.43 -17881148.21 0.0274 0.0133

Saturn -53668-02-12 15:49 J -17880771.06 -17880770.84 -17880770.62 0.0271 0.0115
 Pluto -53662-01-08 05:45 J -17878615.46 -17878615.26 -17878615.02 0.0063 0.0034
 Pluto -53661-01-09 17:30 J -17878248.96 -17878248.77 -17878248.56 0.0064 0.0041
 Jupiter -53660-08-30 21:21 J -17877649.84 -17877649.61 -17877649.38 0.0533 0.0016
 Uranus -53659-03-01 19:40 J -17877466.92 -17877466.68 -17877466.43 0.0144 0.0042
 Uranus -53658-03-06 21:49 J -17877096.77 -17877096.59 -17877096.37 0.0144 0.0090
 Saturn -53654-08-02 11:16 J -17875487.18 -17875487.03 -17875486.86 0.0286 0.0215
 Saturn -53653-08-15 04:04 J -17875108.57 -17875108.33 -17875108.10 0.0290 0.0074
 Jupiter -53648-09-04 20:52 J -17873261.72 -17873261.63 -17873261.54 0.0532 0.0482
 Saturn -53640-01-25 20:52 J -17870561.74 -17870561.63 -17870561.53 0.0276 0.0248
 Saturn -53639-02-07 13:40 J -17870184.18 -17870183.93 -17870183.69 0.0272 0.0006
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 Mars -53636-01-17 10:04 J -17869109.19 -17869109.08 -17869108.96 0.1790 0.1420
 Saturn -53624-08-09 10:47 J -17864522.28 -17864522.05 -17864521.81 0.0287 0.0062
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 Neptune -53613-01-19 12:57 J -17860706.99 -17860706.96 -17860706.88 0.0089 0.0087
 Neptune -53612-01-21 00:57 J -17860339.61 -17860339.46 -17860339.27 0.0089 0.0067
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 Jupiter -53411-08-29 01:25 J -17786704.65 -17786704.44 -17786704.23 0.0534 0.0208
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 Saturn -53389-08-02 20:37 J -17778694.80 -17778694.64 -17778694.49 0.0285 0.0219
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 Neptune -53365-07-27 04:47 J -17769935.46 -17769935.30 -17769935.10 0.0089 0.0064
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Saturn -53359-08-10 17:59 J -17767729.99 -17767729.75 -17767729.51 0.0287 0.0063
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 Jupiter -53357-02-23 17:45 J -17767167.94 -17767167.76 -17767167.58 0.0493 0.0308
 Mars -53352-01-17 11:45 J -17765378.17 -17765378.01 -17765377.85 0.1801 0.1013
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 Saturn -53344-02-14 19:25 J -17762427.91 -17762427.69 -17762427.47 0.0271 0.0128
 Jupiter -53333-03-03 15:21 J -17758392.95 -17758392.86 -17758392.76 0.0494 0.0449
 Saturn -53330-08-05 12:28 J -17757143.16 -17757142.98 -17757142.79 0.0286 0.0184
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 Jupiter -53316-09-01 23:01 J -17752001.76 -17752001.54 -17752001.32 0.0534 0.0177
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 Uranus -53155-03-05 00:28 J -17693377.74 -17693377.48 -17693377.22 0.0145 0.0010
 Uranus -53154-03-10 03:06 J -17693007.38 -17693007.37 -17693007.32 0.0144 0.0144
 Saturn -53153-08-10 00:42 J -17692488.70 -17692488.47 -17692488.23 0.0287 0.0084
 Saturn -53152-08-23 19:25 J -17692109.85 -17692109.69 -17692109.52 0.0290 0.0213
 Jupiter -53150-08-31 17:01 J -17691372.02 -17691371.79 -17691371.56 0.0534 0.0014
 Mars -53147-01-14 15:21 J -17690504.95 -17690504.86 -17690504.76 0.1818 0.1558
 Saturn -53139-02-02 16:33 J -17687564.02 -17687563.81 -17687563.59 0.0274 0.0136
 Saturn -53138-02-15 06:57 J -17687186.43 -17687186.21 -17687185.98 0.0271 0.0116
 Jupiter -53138-09-05 20:09 J -17686983.75 -17686983.66 -17686983.55 0.0533 0.0479
 Saturn -53124-08-04 04:18 J -17681902.47 -17681902.32 -17681902.15 0.0285 0.0218
 Saturn -53123-08-17 19:40 J -17681523.91 -17681523.68 -17681523.44 0.0289 0.0073
 Neptune -53119-01-21 04:18 J -17680271.41 -17680271.32 -17680271.19 0.0089 0.0080

Neptune -53118-01-23 16:18 J -17679904.00 -17679903.82 -17679903.62 0.0089 0.0059
 Neptune -53117-01-26 04:18 J -17679536.55 -17679536.32 -17679536.08 0.0089 0.0038
 Neptune -53116-01-27 16:18 J -17679169.07 -17679168.82 -17679168.56 0.0089 0.0017
 Neptune -53115-01-30 04:04 J -17678801.58 -17678801.33 -17678801.06 0.0089 0.0005
 Neptune -53114-02-01 15:49 J -17678434.07 -17678433.84 -17678433.58 0.0089 0.0026
 Neptune -53113-02-04 03:35 J -17678066.55 -17678066.35 -17678066.11 0.0089 0.0047
 Neptune -53112-02-05 16:18 J -17677698.99 -17677698.82 -17677698.65 0.0089 0.0067
 Uranus -53112-09-03 10:04 J -17677489.29 -17677489.08 -17677488.84 0.0134 0.0060
 Neptune -53111-02-08 03:49 J -17677331.34 -17677331.34 -17677331.30 0.0088 0.0088
 Uranus -53111-09-07 15:49 J -17677120.07 -17677119.84 -17677119.60 0.0134 0.0043
 Saturn -53110-01-28 06:42 J -17676977.31 -17676977.22 -17676977.13 0.0276 0.0255
 Saturn -53109-02-10 00:13 J -17676599.73 -17676599.49 -17676599.24 0.0273 0.0004
 Jupiter -53108-02-21 03:35 J -17676222.35 -17676222.35 -17676222.32 0.0492 0.0491
 Saturn -53108-02-21 12:28 J -17676222.07 -17676221.98 -17676221.87 0.0270 0.0246
 Jupiter -53096-02-25 14:09 J -17671835.13 -17671834.91 -17671834.67 0.0493 0.0115
 Saturn -53094-08-12 06:42 J -17670937.46 -17670937.22 -17670936.98 0.0287 0.0057
 Saturn -53093-08-25 01:11 J -17670558.57 -17670558.45 -17670558.30 0.0291 0.0242
 Jupiter -53084-03-01 21:21 J -17667447.81 -17667447.61 -17667447.40 0.0493 0.0253
 Saturn -53080-02-03 23:45 J -17666012.73 -17666012.51 -17666012.27 0.0274 0.0109
 Saturn -53079-02-16 14:09 J -17665635.12 -17665634.91 -17665634.70 0.0271 0.0142
 Pluto -53076-07-17 16:47 J -17664388.05 -17664387.80 -17664387.54 0.0080 0.0007
 Uranus -53072-02-28 11:59 J -17663066.15 -17663066.00 -17663065.83 0.0145 0.0113
 Uranus -53071-03-05 16:04 J -17662696.08 -17662695.83 -17662695.58 0.0145 0.0022
 Mars -53068-01-17 12:42 J -17661647.16 -17661646.97 -17661646.79 0.1811 0.0568
 Jupiter -53067-08-30 23:59 J -17661056.73 -17661056.50 -17661056.27 0.0534 0.0066
 Saturn -53065-08-05 08:37 J -17660351.31 -17660351.14 -17660350.96 0.0285 0.0193
 Saturn -53064-08-19 00:13 J -17659972.72 -17659972.49 -17659972.26 0.0289 0.0099
 Jupiter -53055-09-05 00:42 J -17656668.61 -17656668.47 -17656668.32 0.0533 0.0415
 Saturn -53051-01-29 11:59 J -17655426.12 -17655426.00 -17655425.86 0.0276 0.0231
 Saturn -53050-02-11 05:30 J -17655048.51 -17655048.27 -17655048.02 0.0272 0.0026

Mars -53043-07-21 05:16 J -17652331.45 -17652331.28 -17652331.11 0.1722 0.0785
 Neptune -53037-07-25 11:45 J -17650135.01 -17650135.01 -17650134.93 0.0089 0.0088
 Neptune -53036-07-27 23:30 J -17649767.66 -17649767.52 -17649767.33 0.0089 0.0067
 Neptune -53035-07-30 11:01 J -17649400.24 -17649400.04 -17649399.80 0.0089 0.0046
 Saturn -53035-08-13 08:52 J -17649386.37 -17649386.13 -17649385.88 0.0288 0.0033
 Neptune -53034-08-01 22:33 J -17649032.80 -17649032.56 -17649032.30 0.0089 0.0025
 Saturn -53034-08-27 04:04 J -17649007.43 -17649007.33 -17649007.24 0.0291 0.0266
 Neptune -53033-08-03 10:04 J -17648665.33 -17648665.08 -17648664.82 0.0089 0.0004
 Neptune -53032-08-05 21:21 J -17648297.85 -17648297.61 -17648297.35 0.0089 0.0018
 Neptune -53031-08-08 08:52 J -17647930.35 -17647930.13 -17647929.89 0.0089 0.0039
 Neptune -53030-08-10 19:54 J -17647562.85 -17647562.67 -17647562.48 0.0089 0.0060
 Neptune -53029-08-12 06:57 J -17647195.30 -17647195.21 -17647195.09 0.0089 0.0081
 Uranus -53028-09-04 00:13 J -17646807.72 -17646807.49 -17646807.25 0.0134 0.0050
 Uranus -53027-09-08 05:30 J -17646438.50 -17646438.27 -17646438.03 0.0134 0.0053
 Saturn -53021-02-06 04:04 J -17644461.56 -17644461.33 -17644461.09 0.0274 0.0086
 Saturn -53020-02-17 18:13 J -17644083.93 -17644083.74 -17644083.54 0.0271 0.0166
 Jupiter -53013-02-25 18:57 J -17641519.93 -17641519.71 -17641519.48 0.0492 0.0170
 Saturn -53006-08-07 10:47 J -17638800.24 -17638800.05 -17638799.85 0.0285 0.0171
 Saturn -53005-08-20 02:09 J -17638421.62 -17638421.41 -17638421.18 0.0289 0.0123
 Jupiter -53001-03-01 06:13 J -17637132.45 -17637132.24 -17637132.03 0.0493 0.0214

53RD MILLENNIUM BCE

This is a list of transits of Earth in the 53rd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								

TIME

Saturn -52992-01-30 13:54 J -17633875.07 -17633874.92 -17633874.75 0.0276 0.0210
Saturn -52991-02-12 07:25 J -17633497.43 -17633497.19 -17633496.95 0.0272 0.0047
Uranus -52988-02-28 23:16 J -17632384.69 -17632384.53 -17632384.34 0.0145 0.0106
Uranus -52987-03-06 03:35 J -17632014.60 -17632014.35 -17632014.09 0.0145 0.0030
Jupiter -52984-08-30 02:37 J -17630741.61 -17630741.39 -17630741.17 0.0534 0.0140
Saturn -52976-08-14 08:23 J -17627835.39 -17627835.15 -17627834.91 0.0288 0.0011
Saturn -52975-08-28 03:06 J -17627456.39 -17627456.37 -17627456.33 0.0291 0.0288
Jupiter -52972-09-04 03:35 J -17626353.52 -17626353.35 -17626353.17 0.0534 0.0344
Mars -52964-07-23 16:33 J -17623473.98 -17623473.81 -17623473.64 0.1728 0.0790
Saturn -52962-02-07 05:16 J -17622910.52 -17622910.28 -17622910.04 0.0274 0.0065
Saturn -52961-02-19 19:54 J -17622532.85 -17622532.67 -17622532.49 0.0271 0.0187
Neptune -52954-01-22 20:52 J -17620003.76 -17620003.63 -17620003.45 0.0089 0.0071
Neptune -52953-01-25 08:52 J -17619636.32 -17619636.13 -17619635.90 0.0089 0.0050
Neptune -52952-01-26 20:52 J -17619268.86 -17619268.63 -17619268.37 0.0089 0.0029
Neptune -52951-01-29 09:06 J -17618901.38 -17618901.12 -17618900.86 0.0089 0.0007
Neptune -52950-01-31 20:52 J -17618533.88 -17618533.63 -17618533.37 0.0089 0.0015
Neptune -52949-02-03 08:52 J -17618166.36 -17618166.13 -17618165.89 0.0089 0.0036
Neptune -52948-02-04 20:37 J -17617798.83 -17617798.64 -17617798.43 0.0089 0.0057
Neptune -52947-02-07 08:52 J -17617431.25 -17617431.13 -17617431.01 0.0089 0.0078
Saturn -52947-08-08 10:33 J -17617249.26 -17617249.06 -17617248.85 0.0285 0.0151
Saturn -52946-08-22 01:40 J -17616870.63 -17616870.43 -17616870.21 0.0289 0.0144
Uranus -52944-09-04 14:23 J -17616126.13 -17616125.90 -17616125.66 0.0134 0.0041
Uranus -52943-09-08 19:40 J -17615756.90 -17615756.68 -17615756.46 0.0134 0.0061
Saturn -52933-02-01 13:25 J -17612324.11 -17612323.94 -17612323.76 0.0276 0.0191
Saturn -52932-02-13 06:57 J -17611946.45 -17611946.21 -17611945.97 0.0272 0.0067
Jupiter -52930-02-25 05:59 J -17611204.46 -17611204.25 -17611204.03 0.0492 0.0202
Jupiter -52918-03-01 17:16 J -17606817.00 -17606816.78 -17606816.56 0.0493 0.0181
Saturn -52918-08-02 17:59 J -17606662.79 -17606662.75 -17606662.70 0.0284 0.0278
Saturn -52917-08-15 06:57 J -17606284.45 -17606284.21 -17606283.97 0.0288 0.0009

Pluto -52916-01-13 07:11 J -17606133.45 -17606133.20 -17606132.93 0.0064 0.0005
 Uranus -52904-03-01 11:16 J -17601703.20 -17601703.03 -17601702.83 0.0145 0.0099
 Saturn -52903-02-08 03:35 J -17601359.59 -17601359.35 -17601359.10 0.0274 0.0048
 Uranus -52903-03-06 15:35 J -17601333.10 -17601332.85 -17601332.60 0.0145 0.0037
 Saturn -52902-02-20 18:13 J -17600981.89 -17600981.74 -17600981.57 0.0271 0.0205
 Jupiter -52901-08-29 09:49 J -17600426.30 -17600426.09 -17600425.87 0.0536 0.0192
 Jupiter -52889-09-03 14:09 J -17596038.09 -17596037.91 -17596037.72 0.0534 0.0309
 Saturn -52888-08-09 09:35 J -17595698.31 -17595698.10 -17595697.88 0.0285 0.0131
 Saturn -52887-08-22 23:59 J -17595319.69 -17595319.50 -17595319.29 0.0289 0.0164
 Saturn -52874-02-02 10:33 J -17590773.24 -17590773.06 -17590772.85 0.0276 0.0175
 Saturn -52873-02-15 04:47 J -17590395.53 -17590395.30 -17590395.06 0.0273 0.0084
 Neptune -52872-07-27 02:52 J -17589867.47 -17589867.38 -17589867.24 0.0089 0.0079
 Neptune -52871-07-29 14:09 J -17589500.08 -17589499.91 -17589499.69 0.0089 0.0058
 Neptune -52870-08-01 01:40 J -17589132.65 -17589132.43 -17589132.18 0.0089 0.0037
 Neptune -52869-08-02 13:11 J -17588765.20 -17588764.95 -17588764.69 0.0089 0.0015
 Neptune -52868-08-05 00:28 J -17588397.73 -17588397.48 -17588397.21 0.0089 0.0007
 Neptune -52867-08-07 11:30 J -17588030.25 -17588030.02 -17588029.76 0.0089 0.0028
 Neptune -52866-08-09 23:01 J -17587662.75 -17587662.54 -17587662.32 0.0089 0.0049
 Neptune -52865-08-11 10:33 J -17587295.22 -17587295.06 -17587294.91 0.0089 0.0070
 Uranus -52861-08-31 23:30 J -17585813.52 -17585813.52 -17585813.49 0.0133 0.0133
 Uranus -52860-09-05 04:33 J -17585444.54 -17585444.31 -17585444.05 0.0134 0.0032
 Saturn -52859-08-03 16:04 J -17585111.92 -17585111.83 -17585111.73 0.0284 0.0260
 Uranus -52859-09-09 09:35 J -17585075.30 -17585075.10 -17585074.88 0.0134 0.0071
 Saturn -52858-08-17 04:33 J -17584733.55 -17584733.31 -17584733.07 0.0287 0.0027
 Jupiter -52847-02-24 15:06 J -17580889.07 -17580888.87 -17580888.66 0.0491 0.0238
 Saturn -52844-02-09 00:28 J -17579808.72 -17579808.48 -17579808.23 0.0274 0.0032
 Saturn -52843-02-21 15:49 J -17579430.98 -17579430.84 -17579430.70 0.0271 0.0222
 Jupiter -52835-03-01 02:09 J -17576501.63 -17576501.41 -17576501.18 0.0492 0.0143
 Saturn -52829-08-10 09:06 J -17574147.34 -17574147.12 -17574146.89 0.0285 0.0111
 Pluto -52828-07-18 10:47 J -17573805.21 -17573805.05 -17573804.86 0.0081 0.0060

Saturn -52828-08-23 23:30 J -17573768.70 -17573768.52 -17573768.32 0.0289 0.0184
 Uranus -52820-03-01 21:06 J -17571021.80 -17571021.62 -17571021.41 0.0145 0.0094
 Uranus -52819-03-07 01:25 J -17570651.68 -17570651.44 -17570651.19 0.0145 0.0042
 Jupiter -52818-08-29 20:37 J -17570110.85 -17570110.64 -17570110.43 0.0535 0.0231
 Saturn -52815-02-03 07:25 J -17569222.39 -17569222.19 -17569221.98 0.0276 0.0158
 Saturn -52814-02-16 01:40 J -17568844.66 -17568844.43 -17568844.20 0.0273 0.0101
 Jupiter -52806-09-03 20:23 J -17565722.85 -17565722.65 -17565722.44 0.0534 0.0252
 Saturn -52800-08-04 15:06 J -17563560.99 -17563560.87 -17563560.73 0.0284 0.0242
 Saturn -52799-08-18 03:06 J -17563182.61 -17563182.37 -17563182.13 0.0287 0.0047
 Neptune -52790-01-22 01:11 J -17560103.51 -17560103.45 -17560103.33 0.0089 0.0083
 Neptune -52789-01-24 12:57 J -17559736.11 -17559735.96 -17559735.74 0.0089 0.0062
 Neptune -52788-01-26 01:25 J -17559368.66 -17559368.44 -17559368.20 0.0089 0.0040
 Neptune -52787-01-28 13:11 J -17559001.19 -17559000.95 -17559000.68 0.0089 0.0019
 Neptune -52786-01-31 01:40 J -17558633.69 -17558633.43 -17558633.17 0.0089 0.0003
 Neptune -52785-02-02 13:25 J -17558266.18 -17558265.94 -17558265.69 0.0089 0.0025
 Saturn -52785-02-10 21:06 J -17558257.87 -17558257.62 -17558257.38 0.0274 0.0016
 Mars -52784-01-17 12:42 J -17557916.16 -17557915.97 -17557915.77 0.1821 0.0085
 Neptune -52784-02-04 01:11 J -17557898.66 -17557898.45 -17557898.22 0.0089 0.0047
 Saturn -52784-02-22 12:42 J -17557880.09 -17557879.97 -17557879.85 0.0271 0.0238
 Neptune -52783-02-06 13:25 J -17557531.10 -17557530.94 -17557530.77 0.0089 0.0068
 Uranus -52777-09-01 14:23 J -17555131.99 -17555131.90 -17555131.81 0.0133 0.0124
 Uranus -52776-09-05 18:57 J -17554762.95 -17554762.71 -17554762.45 0.0134 0.0023
 Uranus -52775-09-10 00:13 J -17554393.68 -17554393.49 -17554393.28 0.0134 0.0080
 Saturn -52770-08-12 09:35 J -17552596.32 -17552596.10 -17552595.86 0.0285 0.0091
 Saturn -52769-08-24 23:45 J -17552217.67 -17552217.51 -17552217.33 0.0288 0.0205
 Jupiter -52764-02-24 02:09 J -17550573.60 -17550573.41 -17550573.21 0.0491 0.0271
 Mars -52759-07-21 23:30 J -17548599.69 -17548599.52 -17548599.34 0.1714 0.0719
 Saturn -52756-02-04 04:18 J -17547671.52 -17547671.32 -17547671.10 0.0276 0.0142
 Saturn -52755-02-16 22:47 J -17547293.77 -17547293.55 -17547293.32 0.0273 0.0118
 Jupiter -52752-02-28 13:11 J -17546186.18 -17546185.95 -17546185.71 0.0492 0.0111

Saturn -52741-08-05 16:04 J -17542009.97 -17542009.83 -17542009.67 0.0284 0.0221
 Saturn -52740-08-19 03:49 J -17541631.57 -17541631.34 -17541631.10 0.0287 0.0069
 Uranus -52736-03-02 11:01 J -17540340.24 -17540340.04 -17540339.82 0.0145 0.0084
 Uranus -52735-03-07 14:52 J -17539970.11 -17539969.88 -17539969.63 0.0145 0.0052
 Jupiter -52735-08-29 00:28 J -17539795.67 -17539795.48 -17539795.28 0.0536 0.0299
 Saturn -52727-01-29 21:06 J -17537084.70 -17537084.62 -17537084.55 0.0278 0.0263
 Saturn -52726-02-11 18:13 J -17536706.98 -17536706.74 -17536706.49 0.0274 0.0006
 Saturn -52725-02-24 10:18 J -17536329.15 -17536329.07 -17536328.99 0.0271 0.0255
 Jupiter -52723-09-03 00:28 J -17535407.69 -17535407.48 -17535407.26 0.0535 0.0191
 Saturn -52711-08-13 13:11 J -17531045.19 -17531044.95 -17531044.72 0.0285 0.0067
 Saturn -52710-08-27 03:06 J -17530666.52 -17530666.37 -17530666.22 0.0288 0.0228
 Neptune -52707-07-28 17:59 J -17529599.88 -17529599.75 -17529599.57 0.0089 0.0070
 Neptune -52706-07-31 05:45 J -17529232.47 -17529232.26 -17529232.04 0.0089 0.0048
 Neptune -52705-08-01 17:01 J -17528865.02 -17528864.79 -17528864.53 0.0089 0.0027
 Neptune -52704-08-04 04:18 J -17528497.57 -17528497.32 -17528497.06 0.0089 0.0005
 Neptune -52703-08-06 15:21 J -17528130.10 -17528129.86 -17528129.59 0.0089 0.0017
 Neptune -52702-08-09 02:37 J -17527762.61 -17527762.39 -17527762.14 0.0089 0.0038
 Neptune -52701-08-10 13:40 J -17527395.10 -17527394.93 -17527394.72 0.0089 0.0060
 Neptune -52700-08-13 00:57 J -17527027.54 -17527027.46 -17527027.33 0.0089 0.0081
 Saturn -52697-02-06 02:52 J -17526120.60 -17526120.38 -17526120.16 0.0276 0.0124
 Saturn -52696-02-17 21:06 J -17525742.83 -17525742.62 -17525742.40 0.0273 0.0136
 Uranus -52693-09-02 04:33 J -17524450.42 -17524450.31 -17524450.16 0.0133 0.0115
 Uranus -52692-09-06 09:49 J -17524081.33 -17524081.09 -17524080.83 0.0134 0.0013
 Uranus -52691-09-10 14:52 J -17523712.05 -17523711.88 -17523711.68 0.0134 0.0091
 Saturn -52682-08-07 19:25 J -17520458.85 -17520458.69 -17520458.50 0.0284 0.0198
 Jupiter -52681-02-24 12:42 J -17520258.15 -17520257.97 -17520257.79 0.0491 0.0306
 Saturn -52681-08-20 07:11 J -17520080.42 -17520080.20 -17520079.96 0.0287 0.0093
 Mars -52680-07-24 10:18 J -17519742.23 -17519742.07 -17519741.90 0.1720 0.0828
 Jupiter -52669-02-28 22:47 J -17515870.79 -17515870.55 -17515870.32 0.0491 0.0076
 Pluto -52668-01-14 12:28 J -17515550.21 -17515549.98 -17515549.72 0.0064 0.0022

Saturn -52668-01-30 19:54 J -17515533.78 -17515533.67 -17515533.55 0.0278 0.0245
 Pluto -52667-01-15 23:59 J -17515183.62 -17515183.50 -17515183.33 0.0064 0.0053
 Saturn -52667-02-12 17:16 J -17515156.02 -17515155.78 -17515155.53 0.0274 0.0021
 Jupiter -52657-03-04 09:06 J -17511483.20 -17511483.12 -17511483.04 0.0492 0.0457
 Uranus -52652-03-03 00:13 J -17509658.70 -17509658.49 -17509658.27 0.0145 0.0075
 Saturn -52652-08-14 19:11 J -17509493.94 -17509493.70 -17509493.46 0.0285 0.0040
 Jupiter -52652-08-28 03:49 J -17509480.50 -17509480.34 -17509480.17 0.0536 0.0365
 Uranus -52651-03-08 03:49 J -17509288.56 -17509288.34 -17509288.10 0.0145 0.0061
 Saturn -52651-08-28 09:06 J -17509115.23 -17509115.12 -17509115.01 0.0288 0.0255
 Jupiter -52640-09-02 08:09 J -17505092.38 -17505092.16 -17505091.93 0.0535 0.0140
 Saturn -52638-02-07 04:04 J -17504569.55 -17504569.33 -17504569.09 0.0276 0.0103
 Saturn -52637-02-19 22:18 J -17504191.76 -17504191.57 -17504191.36 0.0273 0.0157
 Neptune -52625-01-23 18:13 J -17499835.87 -17499835.74 -17499835.58 0.0089 0.0073
 Neptune -52624-01-25 05:45 J -17499468.44 -17499468.26 -17499468.02 0.0089 0.0052
 Neptune -52623-01-27 18:13 J -17499100.98 -17499100.74 -17499100.49 0.0089 0.0030
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 Neptune -52622-01-30 06:13 J -17498733.49 -17498733.24 -17498732.98 0.0089 0.0008
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 Uranus -52609-09-02 19:11 J -17493768.84 -17493768.70 -17493768.53 0.0133 0.0105
 Saturn -52608-02-13 18:57 J -17493604.95 -17493604.71 -17493604.46 0.0274 0.0042
 Uranus -52608-09-07 00:28 J -17493399.73 -17493399.48 -17493399.23 0.0134 0.0003
 Uranus -52607-09-11 05:16 J -17493030.42 -17493030.28 -17493030.09 0.0134 0.0101
 Jupiter -52598-02-23 20:52 J -17489942.79 -17489942.63 -17489942.45 0.0490 0.0347
 Saturn -52593-08-16 04:33 J -17487942.55 -17487942.31 -17487942.07 0.0285 0.0010
 Saturn -52592-08-29 18:42 J -17487563.75 -17487563.72 -17487563.69 0.0289 0.0285

Jupiter -52586-02-28 04:33 J -17485555.54 -17485555.31 -17485555.07 0.0491 0.0025
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 Jupiter -52574-03-04 14:52 J -17481168.01 -17481167.88 -17481167.74 0.0492 0.0406
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 Neptune -52543-07-27 22:04 J -17469699.66 -17469699.58 -17469699.47 0.0089 0.0082
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 Saturn -52534-08-18 17:01 J -17466391.03 -17466390.79 -17466390.55 0.0286 0.0023
 Uranus -52525-09-03 09:21 J -17463087.27 -17463087.11 -17463086.92 0.0133 0.0095
 Uranus -52524-09-07 14:37 J -17462718.14 -17462717.89 -17462717.64 0.0134 0.0007
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 Saturn -52519-02-22 10:04 J -17461089.23 -17461089.08 -17461088.92 0.0272 0.0207
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 Mars -52500-01-17 11:01 J -17454185.22 -17454185.04 -17454184.85 0.1830 0.0500
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 Saturn -52373-02-08 13:25 J -17407777.16 -17407776.94 -17407776.70 0.0276 0.0102
 Neptune -52373-08-08 22:47 J -17407594.76 -17407594.55 -17407594.30 0.0089 0.0038
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Saturn -52357-08-23 14:09 J -17401736.11 -17401735.91 -17401735.69 0.0287 0.0136
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 Uranus -52315-03-10 03:21 J -17386562.56 -17386562.36 -17386562.16 0.0145 0.0091
 Saturn -52314-02-10 03:06 J -17386225.61 -17386225.37 -17386225.13 0.0275 0.0068
 Saturn -52313-02-22 20:23 J -17385847.81 -17385847.65 -17385847.46 0.0272 0.0192
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 Saturn -52225-02-19 08:52 J -17353709.35 -17353709.13 -17353708.90 0.0273 0.0115
 Jupiter -52225-08-28 22:18 J -17353517.75 -17353517.57 -17353517.38 0.0537 0.0326
 Mars -52216-01-17 06:42 J -17350454.37 -17350454.22 -17350454.07 0.1840 0.1184
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 Neptune -52127-02-03 11:30 J -17317930.26 -17317930.02 -17317929.76 0.0089 0.0026
 Neptune -52126-02-05 23:16 J -17317562.72 -17317562.53 -17317562.29 0.0089 0.0049
 Neptune -52125-02-08 11:30 J -17317195.16 -17317195.02 -17317194.85 0.0089 0.0071
 Saturn -52122-08-17 11:16 J -17315909.27 -17315909.03 -17315908.79 0.0285 0.0037
 Saturn -52121-08-30 01:11 J -17315530.53 -17315530.45 -17315530.34 0.0289 0.0263
 Mars -52112-07-26 01:11 J -17312278.60 -17312278.45 -17312278.29 0.1706 0.0968

Saturn -52108-02-09 03:49 J -17310984.56 -17310984.34 -17310984.10 0.0276 0.0097
 Saturn -52107-02-21 22:33 J -17310606.75 -17310606.56 -17310606.36 0.0273 0.0168
 Uranus -52105-09-06 03:49 J -17309679.57 -17309679.34 -17309679.11 0.0133 0.0055
 Uranus -52104-09-10 08:52 J -17309310.35 -17309310.13 -17309309.88 0.0134 0.0049
 Saturn -52093-08-10 16:04 J -17305323.01 -17305322.83 -17305322.63 0.0283 0.0175
 Saturn -52092-08-24 02:52 J -17304944.60 -17304944.38 -17304944.16 0.0287 0.0119
 Jupiter -52088-02-24 05:59 J -17303664.42 -17303664.25 -17303664.07 0.0490 0.0329
 Pluto -52083-07-23 22:18 J -17301688.79 -17301688.57 -17301688.32 0.0080 0.0034
 Saturn -52079-02-03 11:45 J -17300398.15 -17300398.01 -17300397.87 0.0278 0.0226
 Saturn -52078-02-16 09:35 J -17300020.34 -17300020.10 -17300019.85 0.0275 0.0044
 Jupiter -52076-02-28 16:33 J -17299277.04 -17299276.81 -17299276.57 0.0491 0.0058
 Jupiter -52064-03-05 02:52 J -17294889.47 -17294889.38 -17294889.27 0.0492 0.0444
 Uranus -52064-03-06 09:49 J -17294888.34 -17294888.09 -17294887.83 0.0145 0.0024
 Uranus -52063-03-11 13:40 J -17294518.09 -17294517.93 -17294517.76 0.0145 0.0112
 Saturn -52063-08-18 11:59 J -17294358.24 -17294358.00 -17294357.75 0.0285 0.0015
 Saturn -52062-09-01 02:09 J -17293979.44 -17293979.41 -17293979.37 0.0289 0.0285
 Jupiter -52059-08-28 03:06 J -17292887.46 -17292887.37 -17292887.26 0.0537 0.0478
 Saturn -52049-02-11 05:59 J -17289433.49 -17289433.25 -17289433.01 0.0276 0.0075
 Neptune -52049-07-29 14:09 J -17289264.02 -17289263.91 -17289263.74 0.0089 0.0074
 Saturn -52048-02-23 00:28 J -17289055.65 -17289055.48 -17289055.29 0.0273 0.0190
 Neptune -52048-08-01 02:23 J -17288896.61 -17288896.40 -17288896.19 0.0089 0.0051
 Neptune -52047-08-03 13:25 J -17288529.17 -17288528.94 -17288528.68 0.0089 0.0029
 Jupiter -52047-09-02 06:57 J -17288499.44 -17288499.21 -17288498.98 0.0537 0.0034
 Neptune -52046-08-06 01:11 J -17288161.70 -17288161.45 -17288161.19 0.0089 0.0006
 Neptune -52045-08-07 12:13 J -17287794.23 -17287793.99 -17287793.72 0.0089 0.0017
 Neptune -52044-08-09 23:45 J -17287426.74 -17287426.51 -17287426.27 0.0089 0.0039
 Neptune -52043-08-12 10:18 J -17287059.22 -17287059.07 -17287058.86 0.0089 0.0062
 Neptune -52042-08-14 21:21 J -17286691.67 -17286691.61 -17286691.50 0.0089 0.0084
 Saturn -52034-08-12 17:16 J -17283771.99 -17283771.78 -17283771.58 0.0283 0.0153
 Saturn -52033-08-25 03:35 J -17283393.56 -17283393.35 -17283393.13 0.0286 0.0141

Uranus	-52021-09-06 16:18 J	-17278998.04	-17278997.82	-17278997.57	0.0133	0.0047
Saturn	-52020-02-04 11:30 J	-17278847.18	-17278847.02	-17278846.85	0.0278	0.0207
Uranus	-52020-09-10 21:21 J	-17278628.82	-17278628.61	-17278628.37	0.0134	0.0057
Saturn	-52019-02-17 09:35 J	-17278469.34	-17278469.10	-17278468.86	0.0275	0.0064
Jupiter	-52005-02-24 16:47 J	-17273348.96	-17273348.80	-17273348.64	0.0490	0.0365
Saturn	-52005-08-06 02:52 J	-17273185.39	-17273185.38	-17273185.36	0.0282	0.0281
Saturn	-52004-08-19 11:01 J	-17272807.28	-17272807.04	-17272806.80	0.0285	0.0006

52ND MILLENNIUM BCE

This is a list of transits of Earth in the 52nd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-51993-02-29 00:28 J	-17268961.71	-17268961.48	-17268961.24	0.0490	0.0015		
Saturn	-51990-02-12 04:47 J	-17267882.54	-17267882.30	-17267882.06	0.0276	0.0056		
Saturn	-51989-02-24 23:45 J	-17267504.66	-17267504.51	-17267504.34	0.0273	0.0209		
Jupiter	-51981-03-04 10:47 J	-17264574.18	-17264574.05	-17264573.91	0.0491	0.0401		
Uranus	-51980-03-06 22:04 J	-17264206.84	-17264206.58	-17264206.33	0.0145	0.0016		
Uranus	-51979-03-12 01:40 J	-17263836.57	-17263836.43	-17263836.29	0.0145	0.0120		
Jupiter	-51976-08-27 11:45 J	-17262572.05	-17262572.01	-17262571.96	0.0538	0.0525		
Saturn	-51975-08-13 16:18 J	-17262221.02	-17262220.82	-17262220.59	0.0283	0.0134		
Saturn	-51974-08-27 02:37 J	-17261842.58	-17261842.39	-17261842.18	0.0286	0.0161		
Neptune	-51967-01-24 18:42 J	-17259499.83	-17259499.72	-17259499.56	0.0089	0.0076		
Neptune	-51966-01-27 06:57 J	-17259132.40	-17259132.21	-17259131.99	0.0089	0.0053		
Neptune	-51965-01-29 19:11 J	-17258764.94	-17258764.70	-17258764.46	0.0089	0.0030		

Neptune -51964-01-31 06:57 J -17258397.46 -17258397.21 -17258396.95 0.0089 0.0008
 Jupiter -51964-09-01 16:47 J -17258184.03 -17258183.80 -17258183.57 0.0537 0.0011
 Neptune -51963-02-02 18:57 J -17258029.97 -17258029.71 -17258029.46 0.0089 0.0015
 Neptune -51962-02-05 06:42 J -17257662.45 -17257662.22 -17257661.98 0.0089 0.0038
 Saturn -51961-02-06 09:35 J -17257296.27 -17257296.10 -17257295.91 0.0278 0.0189
 Neptune -51961-02-07 18:28 J -17257294.89 -17257294.73 -17257294.52 0.0089 0.0061
 Neptune -51960-02-09 06:13 J -17256927.29 -17256927.24 -17256927.12 0.0089 0.0084
 Saturn -51960-02-18 07:54 J -17256918.41 -17256918.17 -17256917.93 0.0275 0.0083
 Jupiter -51952-09-06 17:01 J -17253795.88 -17253795.79 -17253795.69 0.0536 0.0485
 Saturn -51946-08-08 00:57 J -17251634.53 -17251634.46 -17251634.36 0.0282 0.0263
 Saturn -51945-08-20 09:06 J -17251256.36 -17251256.12 -17251255.88 0.0285 0.0025
 Uranus -51937-09-07 03:49 J -17248316.57 -17248316.34 -17248316.09 0.0133 0.0041
 Uranus -51936-09-11 08:52 J -17247947.34 -17247947.13 -17247946.90 0.0134 0.0063
 Saturn -51931-02-13 01:54 J -17246331.66 -17246331.42 -17246331.17 0.0276 0.0039
 Saturn -51930-02-25 21:06 J -17245953.74 -17245953.62 -17245953.47 0.0273 0.0228
 Pluto -51923-01-19 23:59 J -17243433.75 -17243433.50 -17243433.24 0.0064 0.0007
 Jupiter -51922-02-24 02:52 J -17243033.51 -17243033.38 -17243033.24 0.0489 0.0398
 Saturn -51916-08-14 16:18 J -17240670.05 -17240669.82 -17240669.60 0.0283 0.0113
 Saturn -51915-08-28 01:54 J -17240291.60 -17240291.42 -17240291.23 0.0286 0.0182
 Jupiter -51910-02-28 11:45 J -17238646.24 -17238646.01 -17238645.77 0.0490 0.0018
 Mars -51907-07-24 11:30 J -17237404.20 -17237404.02 -17237403.83 0.1693 0.0423
 Saturn -51902-02-07 06:28 J -17235745.41 -17235745.23 -17235745.02 0.0278 0.0172
 Saturn -51901-02-20 05:01 J -17235367.52 -17235367.29 -17235367.06 0.0275 0.0100
 Jupiter -51898-03-04 22:18 J -17234258.72 -17234258.57 -17234258.41 0.0491 0.0371
 Uranus -51896-03-07 08:52 J -17233525.38 -17233525.13 -17233524.87 0.0145 0.0009
 Uranus -51895-03-12 12:13 J -17233155.10 -17233154.99 -17233154.85 0.0145 0.0127
 Saturn -51887-08-08 23:30 J -17230083.63 -17230083.52 -17230083.39 0.0282 0.0244
 Saturn -51886-08-22 07:11 J -17229705.44 -17229705.20 -17229704.96 0.0285 0.0044
 Neptune -51885-07-28 22:33 J -17229363.61 -17229363.56 -17229363.46 0.0089 0.0085
 Neptune -51884-07-31 10:18 J -17228996.25 -17228996.07 -17228995.88 0.0089 0.0062

Neptune -51883-08-02 21:35 J -17228628.81 -17228628.60 -17228628.35 0.0089 0.0040
 Neptune -51882-08-05 09:06 J -17228261.36 -17228261.12 -17228260.86 0.0089 0.0017
 Neptune -51881-08-06 20:52 J -17227893.88 -17227893.63 -17227893.37 0.0089 0.0006
 Jupiter -51881-08-31 21:06 J -17227868.85 -17227868.62 -17227868.40 0.0537 0.0079
 Neptune -51880-08-09 08:09 J -17227526.39 -17227526.16 -17227525.91 0.0089 0.0029
 Neptune -51879-08-11 18:57 J -17227158.90 -17227158.71 -17227158.48 0.0089 0.0052
 Neptune -51878-08-14 06:42 J -17226791.36 -17226791.22 -17226791.08 0.0089 0.0074
 Saturn -51872-02-13 22:47 J -17224780.80 -17224780.55 -17224780.30 0.0276 0.0022
 Saturn -51871-02-26 18:28 J -17224402.83 -17224402.73 -17224402.61 0.0273 0.0244
 Jupiter -51869-09-05 22:33 J -17223480.70 -17223480.56 -17223480.42 0.0537 0.0427
 Saturn -51857-08-15 16:33 J -17219119.04 -17219118.81 -17219118.58 0.0283 0.0092
 Saturn -51856-08-29 01:54 J -17218740.58 -17218740.42 -17218740.24 0.0286 0.0203
 Mars -51853-01-20 23:45 J -17217865.70 -17217865.51 -17217865.31 0.1843 0.0374
 Uranus -51853-09-07 15:06 J -17217635.11 -17217634.87 -17217634.62 0.0133 0.0035
 Uranus -51852-09-11 19:54 J -17217265.88 -17217265.67 -17217265.45 0.0134 0.0069
 Saturn -51843-02-08 03:49 J -17214194.54 -17214194.34 -17214194.13 0.0278 0.0154
 Saturn -51842-02-21 02:09 J -17213816.63 -17213816.41 -17213816.18 0.0275 0.0118
 Jupiter -51839-02-23 13:54 J -17212718.02 -17212717.92 -17212717.81 0.0490 0.0433
 Pluto -51835-07-25 05:01 J -17211105.44 -17211105.29 -17211105.08 0.0080 0.0059
 Mars -51828-07-26 21:06 J -17208546.77 -17208546.62 -17208546.47 0.1698 0.1047
 Saturn -51828-08-09 23:59 J -17208532.63 -17208532.50 -17208532.34 0.0282 0.0224
 Jupiter -51827-02-27 23:30 J -17208330.75 -17208330.52 -17208330.28 0.0490 0.0049
 Saturn -51827-08-23 07:40 J -17208154.42 -17208154.18 -17208153.94 0.0285 0.0066
 Jupiter -51815-03-04 08:37 J -17203943.31 -17203943.14 -17203942.97 0.0490 0.0338
 Saturn -51813-02-15 19:54 J -17203229.92 -17203229.67 -17203229.43 0.0276 0.0005
 Uranus -51813-03-02 12:42 J -17203214.00 -17203213.97 -17203213.92 0.0146 0.0144
 Saturn -51812-02-27 15:49 J -17202851.90 -17202851.84 -17202851.77 0.0273 0.0262
 Uranus -51812-03-07 17:01 J -17202844.04 -17202843.79 -17202843.53 0.0145 0.0007
 Uranus -51811-03-12 20:23 J -17202473.75 -17202473.65 -17202473.53 0.0145 0.0130
 Neptune -51803-01-24 03:21 J -17199599.39 -17199599.36 -17199599.29 0.0089 0.0087

Neptune -51802-01-26 15:21 J -17199232.03 -17199231.86 -17199231.67 0.0089 0.0064
 Neptune -51801-01-29 03:21 J -17198864.58 -17198864.36 -17198864.12 0.0089 0.0041
 Neptune -51800-01-30 15:21 J -17198497.11 -17198496.86 -17198496.61 0.0089 0.0018
 Neptune -51799-02-02 03:06 J -17198129.62 -17198129.37 -17198129.11 0.0089 0.0005
 Neptune -51798-02-04 15:06 J -17197762.11 -17197761.87 -17197761.62 0.0089 0.0028
 Saturn -51798-08-17 18:28 J -17197567.96 -17197567.73 -17197567.49 0.0283 0.0069
 Jupiter -51798-09-01 02:37 J -17197553.61 -17197553.39 -17197553.16 0.0538 0.0137
 Neptune -51797-02-07 02:37 J -17197394.58 -17197394.39 -17197394.16 0.0089 0.0051
 Saturn -51797-08-30 03:49 J -17197189.48 -17197189.34 -17197189.18 0.0286 0.0226
 Neptune -51796-02-08 14:37 J -17197027.01 -17197026.89 -17197026.72 0.0089 0.0074
 Jupiter -51786-09-06 07:54 J -17193165.32 -17193165.17 -17193165.00 0.0537 0.0383
 Saturn -51784-02-09 02:09 J -17192643.61 -17192643.41 -17192643.18 0.0278 0.0135
 Saturn -51783-02-22 00:42 J -17192265.68 -17192265.47 -17192265.25 0.0275 0.0138
 Uranus -51770-09-04 20:09 J -17187322.67 -17187322.66 -17187322.61 0.0133 0.0132
 Saturn -51769-08-11 02:37 J -17186981.56 -17186981.39 -17186981.21 0.0282 0.0200
 Uranus -51769-09-08 01:25 J -17186953.68 -17186953.44 -17186953.19 0.0133 0.0029
 Saturn -51768-08-24 09:49 J -17186603.31 -17186603.09 -17186602.85 0.0285 0.0090
 Uranus -51768-09-12 06:13 J -17186584.44 -17186584.24 -17186584.02 0.0134 0.0074
 Jupiter -51756-02-23 00:42 J -17182402.54 -17182402.47 -17182402.40 0.0489 0.0465
 Saturn -51755-02-03 17:01 J -17182056.86 -17182056.79 -17182056.69 0.0279 0.0262
 Saturn -51754-02-16 18:42 J -17181678.97 -17181678.72 -17181678.48 0.0276 0.0016
 Jupiter -51744-02-27 09:49 J -17178015.32 -17178015.09 -17178014.86 0.0489 0.0083
 Saturn -51739-08-18 23:45 J -17176016.75 -17176016.51 -17176016.27 0.0283 0.0042
 Saturn -51738-09-01 09:06 J -17175638.22 -17175638.12 -17175638.00 0.0286 0.0253
 Jupiter -51732-03-03 17:30 J -17173627.96 -17173627.77 -17173627.58 0.0490 0.0295
 Uranus -51729-03-02 20:23 J -17172532.70 -17172532.65 -17172532.59 0.0146 0.0142
 Uranus -51728-03-08 00:28 J -17172162.73 -17172162.48 -17172162.22 0.0145 0.0005
 Uranus -51727-03-13 03:49 J -17171792.43 -17171792.34 -17171792.23 0.0145 0.0132
 Saturn -51725-02-11 03:06 J -17171092.59 -17171092.37 -17171092.14 0.0278 0.0113
 Saturn -51724-02-23 01:25 J -17170714.64 -17170714.44 -17170714.24 0.0275 0.0159

Neptune -51720-07-30 19:11 J -17169095.83 -17169095.70 -17169095.54 0.0089 0.0073
 Neptune -51719-08-02 06:42 J -17168728.43 -17168728.22 -17168728.01 0.0089 0.0050
 Neptune -51718-08-04 17:45 J -17168360.99 -17168360.76 -17168360.50 0.0089 0.0028
 Neptune -51717-08-06 05:30 J -17167993.52 -17167993.27 -17167993.01 0.0089 0.0005
 Neptune -51716-08-08 16:47 J -17167626.05 -17167625.80 -17167625.54 0.0089 0.0019
 Neptune -51715-08-11 04:04 J -17167258.54 -17167258.33 -17167258.09 0.0089 0.0042
 Jupiter -51715-08-31 07:40 J -17167238.39 -17167238.18 -17167237.96 0.0537 0.0202
 Neptune -51714-08-13 15:06 J -17166891.02 -17166890.87 -17166890.67 0.0089 0.0065
 Neptune -51713-08-15 02:09 J -17166523.41 -17166523.41 -17166523.33 0.0089 0.0088
 Saturn -51710-08-13 07:54 J -17165430.35 -17165430.17 -17165429.97 0.0282 0.0174
 Saturn -51709-08-25 15:21 J -17165052.08 -17165051.86 -17165051.63 0.0285 0.0117
 Jupiter -51703-09-05 09:35 J -17162850.29 -17162850.10 -17162849.91 0.0537 0.0305
 Saturn -51696-02-04 18:13 J -17160505.85 -17160505.74 -17160505.60 0.0279 0.0240
 Saturn -51695-02-17 19:40 J -17160127.92 -17160127.68 -17160127.43 0.0276 0.0038
 Uranus -51686-09-05 06:28 J -17156641.28 -17156641.23 -17156641.13 0.0133 0.0127
 Uranus -51685-09-08 11:59 J -17156272.25 -17156272.00 -17156271.75 0.0133 0.0025
 Uranus -51684-09-12 16:47 J -17155903.00 -17155902.80 -17155902.59 0.0134 0.0079
 Saturn -51680-08-20 07:40 J -17154465.43 -17154465.18 -17154464.94 0.0283 0.0013
 Saturn -51679-09-02 17:16 J -17154086.81 -17154086.78 -17154086.74 0.0286 0.0283
 Pluto -51675-01-21 12:13 J -17152850.23 -17152849.99 -17152849.72 0.0064 0.0015
 Pluto -51674-01-22 23:45 J -17152483.56 -17152483.51 -17152483.39 0.0064 0.0060
 Saturn -51666-02-12 07:11 J -17149541.44 -17149541.20 -17149540.97 0.0278 0.0088
 Saturn -51665-02-25 04:47 J -17149163.47 -17149163.30 -17149163.11 0.0275 0.0184
 Jupiter -51661-02-27 16:18 J -17147700.05 -17147699.82 -17147699.59 0.0490 0.0135
 Saturn -51651-08-14 16:33 J -17143879.01 -17143878.81 -17143878.60 0.0282 0.0145
 Saturn -51650-08-28 00:28 J -17143500.69 -17143500.48 -17143500.28 0.0286 0.0148
 Jupiter -51649-03-03 01:40 J -17143312.63 -17143312.43 -17143312.23 0.0490 0.0251
 Uranus -51645-03-03 04:04 J -17141851.40 -17141851.33 -17141851.25 0.0146 0.0139
 Uranus -51644-03-08 08:09 J -17141481.42 -17141481.16 -17141480.90 0.0145 0.0002
 Uranus -51643-03-13 11:01 J -17141111.11 -17141111.04 -17141110.93 0.0145 0.0135

Neptune -51638-01-26 00:28 J -17139331.61 -17139331.48 -17139331.34 0.0089 0.0075
 Neptune -51637-01-28 12:13 J -17138964.19 -17138963.99 -17138963.78 0.0089 0.0052
 Saturn -51637-02-06 23:01 J -17138954.69 -17138954.54 -17138954.38 0.0279 0.0213
 Neptune -51636-01-30 00:13 J -17138596.73 -17138596.49 -17138596.24 0.0089 0.0029
 Saturn -51636-02-18 23:45 J -17138576.74 -17138576.51 -17138576.26 0.0276 0.0064
 Neptune -51635-02-01 12:28 J -17138229.24 -17138228.98 -17138228.72 0.0089 0.0006
 Neptune -51634-02-03 23:59 J -17137861.74 -17137861.50 -17137861.23 0.0089 0.0018
 Neptune -51633-02-06 12:13 J -17137494.21 -17137493.99 -17137493.75 0.0089 0.0041
 Neptune -51632-02-07 23:59 J -17137126.66 -17137126.50 -17137126.31 0.0089 0.0064
 Jupiter -51632-08-30 03:21 J -17136923.55 -17136923.36 -17136923.17 0.0538 0.0306
 Neptune -51631-02-10 12:13 J -17136759.03 -17136758.99 -17136758.94 0.0089 0.0087
 Mars -51623-07-25 08:09 J -17133672.34 -17133672.16 -17133671.97 0.1686 0.0313
 Saturn -51622-08-09 12:57 J -17133292.02 -17133291.96 -17133291.86 0.0280 0.0266
 Saturn -51621-08-21 18:28 J -17132913.97 -17132913.73 -17132913.48 0.0283 0.0021
 Jupiter -51620-09-04 07:40 J -17132535.39 -17132535.18 -17132534.96 0.0538 0.0213
 Saturn -51607-02-13 13:54 J -17127990.15 -17127989.92 -17127989.67 0.0277 0.0060
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 Uranus -51600-09-13 02:37 J -17125221.58 -17125221.39 -17125221.19 0.0134 0.0084
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 Pluto -51587-07-26 17:16 J -17120521.90 -17120521.78 -17120521.65 0.0080 0.0070
 Pluto -51586-07-28 22:18 J -17120154.60 -17120154.57 -17120154.49 0.0080 0.0078
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 Jupiter -51578-02-26 23:30 J -17117384.74 -17117384.52 -17117384.30 0.0489 0.0182
 Saturn -51577-02-21 06:57 J -17117025.43 -17117025.21 -17117024.97 0.0276 0.0093
 Mars -51569-01-20 15:06 J -17114135.06 -17114134.87 -17114134.68 0.1853 0.0468
 Jupiter -51566-03-03 07:54 J -17112997.38 -17112997.17 -17112996.95 0.0490 0.0200
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 Saturn -51107-02-08 07:40 J -16945370.32 -16945370.18 -16945370.02 0.0280 0.0223
 Saturn -51106-02-21 09:49 J -16944992.32 -16944992.09 -16944991.84 0.0277 0.0061
 Uranus -51098-09-07 22:18 J -16941871.72 -16941871.57 -16941871.39 0.0133 0.0100
 Uranus -51097-09-11 03:49 J -16941502.59 -16941502.34 -16941502.08 0.0133 0.0005
 Uranus -51096-09-15 09:06 J -16941133.25 -16941133.12 -16941132.96 0.0134 0.0108

Pluto -51091-07-29 21:06 J -16939354.67 -16939354.62 -16939354.55 0.0080 0.0078
 Saturn -51091-08-23 17:59 J -16939329.99 -16939329.75 -16939329.51 0.0283 0.0007
 Pluto -51090-08-01 02:37 J -16938987.51 -16938987.39 -16938987.26 0.0080 0.0069
 Saturn -51077-02-16 04:04 J -16934405.57 -16934405.33 -16934405.09 0.0278 0.0065
 Saturn -51076-02-28 03:21 J -16934027.51 -16934027.36 -16934027.20 0.0275 0.0214
 Jupiter -51068-02-27 13:54 J -16931106.14 -16931105.92 -16931105.69 0.0489 0.0144
 Neptune -51062-08-02 13:40 J -16928759.08 -16928758.93 -16928758.75 0.0088 0.0068
 Saturn -51062-08-18 03:06 J -16928743.59 -16928743.37 -16928743.16 0.0281 0.0131
 Neptune -51061-08-04 01:40 J -16928391.65 -16928391.43 -16928391.20 0.0089 0.0044
 Saturn -51061-08-30 08:37 J -16928365.33 -16928365.14 -16928364.93 0.0284 0.0164
 Neptune -51060-08-06 12:57 J -16928024.20 -16928023.96 -16928023.70 0.0089 0.0020
 Neptune -51059-08-09 00:28 J -16927656.74 -16927656.48 -16927656.22 0.0089 0.0004
 Neptune -51058-08-11 11:30 J -16927289.25 -16927289.02 -16927288.77 0.0089 0.0028
 Uranus -51057-03-05 13:54 J -16927082.06 -16927081.92 -16927081.76 0.0145 0.0116
 Neptune -51057-08-12 22:18 J -16926921.75 -16926921.57 -16926921.33 0.0089 0.0052
 Jupiter -51056-03-03 22:18 J -16926718.78 -16926718.57 -16926718.37 0.0489 0.0243
 Uranus -51056-03-10 17:45 J -16926712.01 -16926711.76 -16926711.50 0.0145 0.0023
 Neptune -51056-08-15 09:49 J -16926554.21 -16926554.09 -16926553.94 0.0089 0.0075
 Mars -51055-07-27 05:59 J -16926208.44 -16926208.25 -16926208.06 0.1674 0.0014
 Saturn -51048-02-09 06:57 J -16923819.37 -16923819.21 -16923819.03 0.0280 0.0203
 Saturn -51047-02-22 09:06 J -16923441.35 -16923441.12 -16923440.88 0.0277 0.0081
 Jupiter -51039-08-30 11:45 J -16920330.17 -16920330.01 -16920329.85 0.0538 0.0381
 Saturn -51033-08-11 13:25 J -16918157.01 -16918156.94 -16918156.85 0.0280 0.0262
 Saturn -51032-08-24 17:16 J -16917779.02 -16917778.78 -16917778.54 0.0283 0.0027
 Jupiter -51027-09-04 14:52 J -16915942.10 -16915941.88 -16915941.65 0.0538 0.0139
 Saturn -51018-02-17 02:09 J -16912854.66 -16912854.41 -16912854.17 0.0278 0.0046
 Saturn -51017-03-01 01:40 J -16912476.56 -16912476.43 -16912476.30 0.0275 0.0233
 Uranus -51014-09-08 07:25 J -16911190.36 -16911190.19 -16911190.02 0.0133 0.0097
 Uranus -51013-09-11 12:42 J -16910821.22 -16910820.97 -16910820.71 0.0133 0.0008
 Uranus -51012-09-15 17:45 J -16910451.87 -16910451.76 -16910451.60 0.0134 0.0112

Saturn -51003-08-19 02:52 J -16907192.59 -16907192.38 -16907192.14 0.0281 0.0111

Saturn -51002-09-01 08:23 J -16906814.33 -16906814.15 -16906813.96 0.0284 0.0185

51ST MILLENNIUM BCE

This is a list of transits of Earth in the 51st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-50989-02-11 04:33 J	-16902268.49	-16902268.31	-16902268.12	0.0280	0.0185		
Saturn	-50988-02-23 06:57 J	-16901890.44	-16901890.21	-16901889.98	0.0277	0.0100		
Jupiter	-50985-02-28 00:57 J	-16900790.68	-16900790.46	-16900790.24	0.0489	0.0179		
Neptune	-50980-01-27 18:13 J	-16898994.87	-16898994.74	-16898994.57	0.0089	0.0071		
Neptune	-50979-01-30 06:13 J	-16898627.45	-16898627.24	-16898627.01	0.0089	0.0047		
Neptune	-50978-02-01 18:13 J	-16898259.98	-16898259.74	-16898259.48	0.0089	0.0023		
Neptune	-50977-02-04 06:13 J	-16897892.50	-16897892.24	-16897891.98	0.0089	0.0001		
Neptune	-50976-02-05 17:59 J	-16897524.99	-16897524.75	-16897524.49	0.0089	0.0026		
Mars	-50976-07-29 14:09 J	-16897351.01	-16897350.91	-16897350.81	0.1679	0.1408		
Neptune	-50975-02-08 05:45 J	-16897157.46	-16897157.26	-16897157.03	0.0089	0.0050		
Neptune	-50974-02-10 17:45 J	-16896789.88	-16896789.76	-16896789.59	0.0089	0.0074		
Saturn	-50974-08-13 12:42 J	-16896606.08	-16896605.97	-16896605.84	0.0280	0.0242		
Jupiter	-50973-03-03 10:04 J	-16896403.29	-16896403.08	-16896402.87	0.0489	0.0211		
Uranus	-50973-03-05 23:16 J	-16896400.69	-16896400.53	-16896400.36	0.0145	0.0111		
Saturn	-50973-08-25 16:18 J	-16896228.06	-16896227.82	-16896227.58	0.0283	0.0048		
Uranus	-50972-03-11 02:52 J	-16896030.63	-16896030.38	-16896030.13	0.0145	0.0027		
Saturn	-50959-02-17 23:01 J	-16891303.79	-16891303.54	-16891303.30	0.0278	0.0029		

Saturn -50958-03-02 22:47 J -16890925.64 -16890925.55 -16890925.45 0.0275 0.0251
 Jupiter -50956-08-29 14:23 J -16890015.02 -16890014.90 -16890014.77 0.0539 0.0455
 Saturn -50944-08-20 03:49 J -16885641.57 -16885641.34 -16885641.11 0.0281 0.0088
 Jupiter -50944-09-03 21:49 J -16885626.82 -16885626.59 -16885626.36 0.0539 0.0084
 Saturn -50943-09-02 08:52 J -16885263.29 -16885263.13 -16885262.96 0.0284 0.0207
 Pluto -50931-01-26 06:13 J -16881099.46 -16881099.24 -16881098.99 0.0064 0.0028
 Pluto -50930-01-27 18:13 J -16880732.90 -16880732.74 -16880732.54 0.0064 0.0046
 Saturn -50930-02-12 01:40 J -16880717.62 -16880717.43 -16880717.23 0.0280 0.0167
 Uranus -50930-09-08 15:06 J -16880509.02 -16880508.87 -16880508.67 0.0133 0.0095
 Saturn -50929-02-25 04:04 J -16880339.55 -16880339.33 -16880339.10 0.0277 0.0118
 Uranus -50929-09-11 21:06 J -16880139.87 -16880139.62 -16880139.37 0.0133 0.0010
 Uranus -50928-09-16 02:09 J -16879770.52 -16879770.41 -16879770.27 0.0134 0.0115
 Mars -50922-01-22 23:16 J -16877815.73 -16877815.53 -16877815.34 0.1866 0.0287
 Saturn -50915-08-14 12:57 J -16875055.10 -16875054.96 -16875054.81 0.0280 0.0221
 Saturn -50914-08-27 16:04 J -16874677.06 -16874676.83 -16874676.59 0.0283 0.0069
 Jupiter -50902-02-27 12:13 J -16870475.20 -16870474.99 -16870474.77 0.0488 0.0210
 Saturn -50900-02-18 19:40 J -16869752.93 -16869752.68 -16869752.44 0.0278 0.0011
 Saturn -50899-03-03 19:40 J -16869374.72 -16869374.68 -16869374.62 0.0275 0.0269
 Neptune -50898-08-02 00:57 J -16868858.55 -16868858.46 -16868858.32 0.0088 0.0079
 Neptune -50897-08-03 12:28 J -16868491.16 -16868490.98 -16868490.75 0.0089 0.0055
 Neptune -50896-08-06 00:13 J -16868123.71 -16868123.49 -16868123.23 0.0089 0.0031
 Neptune -50895-08-08 11:59 J -16867756.25 -16867756.00 -16867755.74 0.0089 0.0006
 Neptune -50894-08-10 23:16 J -16867388.78 -16867388.53 -16867388.27 0.0089 0.0018
 Neptune -50893-08-12 10:47 J -16867021.28 -16867021.05 -16867020.82 0.0089 0.0042
 Neptune -50892-08-14 21:35 J -16866653.75 -16866653.60 -16866653.41 0.0089 0.0066
 Jupiter -50890-03-03 21:21 J -16866087.83 -16866087.61 -16866087.39 0.0489 0.0180
 Uranus -50889-03-06 09:06 J -16865719.29 -16865719.12 -16865718.94 0.0145 0.0105
 Uranus -50888-03-11 12:42 J -16865349.21 -16865348.97 -16865348.71 0.0145 0.0033
 Saturn -50885-08-21 05:45 J -16864090.50 -16864090.26 -16864090.03 0.0281 0.0065
 Saturn -50884-09-03 10:33 J -16863712.19 -16863712.06 -16863711.91 0.0284 0.0231

Jupiter -50873-08-29 00:13 J -16859699.57 -16859699.49 -16859699.41 0.0539 0.0504
 Saturn -50871-02-12 23:59 J -16859166.71 -16859166.50 -16859166.29 0.0280 0.0147
 Saturn -50870-02-26 02:23 J -16858788.61 -16858788.40 -16858788.19 0.0277 0.0138
 Jupiter -50861-09-03 04:18 J -16855311.55 -16855311.32 -16855311.09 0.0538 0.0025
 Saturn -50856-08-15 14:52 J -16853504.05 -16853503.88 -16853503.70 0.0280 0.0198
 Saturn -50855-08-28 17:59 J -16853125.98 -16853125.75 -16853125.52 0.0283 0.0093
 Mars -50850-07-26 00:13 J -16851333.62 -16851333.49 -16851333.35 0.1664 0.1160
 Uranus -50846-09-08 23:59 J -16849827.67 -16849827.50 -16849827.30 0.0133 0.0090
 Uranus -50845-09-12 05:30 J -16849458.52 -16849458.27 -16849458.02 0.0133 0.0014
 Uranus -50844-09-16 10:47 J -16849089.16 -16849089.05 -16849088.93 0.0134 0.0118
 Pluto -50843-07-31 12:57 J -16848771.03 -16848770.96 -16848770.84 0.0080 0.0075
 Saturn -50842-02-07 11:59 J -16848580.01 -16848580.00 -16848579.96 0.0281 0.0280
 Pluto -50842-08-02 18:42 J -16848403.82 -16848403.72 -16848403.60 0.0080 0.0072
 Saturn -50841-02-20 17:30 J -16848202.01 -16848201.77 -16848201.52 0.0278 0.0010
 Saturn -50826-08-23 09:35 J -16842539.34 -16842539.10 -16842538.85 0.0281 0.0039
 Saturn -50825-09-04 14:37 J -16842160.98 -16842160.89 -16842160.77 0.0284 0.0257
 Jupiter -50819-02-26 22:04 J -16840159.79 -16840159.58 -16840159.38 0.0488 0.0251
 Neptune -50816-01-27 05:30 J -16839094.34 -16839094.27 -16839094.14 0.0089 0.0082
 Neptune -50815-01-29 17:59 J -16838726.94 -16838726.75 -16838726.55 0.0089 0.0057
 Neptune -50814-02-01 05:45 J -16838359.49 -16838359.26 -16838359.01 0.0089 0.0033
 Neptune -50813-02-03 17:45 J -16837992.01 -16837991.76 -16837991.50 0.0089 0.0009
 Neptune -50812-02-05 05:16 J -16837624.52 -16837624.28 -16837624.02 0.0089 0.0016
 Saturn -50812-02-13 23:45 J -16837615.72 -16837615.51 -16837615.28 0.0280 0.0125
 Neptune -50811-02-07 17:16 J -16837257.00 -16837256.78 -16837256.54 0.0089 0.0040
 Saturn -50811-02-27 02:09 J -16837237.61 -16837237.41 -16837237.21 0.0277 0.0160
 Neptune -50810-02-10 05:01 J -16836889.44 -16836889.29 -16836889.09 0.0089 0.0065
 Neptune -50809-02-12 17:30 J -16836521.77 -16836521.77 -16836521.75 0.0089 0.0089
 Jupiter -50807-03-03 06:13 J -16835772.47 -16835772.24 -16835772.01 0.0489 0.0135
 Uranus -50805-03-06 18:28 J -16835037.90 -16835037.73 -16835037.53 0.0145 0.0101
 Uranus -50804-03-11 22:04 J -16834667.82 -16834667.58 -16834667.32 0.0145 0.0038

Saturn -50797-08-16 18:42 J -16831952.91 -16831952.72 -16831952.52 0.0280 0.0172
 Saturn -50796-08-29 21:49 J -16831574.80 -16831574.59 -16831574.36 0.0283 0.0120
 Saturn -50783-02-08 12:57 J -16827029.05 -16827028.96 -16827028.85 0.0281 0.0257
 Saturn -50782-02-21 18:13 J -16826650.98 -16826650.74 -16826650.49 0.0278 0.0033
 Jupiter -50778-09-03 02:23 J -16824996.63 -16824996.40 -16824996.17 0.0539 0.0072
 Mars -50771-07-28 06:42 J -16822476.41 -16822476.22 -16822476.03 0.1669 0.0192
 Saturn -50767-08-24 16:04 J -16820988.07 -16820987.83 -16820987.58 0.0281 0.0010
 Jupiter -50766-09-08 07:54 J -16820608.28 -16820608.17 -16820608.05 0.0539 0.0462
 Uranus -50762-09-09 07:40 J -16819146.36 -16819146.18 -16819145.98 0.0133 0.0088
 Uranus -50761-09-12 12:57 J -16818777.20 -16818776.96 -16818776.70 0.0133 0.0016
 Uranus -50760-09-16 17:45 J -16818407.84 -16818407.76 -16818407.63 0.0134 0.0121
 Saturn -50753-02-16 02:52 J -16816064.61 -16816064.38 -16816064.15 0.0280 0.0099
 Saturn -50752-02-28 04:47 J -16815686.48 -16815686.30 -16815686.12 0.0277 0.0185
 Saturn -50738-08-19 01:40 J -16810401.63 -16810401.43 -16810401.21 0.0280 0.0144
 Saturn -50737-08-31 05:30 J -16810023.47 -16810023.27 -16810023.06 0.0283 0.0150
 Jupiter -50736-02-26 06:28 J -16809844.41 -16809844.23 -16809844.04 0.0488 0.0297
 Neptune -50733-08-03 00:13 J -16808590.64 -16808590.49 -16808590.29 0.0088 0.0065
 Neptune -50732-08-05 11:59 J -16808223.21 -16808223.00 -16808222.75 0.0089 0.0041
 Neptune -50731-08-07 23:45 J -16807855.76 -16807855.51 -16807855.25 0.0089 0.0016
 Neptune -50730-08-10 11:16 J -16807488.28 -16807488.03 -16807487.76 0.0089 0.0009
 Neptune -50729-08-11 22:33 J -16807120.79 -16807120.56 -16807120.31 0.0089 0.0033
 Neptune -50728-08-14 09:49 J -16806753.27 -16806753.09 -16806752.88 0.0089 0.0057
 Neptune -50727-08-16 21:06 J -16806385.71 -16806385.62 -16806385.51 0.0089 0.0081
 Saturn -50724-02-09 16:33 J -16805477.94 -16805477.81 -16805477.66 0.0281 0.0231
 Jupiter -50724-03-02 15:21 J -16805457.09 -16805456.86 -16805456.62 0.0488 0.0096
 Saturn -50723-02-22 21:35 J -16805099.85 -16805099.60 -16805099.36 0.0278 0.0059
 Uranus -50721-03-07 02:37 J -16804356.57 -16804356.39 -16804356.20 0.0145 0.0098
 Uranus -50720-03-12 05:59 J -16803986.49 -16803986.25 -16803985.99 0.0145 0.0041
 Jupiter -50712-03-06 23:45 J -16801069.54 -16801069.51 -16801069.49 0.0489 0.0484
 Saturn -50709-08-12 23:30 J -16799814.58 -16799814.52 -16799814.43 0.0279 0.0264

Saturn -50708-08-26 00:57 J -16799436.70 -16799436.46 -16799436.21 0.0282 0.0023
 Jupiter -50695-09-02 07:11 J -16794681.42 -16794681.20 -16794680.97 0.0539 0.0142
 Saturn -50694-02-17 09:35 J -16794513.34 -16794513.10 -16794512.86 0.0279 0.0070
 Saturn -50693-03-01 11:01 J -16794135.20 -16794135.04 -16794134.88 0.0276 0.0213
 Mars -50692-07-30 13:54 J -16793618.98 -16793618.92 -16793618.85 0.1673 0.1573
 Pluto -50683-01-27 23:59 J -16790515.72 -16790515.50 -16790515.24 0.0064 0.0024
 Jupiter -50683-09-07 11:30 J -16790293.17 -16790293.02 -16790292.86 0.0538 0.0390
 Pluto -50682-01-29 11:59 J -16790149.14 -16790149.00 -16790148.82 0.0064 0.0051
 Saturn -50679-08-20 11:16 J -16788850.25 -16788850.03 -16788849.80 0.0281 0.0111
 Saturn -50678-09-02 15:21 J -16788472.04 -16788471.86 -16788471.67 0.0284 0.0184
 Uranus -50678-09-09 16:04 J -16788465.02 -16788464.83 -16788464.63 0.0133 0.0085
 Uranus -50677-09-12 21:06 J -16788095.86 -16788095.62 -16788095.36 0.0133 0.0019
 Uranus -50676-09-17 02:23 J -16787726.49 -16787726.40 -16787726.30 0.0134 0.0123
 Saturn -50665-02-11 23:45 J -16783926.67 -16783926.51 -16783926.32 0.0280 0.0201
 Saturn -50664-02-24 04:04 J -16783548.56 -16783548.33 -16783548.10 0.0277 0.0089
 Jupiter -50653-02-26 14:23 J -16779529.05 -16779528.90 -16779528.72 0.0488 0.0345
 Neptune -50651-01-29 05:16 J -16778826.43 -16778826.28 -16778826.10 0.0089 0.0068
 Neptune -50650-01-31 17:30 J -16778459.00 -16778458.77 -16778458.55 0.0089 0.0043
 Saturn -50650-08-15 10:47 J -16778263.18 -16778263.05 -16778262.91 0.0279 0.0231
 Neptune -50649-02-03 04:47 J -16778091.54 -16778091.30 -16778091.04 0.0089 0.0019
 Saturn -50649-08-27 12:42 J -16777885.20 -16777884.97 -16777884.73 0.0282 0.0058
 Neptune -50648-02-04 17:01 J -16777724.05 -16777723.79 -16777723.53 0.0089 0.0006
 Neptune -50647-02-07 04:47 J -16777356.54 -16777356.30 -16777356.05 0.0089 0.0030
 Neptune -50646-02-09 16:33 J -16776989.00 -16776988.81 -16776988.60 0.0089 0.0055
 Neptune -50645-02-12 04:47 J -16776621.42 -16776621.30 -16776621.19 0.0089 0.0079
 Jupiter -50641-03-01 19:25 J -16775141.92 -16775141.69 -16775141.45 0.0488 0.0032
 Mars -50638-01-22 12:13 J -16774085.18 -16774084.99 -16774084.81 0.1875 0.0692
 Uranus -50637-03-07 09:21 J -16773675.29 -16773675.11 -16773674.91 0.0145 0.0097
 Uranus -50636-03-12 12:57 J -16773305.20 -16773304.96 -16773304.71 0.0145 0.0042
 Saturn -50635-02-18 19:11 J -16772961.94 -16772961.70 -16772961.45 0.0279 0.0038

Saturn -50634-03-03 19:54 J -16772583.77 -16772583.67 -16772583.55 0.0276 0.0244
 Jupiter -50629-03-06 03:06 J -16770754.48 -16770754.37 -16770754.24 0.0489 0.0419
 Saturn -50620-08-21 22:47 J -16767298.78 -16767298.55 -16767298.31 0.0281 0.0077
 Saturn -50619-09-04 03:35 J -16766920.50 -16766920.35 -16766920.20 0.0284 0.0219
 Jupiter -50612-09-01 05:30 J -16764366.47 -16764366.27 -16764366.06 0.0539 0.0239
 Saturn -50606-02-13 10:18 J -16762375.26 -16762375.07 -16762374.87 0.0280 0.0167
 Saturn -50605-02-26 13:40 J -16761997.15 -16761996.93 -16761996.70 0.0277 0.0121
 Jupiter -50600-09-06 03:49 J -16759978.53 -16759978.34 -16759978.13 0.0539 0.0268
 Pluto -50595-08-02 07:40 J -16758187.32 -16758187.18 -16758187.02 0.0080 0.0066
 Uranus -50594-09-09 23:45 J -16757783.70 -16757783.51 -16757783.31 0.0133 0.0083
 Uranus -50593-09-13 05:01 J -16757414.54 -16757414.29 -16757414.04 0.0133 0.0021
 Uranus -50592-09-17 09:35 J -16757045.16 -16757045.10 -16757044.99 0.0134 0.0126
 Saturn -50591-08-16 22:33 J -16756711.73 -16756711.56 -16756711.38 0.0280 0.0198
 Saturn -50590-08-30 01:40 J -16756333.66 -16756333.43 -16756333.20 0.0282 0.0095
 Saturn -50576-02-20 07:40 J -16751410.42 -16751410.18 -16751409.93 0.0279 0.0005
 Jupiter -50570-02-25 16:47 J -16749213.92 -16749213.80 -16749213.68 0.0488 0.0416
 Neptune -50569-08-02 11:30 J -16748690.13 -16748690.02 -16748689.86 0.0088 0.0076
 Neptune -50568-08-04 23:16 J -16748322.73 -16748322.53 -16748322.31 0.0089 0.0051
 Neptune -50567-08-07 10:47 J -16747955.28 -16747955.05 -16747954.79 0.0089 0.0027
 Mars -50566-07-27 02:09 J -16747601.57 -16747601.41 -16747601.26 0.1659 0.0940
 Neptune -50566-08-09 22:33 J -16747587.82 -16747587.56 -16747587.30 0.0089 0.0002
 Neptune -50565-08-11 10:04 J -16747220.33 -16747220.08 -16747219.83 0.0089 0.0023
 Neptune -50564-08-13 21:06 J -16746852.82 -16746852.62 -16746852.38 0.0089 0.0048
 Neptune -50563-08-16 08:23 J -16746485.27 -16746485.15 -16746484.98 0.0089 0.0072
 Saturn -50561-08-23 12:13 J -16745747.23 -16745746.99 -16745746.75 0.0281 0.0041
 Saturn -50560-09-05 17:16 J -16745368.87 -16745368.78 -16745368.67 0.0284 0.0258
 Jupiter -50558-03-01 23:45 J -16744826.74 -16744826.51 -16744826.27 0.0488 0.0031
 Uranus -50553-03-07 15:49 J -16742994.02 -16742993.84 -16742993.63 0.0145 0.0096
 Uranus -50552-03-12 19:25 J -16742623.93 -16742623.69 -16742623.44 0.0145 0.0043
 Saturn -50547-02-14 22:47 J -16740823.76 -16740823.55 -16740823.33 0.0280 0.0132

Saturn -50546-02-28 01:11 J -16740445.64 -16740445.45 -16740445.23 0.0277 0.0156
 Jupiter -50546-03-06 08:37 J -16740439.29 -16740439.14 -16740438.98 0.0489 0.0363
 Saturn -50532-08-18 11:16 J -16735160.22 -16735160.03 -16735159.82 0.0280 0.0163
 Saturn -50531-08-31 15:06 J -16734782.08 -16734781.87 -16734781.65 0.0283 0.0132
 Jupiter -50529-08-30 21:35 J -16734051.76 -16734051.60 -16734051.42 0.0539 0.0365
 Saturn -50518-02-09 17:01 J -16730236.87 -16730236.79 -16730236.68 0.0281 0.0257
 Saturn -50517-02-22 21:35 J -16729858.84 -16729858.60 -16729858.35 0.0278 0.0034
 Jupiter -50517-09-05 04:18 J -16729663.53 -16729663.32 -16729663.10 0.0539 0.0180
 Uranus -50510-09-10 08:09 J -16727102.35 -16727102.16 -16727101.95 0.0133 0.0080
 Uranus -50509-09-13 13:25 J -16726733.19 -16726732.94 -16726732.69 0.0133 0.0024
 Uranus -50508-09-17 18:28 J -16726363.78 -16726363.73 -16726363.65 0.0134 0.0129
 Saturn -50502-08-26 01:25 J -16724195.69 -16724195.44 -16724195.20 0.0282 0.0006
 Saturn -50488-02-16 11:59 J -16719272.22 -16719272.00 -16719271.76 0.0279 0.0097
 Neptune -50487-01-28 16:18 J -16718925.91 -16718925.82 -16718925.68 0.0089 0.0079
 Jupiter -50487-02-24 21:35 J -16718898.65 -16718898.60 -16718898.55 0.0488 0.0476
 Saturn -50487-03-01 14:09 J -16718894.08 -16718893.91 -16718893.72 0.0276 0.0191
 Mars -50487-07-29 08:09 J -16718744.34 -16718744.16 -16718743.97 0.1663 0.0398
 Neptune -50486-01-31 04:18 J -16718558.51 -16718558.32 -16718558.11 0.0089 0.0054
 Neptune -50485-02-02 16:04 J -16718191.06 -16718190.83 -16718190.57 0.0089 0.0030
 Neptune -50484-02-04 04:18 J -16717823.58 -16717823.32 -16717823.06 0.0089 0.0005
 Neptune -50483-02-06 16:04 J -16717456.07 -16717455.83 -16717455.57 0.0089 0.0021
 Neptune -50482-02-09 04:04 J -16717088.55 -16717088.33 -16717088.10 0.0089 0.0045
 Neptune -50481-02-11 15:35 J -16716720.99 -16716720.85 -16716720.67 0.0089 0.0070
 Jupiter -50475-03-01 04:47 J -16714511.53 -16714511.30 -16714511.07 0.0488 0.0091
 Saturn -50473-08-19 23:59 J -16713608.72 -16713608.50 -16713608.29 0.0281 0.0128
 Saturn -50472-09-02 04:04 J -16713230.51 -16713230.33 -16713230.12 0.0283 0.0170
 Uranus -50469-03-07 23:45 J -16712312.69 -16712312.51 -16712312.30 0.0145 0.0093
 Uranus -50468-03-13 03:21 J -16711942.60 -16711942.36 -16711942.11 0.0145 0.0046
 Jupiter -50463-03-05 09:21 J -16710124.30 -16710124.11 -16710123.92 0.0488 0.0288
 Saturn -50459-02-11 08:09 J -16708685.30 -16708685.16 -16708685.00 0.0281 0.0221

Saturn -50458-02-24 11:59 J -16708307.24 -16708307.00 -16708306.76 0.0278 0.0070
 Jupiter -50446-08-30 23:30 J -16703736.65 -16703736.52 -16703736.39 0.0539 0.0445
 Saturn -50444-08-14 11:45 J -16703022.09 -16703022.01 -16703021.92 0.0279 0.0260
 Saturn -50443-08-27 13:40 J -16702644.17 -16702643.93 -16702643.69 0.0282 0.0031
 Pluto -50435-01-29 20:09 J -16699931.92 -16699931.66 -16699931.41 0.0064 0.0014
 Pluto -50434-01-31 07:11 J -16699565.25 -16699565.20 -16699565.06 0.0064 0.0061
 Jupiter -50434-09-05 03:21 J -16699348.58 -16699348.36 -16699348.13 0.0539 0.0086
 Saturn -50429-02-19 00:57 J -16697720.69 -16697720.46 -16697720.21 0.0279 0.0062
 Saturn -50428-03-03 02:52 J -16697342.52 -16697342.38 -16697342.24 0.0276 0.0225
 Uranus -50426-09-10 16:18 J -16696421.01 -16696420.82 -16696420.60 0.0133 0.0078
 Uranus -50425-09-13 21:35 J -16696051.84 -16696051.60 -16696051.35 0.0133 0.0027
 Uranus -50424-09-18 03:06 J -16695682.40 -16695682.37 -16695682.33 0.0134 0.0132
 Saturn -50414-08-22 10:33 J -16692057.29 -16692057.06 -16692056.83 0.0281 0.0095
 Saturn -50413-09-03 15:06 J -16691679.03 -16691678.87 -16691678.69 0.0284 0.0204
 Neptune -50405-08-01 23:01 J -16688789.58 -16688789.54 -16688789.46 0.0088 0.0086
 Neptune -50404-08-04 10:33 J -16688422.22 -16688422.06 -16688421.85 0.0089 0.0062
 Neptune -50403-08-06 22:18 J -16688054.80 -16688054.57 -16688054.33 0.0089 0.0037
 Neptune -50402-08-09 09:49 J -16687687.34 -16687687.09 -16687686.83 0.0089 0.0012
 Neptune -50401-08-10 21:06 J -16687319.87 -16687319.62 -16687319.36 0.0089 0.0013
 Saturn -50400-02-12 21:35 J -16687133.77 -16687133.60 -16687133.41 0.0281 0.0186
 Neptune -50400-08-13 08:23 J -16686952.37 -16686952.15 -16686951.90 0.0089 0.0038
 Saturn -50399-02-26 01:11 J -16686755.68 -16686755.45 -16686755.22 0.0277 0.0105
 Neptune -50399-08-15 20:09 J -16686584.84 -16686584.66 -16686584.48 0.0089 0.0062
 Neptune -50398-08-18 06:57 J -16686217.23 -16686217.21 -16686217.13 0.0089 0.0087
 Jupiter -50392-02-28 06:28 J -16684196.45 -16684196.23 -16684196.00 0.0488 0.0162
 Uranus -50385-03-08 09:35 J -16681631.29 -16681631.10 -16681630.88 0.0145 0.0088
 Saturn -50385-08-15 21:35 J -16681470.72 -16681470.60 -16681470.45 0.0279 0.0229
 Uranus -50384-03-13 13:11 J -16681261.19 -16681260.95 -16681260.71 0.0145 0.0052
 Saturn -50384-08-28 23:59 J -16681092.73 -16681092.50 -16681092.26 0.0282 0.0064
 Jupiter -50380-03-04 13:40 J -16679809.13 -16679808.93 -16679808.72 0.0488 0.0226

Saturn -50370-02-20 12:42 J -16676169.22 -16676168.97 -16676168.73 0.0279 0.0028
 Saturn -50369-03-04 13:40 J -16675791.01 -16675790.93 -16675790.84 0.0276 0.0257
 Saturn -50355-08-23 18:57 J -16670505.95 -16670505.71 -16670505.48 0.0281 0.0065
 Mars -50354-01-21 21:49 J -16670354.64 -16670354.59 -16670354.54 0.1884 0.1821
 Saturn -50354-09-05 23:45 J -16670127.63 -16670127.51 -16670127.36 0.0284 0.0236
 Jupiter -50351-09-03 21:49 J -16669033.82 -16669033.59 -16669033.36 0.0539 0.0030
 Pluto -50347-08-04 07:11 J -16667603.40 -16667603.20 -16667602.95 0.0080 0.0042
 Uranus -50342-09-11 01:25 J -16665739.63 -16665739.44 -16665739.21 0.0133 0.0074
 Saturn -50341-02-15 08:37 J -16665582.33 -16665582.14 -16665581.92 0.0280 0.0155
 Uranus -50341-09-14 06:42 J -16665370.46 -16665370.22 -16665369.97 0.0133 0.0032
 Saturn -50340-02-27 11:45 J -16665204.21 -16665204.01 -16665203.78 0.0277 0.0138
 Jupiter -50339-09-09 03:21 J -16664645.43 -16664645.36 -16664645.29 0.0539 0.0512
 Saturn -50326-08-18 05:45 J -16659919.42 -16659919.26 -16659919.09 0.0279 0.0200
 Saturn -50325-08-30 07:54 J -16659541.39 -16659541.17 -16659540.93 0.0282 0.0095
 Neptune -50322-01-30 14:23 J -16658658.05 -16658657.90 -16658657.70 0.0089 0.0066
 Neptune -50321-02-02 02:23 J -16658290.61 -16658290.40 -16658290.15 0.0089 0.0041
 Neptune -50320-02-03 14:37 J -16657923.14 -16657922.89 -16657922.63 0.0089 0.0016
 Neptune -50319-02-06 02:37 J -16657555.64 -16657555.39 -16657555.13 0.0089 0.0010
 Neptune -50318-02-08 14:09 J -16657188.13 -16657187.91 -16657187.66 0.0089 0.0035
 Neptune -50317-02-11 02:09 J -16656820.59 -16656820.41 -16656820.21 0.0089 0.0060
 Neptune -50316-02-12 13:54 J -16656452.97 -16656452.92 -16656452.82 0.0089 0.0085
 Saturn -50311-02-21 21:35 J -16654617.85 -16654617.60 -16654617.36 0.0279 0.0004
 Jupiter -50309-02-28 12:42 J -16653881.18 -16653880.97 -16653880.76 0.0488 0.0216
 Uranus -50301-03-08 20:23 J -16650949.86 -16650949.65 -16650949.44 0.0145 0.0081
 Uranus -50300-03-13 23:30 J -16650579.74 -16650579.52 -16650579.27 0.0145 0.0058
 Jupiter -50297-03-03 20:37 J -16649493.86 -16649493.64 -16649493.42 0.0488 0.0174
 Saturn -50296-08-25 00:13 J -16648954.73 -16648954.49 -16648954.25 0.0281 0.0037
 Saturn -50295-09-07 05:45 J -16648576.34 -16648576.26 -16648576.17 0.0284 0.0265
 Saturn -50282-02-16 17:01 J -16644031.00 -16644030.79 -16644030.56 0.0280 0.0125
 Mars -50282-07-28 03:21 J -16643869.53 -16643869.36 -16643869.18 0.1654 0.0726

Saturn -50281-02-29 20:09 J -16643652.85 -16643652.66 -16643652.46 0.0277 0.0166
 Mars -50275-01-25 03:35 J -16641496.52 -16641496.35 -16641496.18 0.1877 0.0925
 Jupiter -50268-09-03 02:37 J -16638718.62 -16638718.39 -16638718.16 0.0540 0.0095
 Saturn -50267-08-19 11:01 J -16638368.22 -16638368.04 -16638367.84 0.0279 0.0174
 Saturn -50266-09-01 13:11 J -16637990.16 -16637989.95 -16637989.72 0.0282 0.0123
 Uranus -50258-09-11 09:49 J -16635058.29 -16635058.09 -16635057.86 0.0133 0.0070
 Uranus -50257-09-14 15:21 J -16634689.10 -16634688.86 -16634688.61 0.0133 0.0035
 Jupiter -50256-09-08 07:54 J -16634330.29 -16634330.17 -16634330.03 0.0539 0.0444
 Saturn -50253-02-10 21:06 J -16633444.68 -16633444.62 -16633444.53 0.0282 0.0267
 Saturn -50252-02-23 03:21 J -16633066.61 -16633066.36 -16633066.11 0.0279 0.0030
 Neptune -50240-08-03 21:06 J -16628521.74 -16628521.62 -16628521.44 0.0088 0.0073
 Neptune -50239-08-06 08:52 J -16628154.33 -16628154.13 -16628153.89 0.0089 0.0048
 Neptune -50238-08-08 20:37 J -16627786.88 -16627786.64 -16627786.39 0.0089 0.0023
 Neptune -50237-08-10 08:09 J -16627419.42 -16627419.16 -16627418.90 0.0089 0.0002
 Saturn -50237-08-26 03:35 J -16627403.60 -16627403.35 -16627403.11 0.0281 0.0013
 Neptune -50236-08-12 19:11 J -16627051.93 -16627051.70 -16627051.44 0.0089 0.0028
 Neptune -50235-08-15 06:28 J -16626684.42 -16626684.23 -16626684.00 0.0089 0.0053
 Neptune -50234-08-17 17:59 J -16626316.86 -16626316.75 -16626316.61 0.0089 0.0077
 Jupiter -50226-02-27 18:42 J -16623565.91 -16623565.72 -16623565.52 0.0488 0.0268
 Saturn -50223-02-17 21:49 J -16622479.82 -16622479.59 -16622479.36 0.0280 0.0100
 Saturn -50222-03-03 00:42 J -16622101.64 -16622101.47 -16622101.28 0.0277 0.0192
 Uranus -50217-03-09 06:28 J -16620268.44 -16620268.23 -16620268.00 0.0145 0.0075
 Uranus -50216-03-14 09:49 J -16619898.30 -16619898.09 -16619897.84 0.0145 0.0065
 Jupiter -50214-03-04 03:21 J -16619178.59 -16619178.36 -16619178.14 0.0488 0.0124
 Saturn -50208-08-20 13:54 J -16616817.11 -16616816.92 -16616816.70 0.0279 0.0150
 Saturn -50207-09-02 16:04 J -16616439.03 -16616438.83 -16616438.61 0.0282 0.0147
 Mars -50203-07-30 09:35 J -16615012.27 -16615012.10 -16615011.92 0.1658 0.0601
 Saturn -50194-02-12 00:28 J -16611893.59 -16611893.48 -16611893.35 0.0282 0.0242
 Saturn -50193-02-25 06:42 J -16611515.46 -16611515.22 -16611514.98 0.0278 0.0055
 Pluto -50187-01-31 20:52 J -16609347.89 -16609347.63 -16609347.37 0.0064 0.0006

Jupiter -50185-09-02 05:01 J -16608403.51 -16608403.29 -16608403.07 0.0539 0.0174
 Saturn -50178-08-28 04:33 J -16605852.56 -16605852.31 -16605852.07 0.0281 0.0012
 Uranus -50174-09-11 19:11 J -16604376.90 -16604376.70 -16604376.47 0.0133 0.0066
 Jupiter -50173-09-07 08:37 J -16604015.31 -16604015.14 -16604014.97 0.0539 0.0358
 Uranus -50173-09-15 00:28 J -16604007.71 -16604007.48 -16604007.22 0.0133 0.0039
 Saturn -50164-02-18 23:30 J -16600928.75 -16600928.52 -16600928.28 0.0280 0.0077
 Saturn -50163-03-04 02:23 J -16600550.54 -16600550.40 -16600550.23 0.0277 0.0215
 Neptune -50158-01-30 00:57 J -16598757.58 -16598757.46 -16598757.33 0.0089 0.0077
 Neptune -50157-02-01 12:42 J -16598390.16 -16598389.97 -16598389.75 0.0089 0.0052
 Neptune -50156-02-03 00:42 J -16598022.71 -16598022.47 -16598022.21 0.0089 0.0027
 Neptune -50155-02-05 12:42 J -16597655.23 -16597654.97 -16597654.71 0.0089 0.0001
 Neptune -50154-02-08 00:28 J -16597287.72 -16597287.48 -16597287.22 0.0089 0.0024
 Neptune -50153-02-10 12:42 J -16596920.18 -16596919.97 -16596919.76 0.0089 0.0049
 Neptune -50152-02-11 23:59 J -16596552.61 -16596552.50 -16596552.33 0.0089 0.0075
 Saturn -50149-08-21 15:49 J -16595266.05 -16595265.84 -16595265.62 0.0279 0.0126
 Saturn -50148-09-03 17:45 J -16594887.95 -16594887.76 -16594887.56 0.0282 0.0171
 Jupiter -50143-02-27 05:01 J -16593250.47 -16593250.29 -16593250.11 0.0488 0.0308
 Saturn -50135-02-13 00:57 J -16590342.61 -16590342.46 -16590342.30 0.0282 0.0221
 Saturn -50134-02-26 06:57 J -16589964.44 -16589964.21 -16589963.97 0.0279 0.0077
 Uranus -50133-03-09 15:06 J -16589587.08 -16589586.87 -16589586.63 0.0145 0.0072
 Uranus -50132-03-14 18:57 J -16589216.93 -16589216.71 -16589216.47 0.0145 0.0068
 Jupiter -50131-03-03 12:57 J -16588863.19 -16588862.96 -16588862.72 0.0488 0.0084
 Saturn -50120-08-16 03:49 J -16584679.42 -16584679.34 -16584679.24 0.0278 0.0258
 Jupiter -50119-03-07 21:21 J -16584475.65 -16584475.61 -16584475.56 0.0488 0.0478
 Saturn -50119-08-29 03:49 J -16584301.58 -16584301.34 -16584301.09 0.0281 0.0034
 Saturn -50105-02-20 22:47 J -16579377.79 -16579377.55 -16579377.30 0.0280 0.0056
 Saturn -50104-03-05 02:09 J -16578999.53 -16578999.41 -16578999.27 0.0277 0.0236
 Jupiter -50102-09-02 07:11 J -16578088.41 -16578088.20 -16578088.00 0.0540 0.0252
 Pluto -50099-08-06 12:57 J -16577019.22 -16577018.96 -16577018.70 0.0080 0.0001
 Saturn -50090-08-23 16:18 J -16573715.04 -16573714.82 -16573714.58 0.0279 0.0104

Jupiter -50090-09-07 14:52 J -16573700.06 -16573699.88 -16573699.68 0.0540 0.0302
 Uranus -50090-09-12 04:18 J -16573695.54 -16573695.32 -16573695.09 0.0133 0.0062
 Saturn -50089-09-04 18:13 J -16573336.92 -16573336.74 -16573336.56 0.0282 0.0193
 Uranus -50089-09-15 09:21 J -16573326.34 -16573326.11 -16573325.86 0.0133 0.0043
 Saturn -50076-02-13 23:30 J -16568791.68 -16568791.52 -16568791.33 0.0282 0.0201
 Neptune -50076-08-03 07:54 J -16568621.24 -16568621.17 -16568621.08 0.0088 0.0084
 Saturn -50075-02-27 05:45 J -16568413.49 -16568413.26 -16568413.03 0.0279 0.0098
 Neptune -50075-08-05 19:11 J -16568253.88 -16568253.70 -16568253.49 0.0088 0.0059
 Neptune -50074-08-08 06:42 J -16567886.45 -16567886.22 -16567885.97 0.0089 0.0034
 Neptune -50073-08-09 18:13 J -16567518.99 -16567518.74 -16567518.48 0.0089 0.0009
 Neptune -50072-08-12 05:30 J -16567151.52 -16567151.27 -16567151.01 0.0089 0.0017
 Neptune -50071-08-14 16:33 J -16566784.02 -16566783.81 -16566783.57 0.0089 0.0042
 Neptune -50070-08-17 03:49 J -16566416.49 -16566416.34 -16566416.15 0.0089 0.0067
 Saturn -50061-08-17 04:04 J -16563128.46 -16563128.33 -16563128.20 0.0278 0.0237
 Jupiter -50060-02-26 16:18 J -16562934.99 -16562934.82 -16562934.65 0.0488 0.0343
 Saturn -50060-08-30 03:35 J -16562750.58 -16562750.35 -16562750.11 0.0281 0.0056
 Uranus -50049-03-09 23:30 J -16558905.73 -16558905.52 -16558905.28 0.0146 0.0069
 Jupiter -50048-03-02 23:59 J -16558547.74 -16558547.50 -16558547.27 0.0488 0.0051
 Uranus -50048-03-15 03:21 J -16558535.57 -16558535.36 -16558535.13 0.0145 0.0072
 Saturn -50046-02-21 20:09 J -16557826.90 -16557826.66 -16557826.41 0.0280 0.0037
 Saturn -50045-03-05 23:45 J -16557448.58 -16557448.51 -16557448.40 0.0277 0.0256
 Jupiter -50036-03-07 08:23 J -16554160.24 -16554160.15 -16554160.05 0.0488 0.0445
 Saturn -50031-08-24 17:16 J -16552164.01 -16552163.78 -16552163.54 0.0279 0.0081
 Saturn -50030-09-06 18:28 J -16551785.88 -16551785.73 -16551785.57 0.0282 0.0216
 Jupiter -50019-09-01 17:01 J -16547772.97 -16547772.79 -16547772.59 0.0540 0.0300
 Saturn -50017-02-15 21:35 J -16547240.78 -16547240.60 -16547240.40 0.0282 0.0181
 Saturn -50016-02-28 03:35 J -16546862.57 -16546862.35 -16546862.12 0.0279 0.0118
 Jupiter -50007-09-06 21:49 J -16543384.80 -16543384.59 -16543384.38 0.0539 0.0242
 Uranus -50006-09-12 14:09 J -16543014.12 -16543013.91 -16543013.67 0.0133 0.0058
 Uranus -50005-09-15 19:25 J -16542644.92 -16542644.69 -16542644.44 0.0133 0.0047

Saturn -50002-08-19 03:35 J -16541577.49 -16541577.35 -16541577.18 0.0278 0.0215

Saturn -50001-08-31 03:21 J -16541199.59 -16541199.36 -16541199.12 0.0281 0.0078

50TH MILLENNIUM BCE

This is a list of transits of Earth in the 50th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Mars	-49998-07-29 04:47 J	-16540137.48	-16540137.30	-16540137.12	0.1649	0.0517		
Neptune	-49993-01-31 22:04 J	-16538489.75	-16538489.58	-16538489.40	0.0089	0.0064		
Neptune	-49992-02-02 09:21 J	-16538122.32	-16538122.11	-16538121.86	0.0089	0.0039		
Mars	-49991-01-24 11:16 J	-16537766.23	-16537766.03	-16537765.83	0.1887	0.0249		
Neptune	-49991-02-04 21:49 J	-16537754.85	-16537754.59	-16537754.34	0.0089	0.0013		
Neptune	-49990-02-07 09:35 J	-16537387.35	-16537387.10	-16537386.84	0.0089	0.0013		
Neptune	-49989-02-09 21:35 J	-16537019.83	-16537019.60	-16537019.36	0.0089	0.0038		
Neptune	-49988-02-11 09:06 J	-16536652.27	-16536652.12	-16536651.92	0.0089	0.0064		
Saturn	-49987-02-22 17:30 J	-16536276.02	-16536275.77	-16536275.52	0.0280	0.0016		
Saturn	-49986-03-07 21:35 J	-16535897.62	-16535897.60	-16535897.57	0.0277	0.0275		
Jupiter	-49977-02-27 04:47 J	-16532619.44	-16532619.30	-16532619.14	0.0487	0.0372		
Saturn	-49972-08-25 19:25 J	-16530612.93	-16530612.69	-16530612.45	0.0279	0.0056		
Saturn	-49971-09-07 20:23 J	-16530234.77	-16530234.65	-16530234.52	0.0282	0.0241		
Jupiter	-49965-03-02 11:01 J	-16528232.28	-16528232.04	-16528231.81	0.0487	0.0014		
Uranus	-49965-03-10 07:40 J	-16528224.39	-16528224.18	-16528223.93	0.0146	0.0066		
Uranus	-49964-03-15 11:59 J	-16527854.22	-16527854.00	-16527853.78	0.0145	0.0075		
Saturn	-49958-02-16 19:40 J	-16525689.87	-16525689.68	-16525689.47	0.0282	0.0160		

Saturn -49957-03-01 01:54 J -16525311.63 -16525311.42 -16525311.21 0.0279 0.0139
 Jupiter -49953-03-06 18:42 J -16523844.84 -16523844.72 -16523844.58 0.0488 0.0406
 Saturn -49943-08-20 05:16 J -16520026.45 -16520026.28 -16520026.10 0.0278 0.0191
 Saturn -49942-09-02 04:47 J -16519648.52 -16519648.30 -16519648.07 0.0281 0.0102
 Pluto -49940-02-01 13:25 J -16519130.15 -16519129.94 -16519129.73 0.0064 0.0036
 Pluto -49939-02-03 00:57 J -16518763.65 -16518763.46 -16518763.23 0.0064 0.0038
 Jupiter -49936-08-31 20:37 J -16517457.80 -16517457.64 -16517457.47 0.0540 0.0375
 Saturn -49928-02-23 15:21 J -16514725.11 -16514724.86 -16514724.61 0.0280 0.0005
 Jupiter -49924-09-05 21:35 J -16513069.82 -16513069.60 -16513069.38 0.0540 0.0152
 Uranus -49922-09-12 23:59 J -16512332.73 -16512332.50 -16512332.27 0.0133 0.0053
 Uranus -49921-09-16 04:47 J -16511963.52 -16511963.30 -16511963.06 0.0133 0.0052
 Mars -49919-07-31 10:47 J -16511280.22 -16511280.05 -16511279.89 0.1653 0.0799
 Saturn -49913-08-26 22:33 J -16509061.80 -16509061.56 -16509061.32 0.0279 0.0030
 Saturn -49912-09-08 23:30 J -16508683.58 -16508683.52 -16508683.43 0.0282 0.0268
 Neptune -49911-08-05 04:47 J -16508353.44 -16508353.30 -16508353.14 0.0088 0.0071
 Neptune -49910-08-07 16:18 J -16507986.03 -16507985.82 -16507985.59 0.0088 0.0046
 Neptune -49909-08-09 03:49 J -16507618.58 -16507618.34 -16507618.08 0.0089 0.0020
 Neptune -49908-08-11 15:21 J -16507251.11 -16507250.86 -16507250.59 0.0089 0.0006
 Neptune -49907-08-14 02:37 J -16506883.62 -16506883.39 -16506883.14 0.0089 0.0031
 Neptune -49906-08-16 13:54 J -16506516.11 -16506515.92 -16506515.71 0.0089 0.0056
 Neptune -49905-08-18 01:11 J -16506148.54 -16506148.45 -16506148.34 0.0089 0.0081
 Saturn -49899-02-17 19:40 J -16504138.89 -16504138.68 -16504138.46 0.0282 0.0137
 Saturn -49898-03-03 01:25 J -16503760.63 -16503760.44 -16503760.23 0.0279 0.0161
 Jupiter -49894-02-26 14:09 J -16502304.03 -16502303.91 -16502303.79 0.0487 0.0417
 Saturn -49884-08-21 08:52 J -16498475.32 -16498475.13 -16498474.93 0.0278 0.0165
 Saturn -49883-09-03 08:23 J -16498097.36 -16498097.15 -16498096.93 0.0281 0.0129
 Jupiter -49882-03-02 21:21 J -16497916.84 -16497916.61 -16497916.37 0.0488 0.0026
 Uranus -49881-03-10 18:13 J -16497542.96 -16497542.74 -16497542.49 0.0146 0.0060
 Uranus -49880-03-15 22:18 J -16497172.78 -16497172.57 -16497172.36 0.0145 0.0081
 Saturn -49870-02-12 06:28 J -16493552.28 -16493552.23 -16493552.17 0.0283 0.0275

Jupiter -49870-03-07 05:45 J -16493529.41 -16493529.26 -16493529.11 0.0488 0.0371
 Saturn -49869-02-25 15:06 J -16493174.12 -16493173.87 -16493173.63 0.0280 0.0028
 Saturn -49854-08-29 04:04 J -16487510.57 -16487510.33 -16487510.08 0.0279 0.0002
 Jupiter -49853-08-30 20:09 J -16487142.77 -16487142.66 -16487142.54 0.0540 0.0469
 Pluto -49852-08-06 21:49 J -16486801.67 -16486801.59 -16486801.48 0.0080 0.0075
 Pluto -49851-08-09 02:52 J -16486434.46 -16486434.38 -16486434.23 0.0080 0.0071
 Jupiter -49841-09-05 04:47 J -16482754.53 -16482754.30 -16482754.07 0.0540 0.0091
 Saturn -49840-02-18 21:35 J -16482587.82 -16482587.60 -16482587.37 0.0281 0.0111
 Saturn -49839-03-04 03:06 J -16482209.54 -16482209.37 -16482209.18 0.0278 0.0187
 Uranus -49838-09-13 10:47 J -16481651.28 -16481651.05 -16481650.81 0.0133 0.0047
 Uranus -49837-09-16 15:35 J -16481282.07 -16481281.85 -16481281.61 0.0133 0.0057
 Neptune -49829-01-31 06:28 J -16478589.33 -16478589.23 -16478589.07 0.0089 0.0077
 Neptune -49828-02-01 18:28 J -16478221.93 -16478221.73 -16478221.51 0.0089 0.0051
 Neptune -49827-02-04 05:59 J -16477854.48 -16477854.25 -16477853.98 0.0089 0.0026
 Neptune -49826-02-06 18:13 J -16477487.00 -16477486.74 -16477486.48 0.0089 0.0001
 Neptune -49825-02-09 05:59 J -16477119.49 -16477119.25 -16477119.00 0.0089 0.0026
 Saturn -49825-08-22 14:37 J -16476924.09 -16476923.89 -16476923.67 0.0279 0.0137
 Neptune -49824-02-10 17:45 J -16476751.96 -16476751.76 -16476751.54 0.0089 0.0052
 Saturn -49824-09-04 14:23 J -16476546.09 -16476545.90 -16476545.69 0.0281 0.0159
 Neptune -49823-02-13 05:16 J -16476384.37 -16476384.28 -16476384.13 0.0089 0.0078
 Saturn -49811-02-13 09:06 J -16472001.23 -16472001.12 -16472001.00 0.0282 0.0249
 Jupiter -49811-02-25 23:45 J -16471988.57 -16471988.51 -16471988.42 0.0487 0.0459
 Saturn -49810-02-26 17:16 J -16471623.02 -16471622.78 -16471622.54 0.0280 0.0054
 Jupiter -49799-03-02 07:25 J -16467601.42 -16467601.19 -16467600.95 0.0487 0.0067
 Uranus -49797-03-11 05:59 J -16466861.49 -16466861.25 -16466861.01 0.0146 0.0052
 Uranus -49796-03-16 09:35 J -16466491.29 -16466491.10 -16466490.89 0.0145 0.0089
 Saturn -49796-08-17 13:40 J -16466337.00 -16466336.93 -16466336.83 0.0277 0.0259
 Saturn -49795-08-30 11:45 J -16465959.25 -16465959.01 -16465958.77 0.0280 0.0031
 Mars -49793-07-27 03:06 J -16465262.43 -16465262.37 -16465262.30 0.1641 0.1534
 Jupiter -49787-03-06 12:28 J -16463214.15 -16463213.98 -16463213.79 0.0487 0.0318

Saturn -49781-02-21 03:06 J -16461036.60 -16461036.37 -16461036.13 0.0281 0.0082
 Saturn -49780-03-05 08:09 J -16460658.31 -16460658.16 -16460658.00 0.0278 0.0215
 Jupiter -49770-08-31 00:42 J -16456827.47 -16456827.47 -16456827.45 0.0540 0.0539
 Saturn -49766-08-24 23:01 J -16455372.76 -16455372.54 -16455372.31 0.0279 0.0105
 Saturn -49765-09-05 23:16 J -16454994.70 -16454994.53 -16454994.35 0.0282 0.0192
 Jupiter -49758-09-05 05:01 J -16452439.52 -16452439.29 -16452439.05 0.0540 0.0009
 Uranus -49754-09-13 20:52 J -16450969.86 -16450969.63 -16450969.38 0.0133 0.0042
 Uranus -49753-09-17 01:40 J -16450600.65 -16450600.43 -16450600.20 0.0133 0.0063
 Saturn -49752-02-14 14:37 J -16450450.03 -16450449.89 -16450449.72 0.0282 0.0219
 Saturn -49751-02-27 22:33 J -16450071.79 -16450071.56 -16450071.32 0.0279 0.0083
 Neptune -49747-08-04 12:42 J -16448453.04 -16448452.97 -16448452.88 0.0088 0.0084
 Neptune -49746-08-06 23:59 J -16448085.66 -16448085.50 -16448085.28 0.0088 0.0059
 Jupiter -49746-09-10 04:04 J -16448051.38 -16448051.33 -16448051.26 0.0540 0.0519
 Neptune -49745-08-08 12:13 J -16447718.22 -16447717.99 -16447717.74 0.0088 0.0033
 Neptune -49744-08-10 23:59 J -16447350.76 -16447350.50 -16447350.25 0.0089 0.0007
 Neptune -49743-08-13 11:16 J -16446983.28 -16446983.03 -16446982.78 0.0089 0.0019
 Neptune -49742-08-15 22:18 J -16446615.78 -16446615.57 -16446615.33 0.0089 0.0045
 Neptune -49741-08-17 09:49 J -16446248.24 -16446248.09 -16446247.92 0.0089 0.0070
 Saturn -49737-08-18 23:16 J -16444785.66 -16444785.53 -16444785.39 0.0277 0.0227
 Saturn -49736-08-31 21:49 J -16444407.83 -16444407.59 -16444407.35 0.0280 0.0065
 Saturn -49722-02-22 11:45 J -16439485.25 -16439485.01 -16439484.77 0.0281 0.0050
 Saturn -49721-03-06 16:18 J -16439106.93 -16439106.82 -16439106.71 0.0278 0.0245
 Jupiter -49716-03-01 11:59 J -16437286.23 -16437286.00 -16437285.77 0.0487 0.0130
 Mars -49714-07-30 07:11 J -16436405.39 -16436405.20 -16436405.01 0.1644 0.0292
 Uranus -49713-03-11 18:28 J -16436179.97 -16436179.73 -16436179.48 0.0146 0.0043
 Uranus -49712-03-16 22:04 J -16435809.75 -16435809.58 -16435809.37 0.0145 0.0098
 Mars -49707-01-23 16:47 J -16434035.92 -16434035.80 -16434035.69 0.1895 0.1554
 Saturn -49707-08-26 09:06 J -16433821.35 -16433821.12 -16433820.88 0.0279 0.0071
 Saturn -49706-09-08 09:49 J -16433443.23 -16433443.09 -16433442.94 0.0282 0.0227
 Jupiter -49704-03-05 18:42 J -16432898.92 -16432898.72 -16432898.52 0.0488 0.0261

Saturn -49693-02-17 00:13 J -16428898.66 -16428898.49 -16428898.30 0.0282 0.0186
 Pluto -49692-02-03 23:01 J -16428545.80 -16428545.54 -16428545.28 0.0064 0.0005
 Saturn -49692-03-01 07:25 J -16428520.41 -16428520.19 -16428519.96 0.0279 0.0116
 Saturn -49678-08-21 10:04 J -16423234.25 -16423234.08 -16423233.90 0.0278 0.0193
 Saturn -49677-09-02 09:35 J -16422856.33 -16422856.10 -16422855.87 0.0281 0.0102
 Jupiter -49675-09-03 22:18 J -16422124.80 -16422124.57 -16422124.34 0.0540 0.0122
 Uranus -49670-09-14 07:54 J -16420288.40 -16420288.17 -16420287.91 0.0133 0.0036
 Uranus -49669-09-17 12:57 J -16419919.17 -16419918.96 -16419918.74 0.0133 0.0069
 Neptune -49664-02-01 02:23 J -16418321.56 -16418321.40 -16418321.20 0.0089 0.0064
 Neptune -49663-02-03 14:23 J -16417954.12 -16417953.90 -16417953.66 0.0089 0.0038
 Saturn -49663-02-23 23:16 J -16417933.77 -16417933.53 -16417933.28 0.0280 0.0014
 Jupiter -49663-09-09 05:45 J -16417736.39 -16417736.26 -16417736.12 0.0540 0.0436
 Neptune -49662-02-06 02:09 J -16417586.66 -16417586.41 -16417586.15 0.0089 0.0012
 Neptune -49661-02-08 13:40 J -16417219.17 -16417218.93 -16417218.66 0.0089 0.0014
 Neptune -49660-02-10 01:11 J -16416851.66 -16416851.45 -16416851.20 0.0089 0.0040
 Neptune -49659-02-12 13:11 J -16416484.10 -16416483.95 -16416483.76 0.0089 0.0066
 Saturn -49648-08-27 21:06 J -16412269.86 -16412269.62 -16412269.38 0.0279 0.0035
 Saturn -49647-09-09 22:33 J -16411891.64 -16411891.56 -16411891.47 0.0282 0.0265
 Mars -49635-08-01 12:28 J -16407548.13 -16407547.98 -16407547.83 0.1648 0.1008
 Saturn -49634-02-18 11:59 J -16407347.20 -16407347.00 -16407346.78 0.0281 0.0151
 Jupiter -49633-02-29 17:45 J -16406970.97 -16406970.76 -16406970.54 0.0487 0.0188
 Saturn -49633-03-02 18:28 J -16406968.93 -16406968.73 -16406968.52 0.0279 0.0151
 Uranus -49629-03-12 05:59 J -16405498.49 -16405498.25 -16405497.99 0.0146 0.0036
 Mars -49628-01-27 00:28 J -16405177.61 -16405177.48 -16405177.33 0.1889 0.1330
 Uranus -49628-03-17 10:04 J -16405128.26 -16405128.08 -16405127.90 0.0145 0.0105
 Jupiter -49621-03-05 00:28 J -16402583.69 -16402583.48 -16402583.26 0.0487 0.0204
 Saturn -49619-08-22 21:35 J -16401682.80 -16401682.60 -16401682.39 0.0278 0.0159
 Saturn -49618-09-04 21:49 J -16401304.80 -16401304.59 -16401304.38 0.0281 0.0139
 Saturn -49605-02-13 05:16 J -16396760.30 -16396760.28 -16396760.24 0.0283 0.0281
 Saturn -49604-02-25 13:11 J -16396382.19 -16396381.95 -16396381.70 0.0280 0.0024

Pluto -49604-08-09 18:13 J -16396216.99 -16396216.74 -16396216.47 0.0080 0.0013
 Jupiter -49592-09-02 23:59 J -16391809.71 -16391809.50 -16391809.29 0.0540 0.0205
 Saturn -49589-08-29 09:35 J -16390718.34 -16390718.10 -16390717.86 0.0280 0.0001
 Uranus -49586-09-14 18:42 J -16389606.96 -16389606.72 -16389606.47 0.0133 0.0030
 Uranus -49585-09-17 23:01 J -16389237.74 -16389237.54 -16389237.32 0.0133 0.0074
 Neptune -49582-08-06 07:40 J -16388185.31 -16388185.18 -16388185.01 0.0088 0.0072
 Neptune -49581-08-07 19:25 J -16387817.89 -16387817.69 -16387817.45 0.0088 0.0046
 Neptune -49580-08-10 07:25 J -16387450.44 -16387450.19 -16387449.94 0.0089 0.0020
 Jupiter -49580-09-08 04:04 J -16387421.50 -16387421.33 -16387421.14 0.0540 0.0337
 Neptune -49579-08-12 18:57 J -16387082.96 -16387082.71 -16387082.45 0.0089 0.0006
 Neptune -49578-08-15 06:42 J -16386715.46 -16386715.22 -16386714.98 0.0089 0.0032
 Neptune -49577-08-16 17:45 J -16386347.95 -16386347.76 -16386347.56 0.0089 0.0058
 Neptune -49576-08-19 04:33 J -16385980.36 -16385980.31 -16385980.20 0.0089 0.0084
 Saturn -49575-02-20 01:40 J -16385795.66 -16385795.43 -16385795.20 0.0281 0.0113
 Saturn -49574-03-05 07:11 J -16385417.37 -16385417.20 -16385417.01 0.0278 0.0187
 Saturn -49560-08-24 09:21 J -16380131.32 -16380131.11 -16380130.88 0.0279 0.0124
 Saturn -49559-09-06 10:18 J -16379753.26 -16379753.07 -16379752.88 0.0282 0.0176
 Jupiter -49550-02-28 19:25 J -16376655.88 -16376655.69 -16376655.49 0.0487 0.0261
 Saturn -49546-02-14 20:09 J -16375208.77 -16375208.66 -16375208.53 0.0282 0.0244
 Saturn -49545-02-28 03:49 J -16374830.58 -16374830.34 -16374830.10 0.0280 0.0061
 Uranus -49545-03-12 16:47 J -16374817.05 -16374816.80 -16374816.55 0.0146 0.0029
 Uranus -49544-03-17 20:23 J -16374446.80 -16374446.65 -16374446.47 0.0145 0.0111
 Jupiter -49538-03-05 02:09 J -16372268.63 -16372268.41 -16372268.18 0.0487 0.0131
 Saturn -49531-08-18 22:47 J -16369544.62 -16369544.55 -16369544.45 0.0277 0.0257
 Saturn -49530-08-31 21:35 J -16369166.84 -16369166.60 -16369166.36 0.0280 0.0037
 Saturn -49516-02-21 15:21 J -16364244.09 -16364243.86 -16364243.62 0.0281 0.0076
 Saturn -49515-03-06 20:23 J -16363865.78 -16363865.65 -16363865.49 0.0278 0.0224
 Mars -49509-07-28 06:13 J -16361530.35 -16361530.24 -16361530.12 0.1636 0.1289
 Jupiter -49509-09-01 16:47 J -16361494.98 -16361494.80 -16361494.61 0.0540 0.0330
 Uranus -49503-09-11 01:40 J -16359294.49 -16359294.43 -16359294.35 0.0133 0.0127

Uranus -49502-09-15 06:13 J -16358925.48 -16358925.24 -16358924.98 0.0133 0.0024
 Saturn -49501-08-25 19:54 J -16358579.89 -16358579.67 -16358579.43 0.0279 0.0091
 Uranus -49501-09-18 10:47 J -16358556.23 -16358556.05 -16358555.83 0.0133 0.0081
 Neptune -49500-01-31 09:35 J -16358421.20 -16358421.10 -16358420.95 0.0089 0.0078
 Saturn -49500-09-07 21:21 J -16358201.77 -16358201.61 -16358201.45 0.0282 0.0211
 Neptune -49499-02-02 21:06 J -16358053.80 -16358053.62 -16358053.38 0.0089 0.0052
 Neptune -49498-02-05 08:52 J -16357686.36 -16357686.13 -16357685.87 0.0089 0.0026
 Neptune -49497-02-07 20:52 J -16357318.89 -16357318.63 -16357318.37 0.0089 0.0001
 Jupiter -49497-09-06 20:23 J -16357106.86 -16357106.65 -16357106.43 0.0540 0.0211
 Neptune -49496-02-09 08:23 J -16356951.38 -16356951.15 -16356950.89 0.0089 0.0027
 Neptune -49495-02-11 19:54 J -16356583.86 -16356583.67 -16356583.44 0.0089 0.0053
 Neptune -49494-02-14 07:40 J -16356216.27 -16356216.18 -16356216.04 0.0089 0.0079
 Saturn -49487-02-16 10:47 J -16353657.20 -16353657.05 -16353656.87 0.0282 0.0207
 Saturn -49486-03-01 17:59 J -16353278.98 -16353278.75 -16353278.52 0.0279 0.0098
 Saturn -49472-08-20 09:49 J -16347993.23 -16347993.09 -16347992.94 0.0277 0.0225
 Saturn -49471-09-02 08:37 J -16347615.38 -16347615.14 -16347614.90 0.0280 0.0071
 Jupiter -49467-02-27 23:45 J -16346340.68 -16346340.51 -16346340.33 0.0487 0.0325
 Uranus -49461-03-13 02:52 J -16344135.64 -16344135.38 -16344135.13 0.0146 0.0024
 Uranus -49460-03-18 06:28 J -16343765.37 -16343765.23 -16343765.06 0.0146 0.0117
 Saturn -49457-02-24 03:49 J -16342692.59 -16342692.34 -16342692.10 0.0281 0.0041
 Saturn -49456-03-08 08:52 J -16342314.22 -16342314.13 -16342314.04 0.0278 0.0258
 Jupiter -49455-03-04 06:57 J -16341953.44 -16341953.21 -16341952.97 0.0487 0.0070
 Pluto -49445-02-05 23:30 J -16338327.75 -16338327.52 -16338327.25 0.0064 0.0017
 Pluto -49444-02-06 11:59 J -16337961.09 -16337961.00 -16337960.86 0.0065 0.0058
 Jupiter -49443-03-08 14:09 J -16337565.98 -16337565.91 -16337565.84 0.0488 0.0464
 Saturn -49442-08-28 05:01 J -16337028.53 -16337028.29 -16337028.05 0.0279 0.0058
 Saturn -49441-09-09 06:13 J -16336650.35 -16336650.24 -16336650.11 0.0282 0.0245
 Mars -49430-07-31 10:33 J -16332673.25 -16332673.06 -16332672.87 0.1640 0.0060
 Saturn -49428-02-17 23:45 J -16332105.70 -16332105.51 -16332105.32 0.0282 0.0172
 Saturn -49427-03-03 06:28 J -16331727.44 -16331727.23 -16331727.01 0.0279 0.0132

Jupiter -49426-09-01 15:21 J -16331179.99 -16331179.86 -16331179.71 0.0541 0.0427
 Uranus -49419-09-11 12:57 J -16328613.04 -16328612.96 -16328612.83 0.0133 0.0121
 Neptune -49418-08-05 13:40 J -16328284.97 -16328284.93 -16328284.84 0.0088 0.0086
 Uranus -49418-09-15 17:59 J -16328244.00 -16328243.75 -16328243.50 0.0133 0.0017
 Neptune -49417-08-07 01:25 J -16327917.61 -16327917.44 -16327917.23 0.0088 0.0060
 Uranus -49417-09-18 22:04 J -16327874.75 -16327874.58 -16327874.37 0.0133 0.0088
 Neptune -49416-08-09 13:11 J -16327550.17 -16327549.95 -16327549.70 0.0088 0.0034
 Neptune -49415-08-12 01:11 J -16327182.70 -16327182.45 -16327182.19 0.0088 0.0008
 Neptune -49414-08-14 12:42 J -16326815.21 -16326814.97 -16326814.71 0.0089 0.0019
 Jupiter -49414-09-06 23:16 J -16326791.75 -16326791.53 -16326791.30 0.0540 0.0134
 Neptune -49413-08-16 00:13 J -16326447.70 -16326447.49 -16326447.26 0.0089 0.0045
 Saturn -49413-08-21 18:28 J -16326441.90 -16326441.73 -16326441.55 0.0277 0.0194
 Neptune -49412-08-18 11:45 J -16326080.15 -16326080.01 -16326079.85 0.0089 0.0071
 Saturn -49412-09-03 17:16 J -16326064.01 -16326063.78 -16326063.55 0.0280 0.0103
 Saturn -49398-02-25 14:09 J -16321141.16 -16321140.91 -16321140.67 0.0280 0.0008
 Jupiter -49384-02-27 05:45 J -16316025.40 -16316025.26 -16316025.11 0.0488 0.0382
 Saturn -49383-08-29 11:59 J -16315477.24 -16315477.00 -16315476.76 0.0280 0.0029
 Saturn -49382-09-11 13:25 J -16315098.98 -16315098.94 -16315098.87 0.0282 0.0275
 Uranus -49377-03-13 13:11 J -16313454.21 -16313453.95 -16313453.70 0.0146 0.0018
 Uranus -49376-03-18 17:01 J -16313083.91 -16313083.79 -16313083.64 0.0146 0.0123
 Jupiter -49372-03-03 11:16 J -16311638.27 -16311638.03 -16311637.80 0.0487 0.0011
 Saturn -49369-02-20 09:06 J -16310554.33 -16310554.12 -16310553.91 0.0282 0.0141
 Saturn -49368-03-04 15:35 J -16310176.04 -16310175.85 -16310175.64 0.0279 0.0164
 Jupiter -49360-03-07 18:42 J -16307250.84 -16307250.72 -16307250.59 0.0487 0.0405
 Pluto -49357-08-10 17:45 J -16305999.00 -16305998.76 -16305998.50 0.0080 0.0018
 Saturn -49354-08-24 00:57 J -16304890.64 -16304890.46 -16304890.25 0.0277 0.0167
 Saturn -49353-09-04 23:45 J -16304512.72 -16304512.51 -16304512.29 0.0280 0.0132
 Mars -49351-08-02 15:21 J -16303815.98 -16303815.86 -16303815.73 0.1643 0.1237
 Mars -49344-01-26 07:11 J -16301447.40 -16301447.20 -16301447.00 0.1898 0.0086
 Jupiter -49343-08-31 19:40 J -16300864.76 -16300864.68 -16300864.59 0.0540 0.0500

Saturn -49339-02-26 21:21 J -16299589.85 -16299589.61 -16299589.36 0.0280 0.0023
 Neptune -49335-02-02 04:04 J -16298153.48 -16298153.33 -16298153.14 0.0089 0.0066
 Uranus -49335-09-12 01:40 J -16297931.53 -16297931.43 -16297931.27 0.0133 0.0113
 Neptune -49334-02-04 16:04 J -16297786.06 -16297785.83 -16297785.60 0.0089 0.0039
 Uranus -49334-09-16 06:42 J -16297562.47 -16297562.22 -16297561.96 0.0133 0.0009
 Neptune -49333-02-07 03:49 J -16297418.60 -16297418.34 -16297418.09 0.0089 0.0013
 Uranus -49333-09-19 11:01 J -16297193.19 -16297193.04 -16297192.85 0.0133 0.0096
 Neptune -49332-02-08 15:21 J -16297051.11 -16297050.86 -16297050.60 0.0089 0.0014
 Neptune -49331-02-11 02:52 J -16296683.60 -16296683.38 -16296683.14 0.0089 0.0040
 Jupiter -49331-09-05 22:33 J -16296476.79 -16296476.56 -16296476.33 0.0540 0.0041
 Neptune -49330-02-13 14:37 J -16296316.05 -16296315.89 -16296315.71 0.0089 0.0066
 Saturn -49324-08-30 16:04 J -16293926.07 -16293925.83 -16293925.58 0.0280 0.0004
 Saturn -49310-02-21 14:52 J -16289003.10 -16289002.88 -16289002.65 0.0282 0.0114
 Saturn -49309-03-05 21:49 J -16288624.76 -16288624.59 -16288624.41 0.0279 0.0192
 Jupiter -49301-02-27 13:11 J -16285710.05 -16285709.95 -16285709.84 0.0487 0.0431
 Saturn -49295-08-25 05:45 J -16283339.47 -16283339.26 -16283339.05 0.0277 0.0140
 Saturn -49294-09-07 03:49 J -16282961.53 -16282961.34 -16282961.13 0.0280 0.0160
 Uranus -49293-03-14 01:40 J -16282772.68 -16282772.43 -16282772.17 0.0146 0.0010
 Uranus -49292-03-19 05:30 J -16282402.36 -16282402.27 -16282402.15 0.0146 0.0132
 Jupiter -49289-03-02 19:25 J -16281322.93 -16281322.69 -16281322.46 0.0487 0.0040
 Saturn -49281-02-15 16:18 J -16278416.90 -16278416.82 -16278416.72 0.0283 0.0262
 Saturn -49280-02-28 01:54 J -16278038.66 -16278038.42 -16278038.18 0.0280 0.0048
 Jupiter -49277-03-07 02:52 J -16276935.53 -16276935.38 -16276935.22 0.0487 0.0357
 Saturn -49266-08-19 21:21 J -16272752.65 -16272752.61 -16272752.56 0.0277 0.0271
 Saturn -49265-08-31 18:13 J -16272374.98 -16272374.74 -16272374.49 0.0280 0.0023
 Neptune -49253-08-06 07:25 J -16268017.33 -16268017.19 -16268017.05 0.0088 0.0074
 Neptune -49252-08-08 18:42 J -16267649.93 -16267649.72 -16267649.49 0.0089 0.0048
 Saturn -49251-02-22 17:30 J -16267452.00 -16267451.77 -16267451.53 0.0282 0.0089
 Neptune -49251-08-11 06:13 J -16267282.48 -16267282.24 -16267281.98 0.0089 0.0022
 Uranus -49251-09-12 14:37 J -16267250.03 -16267249.89 -16267249.72 0.0133 0.0104

Saturn -49250-03-08 00:28 J -16267073.63 -16267073.48 -16267073.32 0.0279 0.0217
 Neptune -49250-08-13 18:13 J -16266915.00 -16266914.74 -16266914.49 0.0089 0.0005
 Uranus -49250-09-16 19:25 J -16266880.94 -16266880.69 -16266880.43 0.0133 0.0003
 Neptune -49249-08-15 05:16 J -16266547.50 -16266547.28 -16266547.02 0.0089 0.0032
 Uranus -49249-09-20 00:13 J -16266511.64 -16266511.49 -16266511.33 0.0133 0.0104
 Neptune -49248-08-17 16:47 J -16266179.97 -16266179.80 -16266179.58 0.0089 0.0058
 Jupiter -49248-09-04 23:16 J -16266161.76 -16266161.53 -16266161.30 0.0541 0.0047
 Neptune -49247-08-20 04:18 J -16265812.38 -16265812.32 -16265812.21 0.0089 0.0084
 Saturn -49236-08-26 08:09 J -16261788.38 -16261788.16 -16261787.93 0.0277 0.0115
 Jupiter -49236-09-10 07:40 J -16261773.24 -16261773.18 -16261773.12 0.0541 0.0519
 Saturn -49235-09-08 06:28 J -16261410.41 -16261410.23 -16261410.04 0.0280 0.0184
 Mars -49225-07-29 10:33 J -16257798.21 -16257798.06 -16257797.92 0.1632 0.1019
 Saturn -49222-02-16 17:30 J -16256865.88 -16256865.77 -16256865.62 0.0283 0.0239
 Saturn -49221-03-01 03:06 J -16256487.60 -16256487.37 -16256487.13 0.0280 0.0072
 Jupiter -49218-02-26 22:18 J -16255394.61 -16255394.57 -16255394.52 0.0487 0.0476
 Uranus -49210-03-10 10:04 J -16252461.12 -16252461.08 -16252460.99 0.0146 0.0142
 Uranus -49209-03-14 15:06 J -16252091.13 -16252090.87 -16252090.62 0.0146 0.0001
 Uranus -49208-03-19 18:57 J -16251720.74 -16251720.71 -16251720.64 0.0146 0.0143
 Saturn -49207-08-20 21:49 J -16251201.68 -16251201.59 -16251201.47 0.0277 0.0249
 Jupiter -49206-03-03 05:16 J -16251007.51 -16251007.28 -16251007.05 0.0487 0.0080
 Saturn -49206-09-02 18:42 J -16250823.96 -16250823.72 -16250823.48 0.0280 0.0046
 Pluto -49198-02-07 04:47 J -16248109.51 -16248109.30 -16248109.05 0.0064 0.0029
 Pluto -49197-02-08 17:01 J -16247742.94 -16247742.79 -16247742.57 0.0064 0.0046
 Jupiter -49194-03-07 12:13 J -16246620.16 -16246619.99 -16246619.81 0.0487 0.0317
 Saturn -49192-02-23 17:30 J -16245901.00 -16245900.77 -16245900.52 0.0282 0.0067
 Saturn -49191-03-09 00:28 J -16245522.59 -16245522.48 -16245522.34 0.0279 0.0240
 Saturn -49177-08-27 09:35 J -16240237.32 -16240237.10 -16240236.86 0.0277 0.0092
 Saturn -49176-09-09 07:40 J -16239859.33 -16239859.18 -16239859.01 0.0280 0.0209
 Neptune -49171-02-01 10:18 J -16238253.18 -16238253.07 -16238252.97 0.0089 0.0080
 Neptune -49170-02-03 21:21 J -16237885.79 -16237885.61 -16237885.39 0.0089 0.0054

Neptune -49169-02-06 09:06 J -16237518.35 -16237518.12 -16237517.86 0.0089 0.0028
 Neptune -49168-02-07 21:06 J -16237150.88 -16237150.62 -16237150.36 0.0089 0.0001
 Neptune -49167-02-10 08:37 J -16236783.38 -16236783.14 -16236782.89 0.0089 0.0026
 Uranus -49167-09-13 04:18 J -16236568.47 -16236568.32 -16236568.12 0.0132 0.0095
 Neptune -49166-02-12 19:54 J -16236415.86 -16236415.67 -16236415.44 0.0089 0.0053
 Uranus -49166-09-17 09:21 J -16236199.36 -16236199.11 -16236198.86 0.0133 0.0009
 Neptune -49165-02-15 07:54 J -16236048.27 -16236048.17 -16236048.04 0.0089 0.0079
 Jupiter -49165-09-04 08:23 J -16235846.38 -16235846.15 -16235845.92 0.0541 0.0099
 Uranus -49165-09-20 13:40 J -16235830.04 -16235829.93 -16235829.78 0.0133 0.0114
 Saturn -49163-02-17 16:47 J -16235314.95 -16235314.80 -16235314.64 0.0283 0.0217
 Saturn -49162-03-03 02:09 J -16234936.64 -16234936.41 -16234936.17 0.0280 0.0094
 Jupiter -49153-09-09 13:25 J -16231458.06 -16231457.94 -16231457.82 0.0540 0.0454
 Saturn -49148-08-21 22:04 J -16229650.71 -16229650.58 -16229650.43 0.0277 0.0227
 Saturn -49147-09-03 18:28 J -16229272.96 -16229272.73 -16229272.49 0.0280 0.0069
 Mars -49146-08-01 14:23 J -16228941.08 -16228940.90 -16228940.71 0.1636 0.0217
 Saturn -49133-02-25 15:35 J -16224350.09 -16224349.85 -16224349.61 0.0282 0.0045
 Saturn -49132-03-09 22:47 J -16223971.63 -16223971.55 -16223971.46 0.0279 0.0260
 Uranus -49126-03-11 00:42 J -16221779.57 -16221779.47 -16221779.34 0.0146 0.0130
 Uranus -49125-03-15 05:45 J -16221409.51 -16221409.26 -16221409.00 0.0146 0.0012
 Jupiter -49123-03-02 17:30 J -16220692.00 -16220691.77 -16220691.54 0.0487 0.0112
 Saturn -49118-08-29 10:18 J -16218686.30 -16218686.07 -16218685.82 0.0277 0.0068
 Saturn -49117-09-10 08:09 J -16218308.28 -16218308.16 -16218308.02 0.0280 0.0232
 Jupiter -49111-03-06 23:30 J -16216304.71 -16216304.52 -16216304.33 0.0487 0.0280
 Pluto -49110-08-12 21:21 J -16215780.82 -16215780.61 -16215780.36 0.0080 0.0038
 Saturn -49104-02-18 15:06 J -16213764.03 -16213763.87 -16213763.68 0.0283 0.0196
 Saturn -49103-03-04 00:28 J -16213385.69 -16213385.48 -16213385.24 0.0280 0.0117
 Saturn -49089-08-22 22:04 J -16208099.74 -16208099.58 -16208099.41 0.0277 0.0204
 Neptune -49088-08-07 23:16 J -16207749.69 -16207749.53 -16207749.33 0.0088 0.0063
 Saturn -49088-09-04 18:28 J -16207721.95 -16207721.73 -16207721.49 0.0280 0.0092
 Neptune -49087-08-10 10:47 J -16207382.27 -16207382.05 -16207381.79 0.0089 0.0037

Neptune -49086-08-12 22:47 J -16207014.81 -16207014.55 -16207014.29 0.0089 0.0010
 Neptune -49085-08-14 10:18 J -16206647.32 -16206647.07 -16206646.81 0.0089 0.0017
 Neptune -49084-08-16 21:35 J -16206279.81 -16206279.60 -16206279.36 0.0089 0.0044
 Neptune -49083-08-19 08:52 J -16205912.26 -16205912.13 -16205911.95 0.0089 0.0070
 Uranus -49083-09-13 17:45 J -16205886.93 -16205886.76 -16205886.55 0.0132 0.0086
 Jupiter -49082-09-04 11:59 J -16205531.22 -16205531.00 -16205530.78 0.0540 0.0175
 Uranus -49082-09-17 22:47 J -16205517.80 -16205517.55 -16205517.30 0.0133 0.0018
 Uranus -49081-09-21 03:06 J -16205148.44 -16205148.37 -16205148.25 0.0133 0.0123
 Saturn -49074-02-26 12:42 J -16202799.22 -16202798.97 -16202798.72 0.0282 0.0025
 Jupiter -49070-09-09 13:54 J -16201143.09 -16201142.92 -16201142.75 0.0541 0.0366
 Mars -49067-08-03 19:11 J -16200083.78 -16200083.70 -16200083.63 0.1639 0.1487
 Mars -49060-01-25 12:28 J -16197717.13 -16197716.98 -16197716.82 0.1905 0.1244
 Saturn -49059-08-30 11:59 J -16197135.24 -16197135.00 -16197134.76 0.0277 0.0042
 Saturn -49058-09-12 09:35 J -16196757.18 -16196757.10 -16196757.00 0.0280 0.0257
 Saturn -49045-02-20 13:25 J -16192213.12 -16192212.94 -16192212.74 0.0283 0.0174
 Saturn -49044-03-04 22:47 J -16191834.76 -16191834.55 -16191834.33 0.0280 0.0138
 Uranus -49042-03-11 13:11 J -16191098.07 -16191097.95 -16191097.79 0.0146 0.0122
 Uranus -49041-03-15 18:13 J -16190727.99 -16190727.74 -16190727.48 0.0146 0.0022
 Jupiter -49040-03-02 03:49 J -16190376.56 -16190376.34 -16190376.11 0.0487 0.0154
 Saturn -49030-08-24 22:47 J -16186548.73 -16186548.55 -16186548.36 0.0277 0.0180
 Saturn -49029-09-05 19:11 J -16186170.92 -16186170.70 -16186170.48 0.0280 0.0117
 Jupiter -49028-03-06 10:33 J -16185989.26 -16185989.06 -16185988.85 0.0487 0.0244
 Saturn -49015-02-27 10:33 J -16181248.30 -16181248.06 -16181247.81 0.0282 0.0005
 Neptune -49006-02-03 02:52 J -16177985.52 -16177985.38 -16177985.19 0.0089 0.0069
 Neptune -49005-02-05 14:52 J -16177618.10 -16177617.88 -16177617.65 0.0089 0.0042
 Neptune -49004-02-07 02:23 J -16177250.64 -16177250.40 -16177250.13 0.0089 0.0016
 Neptune -49003-02-09 14:09 J -16176883.16 -16176882.91 -16176882.65 0.0089 0.0012
 Neptune -49002-02-12 01:40 J -16176515.64 -16176515.43 -16176515.18 0.0089 0.0039
 Neptune -49001-02-14 13:25 J -16176148.10 -16176147.94 -16176147.76 0.0089 0.0065

49TH MILLENNIUM BCE

This is a list of transits of Earth in the 49th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-49000-08-31 14:37 J	-16175584.14	-16175583.89	-16175583.65	0.0278	0.0016		
Jupiter	-48999-09-03 13:25 J	-16175216.14	-16175215.94	-16175215.74	0.0541	0.0262		
Uranus	-48999-09-14 07:54 J	-16175205.35	-16175205.17	-16175204.94	0.0132	0.0077		
Uranus	-48998-09-18 12:57 J	-16174836.21	-16174835.96	-16174835.71	0.0133	0.0028		
Uranus	-48997-09-21 17:30 J	-16174466.78	-16174466.77	-16174466.74	0.0133	0.0132		
Jupiter	-48987-09-08 22:33 J	-16170827.74	-16170827.56	-16170827.37	0.0541	0.0312		
Saturn	-48986-02-21 13:11 J	-16170662.15	-16170661.95	-16170661.74	0.0283	0.0150		
Saturn	-48985-03-05 22:18 J	-16170283.77	-16170283.57	-16170283.36	0.0280	0.0162		
Mars	-48981-01-29 22:18 J	-16168858.64	-16168858.57	-16168858.50	0.1899	0.1764		
Saturn	-48971-08-26 01:40 J	-16164997.63	-16164997.43	-16164997.22	0.0277	0.0153		
Saturn	-48970-09-07 22:04 J	-16164619.79	-16164619.58	-16164619.37	0.0280	0.0144		
Uranus	-48958-03-12 02:23 J	-16160416.55	-16160416.40	-16160416.23	0.0146	0.0113		
Jupiter	-48957-03-01 15:21 J	-16160061.08	-16160060.86	-16160060.64	0.0487	0.0189		
Uranus	-48957-03-16 07:25 J	-16160046.44	-16160046.19	-16160045.94	0.0146	0.0030		
Saturn	-48956-02-28 09:49 J	-16159697.34	-16159697.09	-16159696.85	0.0281	0.0022		
Pluto	-48951-02-08 13:54 J	-16157891.13	-16157890.92	-16157890.68	0.0064	0.0034		
Pluto	-48950-02-10 02:23 J	-16157524.59	-16157524.40	-16157524.19	0.0065	0.0041		
Jupiter	-48945-03-05 22:47 J	-16155673.76	-16155673.55	-16155673.34	0.0487	0.0210		
Mars	-48941-07-30 15:49 J	-16154066.01	-16154065.84	-16154065.67	0.1629	0.0732		
Saturn	-48941-09-01 18:42 J	-16154032.96	-16154032.72	-16154032.47	0.0278	0.0015		

Saturn -48927-02-22 15:06 J -16149111.09 -16149110.87 -16149110.64 0.0283 0.0123
 Saturn -48926-03-07 23:59 J -16148732.68 -16148732.50 -16148732.31 0.0280 0.0188
 Neptune -48924-08-07 02:37 J -16147849.48 -16147849.39 -16147849.24 0.0088 0.0079
 Neptune -48923-08-09 14:37 J -16147482.09 -16147481.89 -16147481.67 0.0089 0.0052
 Neptune -48922-08-12 02:23 J -16147114.64 -16147114.40 -16147114.15 0.0089 0.0025
 Neptune -48921-08-13 14:09 J -16146747.17 -16146746.91 -16146746.65 0.0089 0.0002
 Neptune -48920-08-16 01:11 J -16146379.68 -16146379.45 -16146379.19 0.0089 0.0029
 Neptune -48919-08-18 12:28 J -16146012.15 -16146011.98 -16146011.75 0.0089 0.0056
 Neptune -48918-08-20 23:59 J -16145644.57 -16145644.50 -16145644.38 0.0089 0.0082
 Jupiter -48916-09-02 20:09 J -16144900.84 -16144900.66 -16144900.47 0.0541 0.0324
 Uranus -48915-09-14 22:18 J -16144523.78 -16144523.57 -16144523.34 0.0132 0.0067
 Uranus -48914-09-19 02:52 J -16144154.61 -16144154.38 -16144154.13 0.0133 0.0038
 Saturn -48912-08-27 06:13 J -16143446.45 -16143446.24 -16143446.02 0.0277 0.0125
 Saturn -48911-09-09 02:37 J -16143068.57 -16143068.39 -16143068.19 0.0280 0.0174
 Jupiter -48904-09-08 01:11 J -16140512.66 -16140512.45 -16140512.24 0.0541 0.0230
 Saturn -48898-02-17 00:13 J -16138524.56 -16138524.49 -16138524.40 0.0284 0.0267
 Saturn -48897-03-01 11:30 J -16138146.26 -16138146.02 -16138145.77 0.0281 0.0050
 Saturn -48883-08-22 06:42 J -16132859.32 -16132859.22 -16132859.11 0.0276 0.0248
 Saturn -48882-09-04 01:40 J -16132481.67 -16132481.43 -16132481.19 0.0278 0.0045
 Jupiter -48874-03-01 23:30 J -16129745.72 -16129745.52 -16129745.32 0.0487 0.0240
 Uranus -48874-03-12 12:57 J -16129735.12 -16129734.96 -16129734.77 0.0146 0.0107
 Uranus -48873-03-16 17:59 J -16129364.99 -16129364.75 -16129364.50 0.0146 0.0037
 Saturn -48868-02-23 19:40 J -16127559.91 -16127559.68 -16127559.45 0.0283 0.0093
 Saturn -48867-03-09 04:04 J -16127181.48 -16127181.33 -16127181.17 0.0280 0.0217
 Pluto -48863-08-14 09:06 J -16125562.35 -16125562.12 -16125561.88 0.0080 0.0034
 Jupiter -48862-03-06 05:45 J -16125358.48 -16125358.26 -16125358.03 0.0487 0.0155
 Mars -48862-08-02 19:25 J -16125208.87 -16125208.69 -16125208.51 0.1632 0.0494
 Saturn -48853-08-28 13:11 J -16121895.17 -16121894.95 -16121894.71 0.0277 0.0093
 Saturn -48852-09-10 10:04 J -16121517.24 -16121517.08 -16121516.91 0.0280 0.0206
 Neptune -48842-02-02 07:54 J -16118085.23 -16118085.17 -16118085.07 0.0089 0.0084

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 Neptune -48840-02-06 07:25 J -16117350.43 -16117350.19 -16117349.95 0.0089 0.0030
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 Saturn -48838-03-03 16:33 J -16116595.04 -16116594.81 -16116594.57 0.0281 0.0079
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 Neptune -48836-02-15 05:59 J -16115880.35 -16115880.25 -16115880.11 0.0089 0.0078
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 Saturn -48824-08-23 14:23 J -16111308.04 -16111307.90 -16111307.74 0.0276 0.0217
 Saturn -48823-09-05 10:04 J -16110930.31 -16110930.08 -16110929.84 0.0279 0.0079
 Jupiter -48821-09-06 20:23 J -16110197.87 -16110197.65 -16110197.42 0.0541 0.0114
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Neptune -48755-08-17 16:18 J -16086112.03 -16086111.82 -16086111.57 0.0089 0.0041
 Neptune -48754-08-20 04:18 J -16085744.49 -16085744.32 -16085744.15 0.0089 0.0067
 Saturn -48750-02-27 14:23 J -16084457.14 -16084456.90 -16084456.65 0.0282 0.0025
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 Jupiter -48738-09-06 23:30 J -16079882.75 -16079882.52 -16079882.29 0.0541 0.0036
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 Jupiter -48708-02-28 12:28 J -16069115.14 -16069114.98 -16069114.82 0.0487 0.0355
 Uranus -48706-03-13 15:06 J -16068372.07 -16068371.87 -16068371.66 0.0146 0.0088
 Saturn -48706-08-27 11:16 J -16068205.23 -16068205.03 -16068204.82 0.0277 0.0149
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 Saturn -48705-09-08 08:09 J -16067827.36 -16067827.16 -16067826.95 0.0279 0.0151
 Pluto -48704-02-10 03:06 J -16067672.60 -16067672.37 -16067672.13 0.0064 0.0028
 Pluto -48703-02-11 15:06 J -16067306.02 -16067305.87 -16067305.66 0.0065 0.0047
 Mars -48697-01-29 02:23 J -16065128.59 -16065128.40 -16065128.20 0.1907 0.0404
 Jupiter -48696-03-04 16:33 J -16064728.04 -16064727.81 -16064727.57 0.0487 0.0034
 Saturn -48691-03-01 03:35 J -16062905.59 -16062905.35 -16062905.10 0.0282 0.0013
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 Neptune -48677-02-03 23:59 J -16057817.61 -16057817.50 -16057817.32 0.0089 0.0073
 Neptune -48676-02-05 11:45 J -16057450.21 -16057450.01 -16057449.77 0.0089 0.0046
 Saturn -48676-09-02 21:21 J -16057240.85 -16057240.61 -16057240.36 0.0278 0.0012
 Neptune -48675-02-07 23:30 J -16057082.76 -16057082.52 -16057082.25 0.0089 0.0019
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 Neptune -48673-02-12 23:16 J -16056347.77 -16056347.53 -16056347.30 0.0089 0.0036
 Neptune -48672-02-14 10:18 J -16055980.22 -16055980.07 -16055979.86 0.0089 0.0064
 Uranus -48663-09-16 18:42 J -16052478.96 -16052478.72 -16052478.47 0.0132 0.0036

Saturn -48662-02-23 13:25 J -16052319.15 -16052318.94 -16052318.72 0.0283 0.0131
 Uranus -48662-09-20 22:47 J -16052109.76 -16052109.55 -16052109.33 0.0133 0.0068
 Saturn -48661-03-07 22:47 J -16051940.73 -16051940.55 -16051940.36 0.0280 0.0184
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 Jupiter -48655-09-05 15:35 J -16049568.08 -16049567.85 -16049567.62 0.0540 0.0095
 Saturn -48647-08-28 22:18 J -16046653.79 -16046653.57 -16046653.34 0.0277 0.0115
 Saturn -48646-09-10 19:54 J -16046275.84 -16046275.67 -16046275.49 0.0280 0.0188
 Jupiter -48643-09-10 19:54 J -16045179.79 -16045179.67 -16045179.55 0.0541 0.0457
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 Jupiter -48625-02-28 14:52 J -16038799.98 -16038799.88 -16038799.76 0.0487 0.0426
 Uranus -48622-03-14 06:28 J -16037690.44 -16037690.23 -16037690.00 0.0146 0.0076
 Uranus -48621-03-18 11:16 J -16037320.24 -16037320.03 -16037319.79 0.0146 0.0068
 Saturn -48618-08-23 13:25 J -16036067.03 -16036066.94 -16036066.83 0.0276 0.0250
 Saturn -48617-09-04 08:52 J -16035689.37 -16035689.13 -16035688.88 0.0278 0.0048
 Pluto -48616-08-16 00:13 J -16035343.72 -16035343.49 -16035343.22 0.0080 0.0019
 Jupiter -48613-03-03 20:23 J -16034412.88 -16034412.65 -16034412.41 0.0487 0.0033
 Saturn -48603-02-25 03:06 J -16030767.59 -16030767.37 -16030767.13 0.0282 0.0093
 Saturn -48602-03-10 12:13 J -16030389.14 -16030388.99 -16030388.84 0.0280 0.0221
 Jupiter -48601-03-08 03:21 J -16030025.51 -16030025.36 -16030025.20 0.0487 0.0367
 Neptune -48595-08-07 20:52 J -16027681.68 -16027681.63 -16027681.52 0.0088 0.0084
 Neptune -48594-08-10 08:37 J -16027314.31 -16027314.14 -16027313.91 0.0088 0.0057
 Neptune -48593-08-11 20:37 J -16026946.87 -16026946.64 -16026946.38 0.0088 0.0030
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 Neptune -48589-08-20 18:57 J -16025476.83 -16025476.71 -16025476.60 0.0089 0.0079
 Saturn -48588-08-30 08:52 J -16025102.36 -16025102.13 -16025101.89 0.0278 0.0081
 Saturn -48587-09-12 06:57 J -16024724.35 -16024724.21 -16024724.06 0.0280 0.0224
 Uranus -48580-09-13 05:01 J -16022166.33 -16022166.29 -16022166.22 0.0132 0.0129

Uranus -48579-09-17 09:21 J -16021797.35 -16021797.11 -16021796.86 0.0132 0.0026
 Mars -48578-08-04 00:57 J -16021476.63 -16021476.46 -16021476.30 0.1628 0.0781
 Uranus -48578-09-21 13:11 J -16021428.14 -16021427.95 -16021427.73 0.0133 0.0079
 Saturn -48574-02-19 21:49 J -16020180.73 -16020180.59 -16020180.45 0.0284 0.0230
 Saturn -48573-03-04 07:54 J -16019802.40 -16019802.17 -16019801.93 0.0281 0.0089
 Jupiter -48572-09-04 13:25 J -16019253.15 -16019252.94 -16019252.72 0.0541 0.0197
 Jupiter -48560-09-09 21:35 J -16014864.77 -16014864.60 -16014864.44 0.0541 0.0374
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 Saturn -48558-09-06 19:54 J -16014137.90 -16014137.67 -16014137.43 0.0279 0.0083
 Saturn -48544-02-26 16:04 J -16009216.07 -16009215.83 -16009215.59 0.0282 0.0056
 Saturn -48543-03-12 00:13 J -16008837.57 -16008837.49 -16008837.38 0.0279 0.0258
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 Uranus -48537-03-19 00:13 J -16006638.70 -16006638.49 -16006638.26 0.0146 0.0078
 Jupiter -48530-03-04 01:25 J -16004097.67 -16004097.44 -16004097.21 0.0487 0.0095
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 Jupiter -48518-03-08 05:59 J -15999710.43 -15999710.25 -15999710.06 0.0487 0.0300
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 Neptune -48513-02-03 05:16 J -15997917.29 -15997917.28 -15997917.21 0.0089 0.0088
 Neptune -48512-02-04 16:47 J -15997549.96 -15997549.80 -15997549.59 0.0089 0.0061
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 Neptune -48507-02-16 03:21 J -15995712.48 -15995712.36 -15995712.22 0.0089 0.0076
 Saturn -48500-08-26 09:06 J -15992964.29 -15992964.12 -15992963.93 0.0276 0.0186
 Saturn -48499-09-08 05:01 J -15992586.50 -15992586.29 -15992586.06 0.0279 0.0116
 Uranus -48496-09-13 19:11 J -15991484.79 -15991484.70 -15991484.57 0.0132 0.0119
 Uranus -48495-09-17 23:45 J -15991115.76 -15991115.51 -15991115.26 0.0132 0.0016

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 Jupiter -48489-09-03 15:21 J -15988938.06 -15988937.86 -15988937.66 0.0541 0.0283
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 Saturn -48470-09-03 01:25 J -15981999.68 -15981999.44 -15981999.19 0.0278 0.0018
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 Uranus -48453-03-19 14:09 J -15975957.11 -15975956.91 -15975956.70 0.0146 0.0087
 Mars -48452-07-30 23:01 J -15975458.64 -15975458.54 -15975458.44 0.1619 0.1364
 Jupiter -48447-03-03 06:57 J -15973782.43 -15973782.21 -15973781.99 0.0487 0.0154
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 Jupiter -48435-03-07 12:13 J -15969395.19 -15969394.99 -15969394.78 0.0487 0.0242
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 Mars -48413-01-28 04:18 J -15961398.49 -15961398.32 -15961398.16 0.1914 0.1082
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 Saturn -48411-09-04 06:28 J -15960448.48 -15960448.23 -15960447.99 0.0278 0.0012
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 Uranus -48410-09-22 17:45 J -15960064.91 -15960064.76 -15960064.58 0.0132 0.0098
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 Jupiter -48394-09-08 16:33 J -15954235.03 -15954234.81 -15954234.59 0.0541 0.0168
 Saturn -48382-08-29 22:04 J -15949861.79 -15949861.58 -15949861.35 0.0276 0.0127
 Saturn -48381-09-10 17:30 J -15949483.95 -15949483.77 -15949483.57 0.0279 0.0176
 Mars -48373-08-02 01:40 J -15946601.62 -15946601.43 -15946601.24 0.1622 0.0170
 Uranus -48370-03-15 19:25 J -15945645.92 -15945645.69 -15945645.44 0.0147 0.0051
 Uranus -48369-03-19 23:59 J -15945275.68 -15945275.50 -15945275.28 0.0146 0.0094
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 Saturn -48368-02-18 05:30 J -15944940.27 -15944940.27 -15944940.23 0.0284 0.0284
 Saturn -48367-03-03 17:45 J -15944562.00 -15944561.76 -15944561.51 0.0282 0.0041
 Jupiter -48364-03-02 14:09 J -15943467.12 -15943466.91 -15943466.70 0.0487 0.0207
 Saturn -48353-08-23 14:52 J -15939274.95 -15939274.88 -15939274.80 0.0276 0.0261
 Jupiter -48352-03-06 20:23 J -15939079.86 -15939079.65 -15939079.43 0.0487 0.0194
 Saturn -48352-09-05 09:21 J -15938897.35 -15938897.11 -15938896.87 0.0278 0.0037
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 Uranus -48328-09-14 23:59 J -15930121.66 -15930121.50 -15930121.33 0.0132 0.0100
 Uranus -48327-09-19 04:04 J -15929752.58 -15929752.33 -15929752.08 0.0132 0.0003
 Uranus -48326-09-23 07:54 J -15929383.31 -15929383.17 -15929383.01 0.0132 0.0107
 Saturn -48323-08-31 01:54 J -15928310.65 -15928310.42 -15928310.19 0.0276 0.0100
 Jupiter -48323-09-02 15:06 J -15928307.99 -15928307.87 -15928307.76 0.0541 0.0470
 Saturn -48322-09-12 20:52 J -15927932.79 -15927932.63 -15927932.46 0.0279 0.0202
 Jupiter -48311-09-07 23:45 J -15923919.74 -15923919.51 -15923919.28 0.0541 0.0106
 Saturn -48309-02-20 08:37 J -15923389.23 -15923389.14 -15923389.03 0.0284 0.0257

Saturn -48308-03-04 20:52 J -15923010.87 -15923010.63 -15923010.39 0.0282 0.0068
 Mars -48294-08-05 05:30 J -15917744.41 -15917744.27 -15917744.13 0.1625 0.1049
 Saturn -48294-08-25 17:01 J -15917723.91 -15917723.79 -15917723.66 0.0276 0.0236
 Saturn -48293-09-06 11:01 J -15917346.27 -15917346.04 -15917345.80 0.0278 0.0063
 Uranus -48286-03-16 07:11 J -15914964.44 -15914964.20 -15914963.95 0.0147 0.0043
 Uranus -48285-03-20 11:59 J -15914594.18 -15914594.00 -15914593.81 0.0146 0.0101
 Jupiter -48281-03-01 23:30 J -15913151.72 -15913151.52 -15913151.32 0.0487 0.0249
 Saturn -48279-02-27 10:33 J -15912424.29 -15912424.06 -15912423.82 0.0283 0.0077
 Saturn -48278-03-12 20:37 J -15912045.75 -15912045.64 -15912045.51 0.0280 0.0244
 Jupiter -48269-03-06 07:11 J -15908764.42 -15908764.20 -15908763.98 0.0486 0.0156
 Neptune -48266-08-08 15:49 J -15907513.84 -15907513.84 -15907513.80 0.0088 0.0088
 Neptune -48265-08-10 03:49 J -15907146.51 -15907146.34 -15907146.14 0.0088 0.0061
 Neptune -48264-08-12 15:35 J -15906779.07 -15906778.85 -15906778.59 0.0088 0.0034
 Saturn -48264-09-01 04:04 J -15906759.56 -15906759.33 -15906759.09 0.0276 0.0075
 Neptune -48263-08-15 03:35 J -15906411.60 -15906411.35 -15906411.09 0.0088 0.0006
 Saturn -48263-09-13 23:01 J -15906381.67 -15906381.54 -15906381.40 0.0279 0.0228
 Neptune -48262-08-17 15:06 J -15906044.11 -15906043.87 -15906043.61 0.0088 0.0023
 Neptune -48261-08-19 02:37 J -15905676.59 -15905676.39 -15905676.17 0.0089 0.0050
 Neptune -48260-08-21 13:40 J -15905309.02 -15905308.93 -15905308.77 0.0089 0.0078
 Saturn -48250-02-21 09:06 J -15901838.26 -15901838.12 -15901837.98 0.0284 0.0233
 Saturn -48249-03-05 21:21 J -15901459.84 -15901459.61 -15901459.37 0.0282 0.0092
 Uranus -48244-09-15 13:40 J -15899440.10 -15899439.93 -15899439.73 0.0132 0.0091
 Uranus -48243-09-19 17:59 J -15899071.00 -15899070.75 -15899070.49 0.0132 0.0013
 Uranus -48242-09-23 21:35 J -15898701.70 -15898701.60 -15898701.46 0.0132 0.0117
 Jupiter -48240-09-01 20:52 J -15897992.65 -15897992.63 -15897992.60 0.0540 0.0536
 Saturn -48235-08-26 17:59 J -15896172.91 -15896172.75 -15896172.60 0.0276 0.0212
 Saturn -48234-09-08 11:30 J -15895795.25 -15895795.02 -15895794.78 0.0278 0.0087
 Jupiter -48228-09-07 02:23 J -15893604.63 -15893604.40 -15893604.17 0.0541 0.0025
 Saturn -48220-02-28 09:35 J -15890873.35 -15890873.10 -15890872.86 0.0283 0.0053
 Saturn -48219-03-13 19:40 J -15890494.74 -15890494.68 -15890494.59 0.0280 0.0267

Pluto -48211-02-13 03:06 J -15887601.39 -15887601.37 -15887601.33 0.0064 0.0064
 Pluto -48210-02-14 15:50 J -15887235.09 -15887234.84 -15887234.58 0.0065 0.0010
 Saturn -48205-09-02 05:45 J -15885208.50 -15885208.26 -15885208.01 0.0276 0.0049
 Saturn -48204-09-15 00:42 J -15884830.56 -15884830.47 -15884830.37 0.0279 0.0254
 Uranus -48202-03-16 17:30 J -15884283.01 -15884282.77 -15884282.51 0.0147 0.0038
 Uranus -48201-03-20 22:18 J -15883912.74 -15883912.57 -15883912.39 0.0146 0.0107
 Jupiter -48198-03-02 10:47 J -15882836.24 -15882836.05 -15882835.86 0.0487 0.0289
 Saturn -48191-02-22 08:09 J -15880287.32 -15880287.16 -15880286.99 0.0284 0.0210
 Saturn -48190-03-07 20:23 J -15879908.87 -15879908.65 -15879908.42 0.0282 0.0116
 Jupiter -48186-03-06 17:16 J -15878449.00 -15878448.78 -15878448.55 0.0486 0.0113
 Neptune -48183-02-05 14:52 J -15877382.04 -15877381.88 -15877381.68 0.0089 0.0064
 Neptune -48182-02-08 02:52 J -15877014.61 -15877014.38 -15877014.14 0.0089 0.0036
 Neptune -48181-02-10 14:23 J -15876647.15 -15876646.90 -15876646.64 0.0089 0.0008
 Neptune -48180-02-12 01:54 J -15876279.66 -15876279.42 -15876279.16 0.0089 0.0020
 Neptune -48179-02-14 13:40 J -15875912.15 -15875911.93 -15875911.71 0.0089 0.0047
 Neptune -48178-02-17 00:57 J -15875544.58 -15875544.46 -15875544.31 0.0089 0.0075
 Saturn -48176-08-27 18:42 J -15874621.90 -15874621.72 -15874621.54 0.0276 0.0188
 Saturn -48175-09-09 11:59 J -15874244.22 -15874244.00 -15874243.77 0.0278 0.0112
 Mars -48168-08-01 04:33 J -15871726.45 -15871726.31 -15871726.17 0.1617 0.1076
 Saturn -48161-03-01 06:57 J -15869322.45 -15869322.21 -15869321.96 0.0283 0.0031
 Uranus -48160-09-16 03:21 J -15868758.55 -15868758.36 -15868758.15 0.0132 0.0082
 Uranus -48159-09-20 07:40 J -15868389.43 -15868389.18 -15868388.93 0.0132 0.0022
 Uranus -48158-09-24 11:30 J -15868020.08 -15868020.02 -15868019.93 0.0133 0.0126
 Saturn -48146-09-04 07:26 J -15863657.44 -15863657.19 -15863656.95 0.0276 0.0023
 Jupiter -48145-09-06 04:18 J -15863289.55 -15863289.32 -15863289.09 0.0541 0.0061
 Jupiter -48133-09-11 13:54 J -15858900.97 -15858900.92 -15858900.86 0.0542 0.0524
 Saturn -48132-02-23 06:42 J -15858736.40 -15858736.22 -15858736.03 0.0284 0.0187
 Saturn -48131-03-08 18:42 J -15858357.93 -15858357.72 -15858357.50 0.0282 0.0139
 Pluto -48123-08-18 19:54 J -15855272.74 -15855272.67 -15855272.55 0.0080 0.0075
 Pluto -48122-08-21 01:26 J -15854905.57 -15854905.44 -15854905.30 0.0080 0.0068

Uranus -48118-03-17 06:57 J -15853601.45 -15853601.21 -15853600.95 0.0146 0.0028
 Uranus -48117-03-21 11:45 J -15853231.16 -15853231.01 -15853230.85 0.0146 0.0116
 Saturn -48117-08-28 19:26 J -15853070.88 -15853070.69 -15853070.49 0.0276 0.0163
 Saturn -48116-09-10 12:57 J -15852693.17 -15852692.96 -15852692.75 0.0278 0.0137
 Jupiter -48115-03-01 21:21 J -15852520.78 -15852520.61 -15852520.43 0.0487 0.0329
 Jupiter -48103-03-06 05:02 J -15848133.52 -15848133.29 -15848133.05 0.0487 0.0080
 Saturn -48102-03-03 04:47 J -15847771.55 -15847771.30 -15847771.05 0.0283 0.0008
 Neptune -48101-08-09 08:09 J -15847246.26 -15847246.16 -15847246.00 0.0088 0.0077
 Neptune -48100-08-11 20:09 J -15846878.86 -15846878.66 -15846878.43 0.0088 0.0049
 Neptune -48099-08-14 08:09 J -15846511.41 -15846511.16 -15846510.90 0.0088 0.0021
 Neptune -48098-08-16 19:40 J -15846143.93 -15846143.68 -15846143.42 0.0088 0.0007
 Neptune -48097-08-18 07:26 J -15845776.42 -15845776.19 -15845775.95 0.0088 0.0035
 Neptune -48096-08-20 18:42 J -15845408.88 -15845408.72 -15845408.52 0.0089 0.0063
 Jupiter -48091-03-10 12:28 J -15843745.99 -15843745.98 -15843745.95 0.0486 0.0485
 Mars -48089-08-03 06:57 J -15842869.40 -15842869.21 -15842869.02 0.1619 0.0112
 Saturn -48087-09-05 09:50 J -15842106.33 -15842106.09 -15842105.84 0.0276 0.0005
 Uranus -48076-09-16 16:47 J -15838076.99 -15838076.80 -15838076.57 0.0132 0.0073
 Uranus -48075-09-20 21:21 J -15837707.85 -15837707.61 -15837707.36 0.0132 0.0031
 Saturn -48073-02-25 05:45 J -15837185.46 -15837185.26 -15837185.05 0.0284 0.0162
 Saturn -48072-03-09 17:45 J -15836806.96 -15836806.76 -15836806.56 0.0282 0.0163
 Jupiter -48062-09-06 12:14 J -15832974.21 -15832973.99 -15832973.76 0.0541 0.0119
 Saturn -48058-08-30 21:35 J -15831519.81 -15831519.60 -15831519.39 0.0276 0.0136
 Saturn -48057-09-11 14:52 J -15831142.06 -15831141.88 -15831141.67 0.0278 0.0166
 Mars -48050-01-30 15:06 J -15828810.06 -15828809.87 -15828809.67 0.1916 0.0502
 Jupiter -48050-09-11 17:30 J -15828585.89 -15828585.77 -15828585.63 0.0541 0.0447
 Saturn -48043-03-04 03:21 J -15826220.60 -15826220.36 -15826220.11 0.0283 0.0018
 Uranus -48034-03-17 19:11 J -15822919.95 -15822919.70 -15822919.44 0.0146 0.0019
 Uranus -48033-03-21 23:30 J -15822549.63 -15822549.52 -15822549.37 0.0146 0.0126
 Jupiter -48032-03-01 10:18 J -15822205.23 -15822205.07 -15822204.91 0.0487 0.0362
 Saturn -48029-08-24 21:06 J -15820932.67 -15820932.62 -15820932.53 0.0274 0.0264

Saturn -48028-09-06 13:26 J -15820555.18 -15820554.94 -15820554.70 0.0277 0.0033

Jupiter -48020-03-05 15:21 J -15817818.09 -15817817.86 -15817817.63 0.0486 0.0035

Neptune -48019-02-04 21:06 J -15817481.73 -15817481.62 -15817481.51 0.0089 0.0079

Neptune -48018-02-07 08:38 J -15817114.35 -15817114.14 -15817113.93 0.0089 0.0051

Neptune -48017-02-09 20:23 J -15816746.90 -15816746.65 -15816746.40 0.0089 0.0023

Neptune -48016-02-11 07:40 J -15816379.43 -15816379.18 -15816378.92 0.0089 0.0005

Neptune -48015-02-13 19:11 J -15816011.93 -15816011.70 -15816011.45 0.0089 0.0033

Neptune -48014-02-16 06:42 J -15815644.38 -15815644.22 -15815644.01 0.0089 0.0061

Saturn -48014-02-26 07:11 J -15815634.41 -15815634.20 -15815633.98 0.0284 0.0135

Neptune -48013-02-18 18:28 J -15815276.73 -15815276.73 -15815276.70 0.0089 0.0089

Saturn -48013-03-10 18:42 J -15815255.89 -15815255.72 -15815255.53 0.0282 0.0190

Mars -48010-08-06 10:04 J -15814012.19 -15814012.08 -15814011.97 0.1622 0.1317

Jupiter -48008-03-09 21:35 J -15813430.70 -15813430.60 -15813430.49 0.0486 0.0436

48TH MILLENNIUM BCE

This is a list of transits of Earth in the 48th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-47999-09-01 01:11 J	-15809968.67	-15809968.45	-15809968.22	0.0276	0.0108		
Saturn	-47998-09-13 19:11 J	-15809590.87	-15809590.70	-15809590.52	0.0278	0.0195		
Uranus	-47992-09-17 06:14 J	-15807395.46	-15807395.24	-15807395.02	0.0132	0.0065		
Uranus	-47991-09-21 10:18 J	-15807026.30	-15807026.07	-15807025.82	0.0132	0.0040		
Saturn	-47985-02-20 14:52 J	-15805047.88	-15805047.88	-15805047.88	0.0285	0.0285		
Saturn	-47984-03-05 04:18 J	-15804669.56	-15804669.32	-15804669.08	0.0283	0.0044		

Jupiter -47979-09-05 08:09 J -15802659.36 -15802659.16 -15802658.95 0.0541 0.0235
 Saturn -47970-08-27 02:23 J -15799381.52 -15799381.40 -15799381.27 0.0275 0.0234
 Saturn -47969-09-07 18:42 J -15799003.95 -15799003.72 -15799003.47 0.0277 0.0065
 Jupiter -47967-09-10 15:06 J -15798271.05 -15798270.87 -15798270.69 0.0542 0.0338
 Pluto -47964-02-15 01:54 J -15797382.62 -15797382.42 -15797382.18 0.0064 0.0034
 Pluto -47963-02-16 14:52 J -15797016.07 -15797015.88 -15797015.67 0.0065 0.0041
 Saturn -47955-02-27 10:47 J -15794083.27 -15794083.05 -15794082.81 0.0284 0.0106
 Saturn -47954-03-12 22:04 J -15793704.72 -15793704.58 -15793704.41 0.0281 0.0220
 Uranus -47950-03-18 08:09 J -15792238.41 -15792238.16 -15792237.90 0.0146 0.0010
 Jupiter -47949-02-29 17:59 J -15791889.87 -15791889.75 -15791889.63 0.0487 0.0416
 Uranus -47949-03-22 12:42 J -15791868.06 -15791867.97 -15791867.86 0.0146 0.0134
 Saturn -47940-09-02 06:57 J -15788417.44 -15788417.21 -15788416.97 0.0276 0.0077
 Saturn -47939-09-15 00:57 J -15788039.59 -15788039.46 -15788039.31 0.0278 0.0227
 Jupiter -47937-03-04 23:45 J -15787502.75 -15787502.51 -15787502.28 0.0487 0.0017
 Neptune -47936-08-11 02:09 J -15786978.56 -15786978.41 -15786978.21 0.0088 0.0064
 Neptune -47935-08-13 13:54 J -15786611.15 -15786610.92 -15786610.67 0.0088 0.0036
 Neptune -47934-08-16 01:54 J -15786243.68 -15786243.42 -15786243.16 0.0088 0.0008
 Neptune -47933-08-17 13:26 J -15785876.19 -15785875.94 -15785875.68 0.0088 0.0020
 Neptune -47932-08-20 00:42 J -15785508.67 -15785508.47 -15785508.24 0.0088 0.0049
 Neptune -47931-08-22 12:14 J -15785141.10 -15785140.99 -15785140.84 0.0089 0.0077
 Saturn -47926-02-21 19:11 J -15783496.80 -15783496.70 -15783496.58 0.0285 0.0255
 Saturn -47925-03-06 08:38 J -15783118.38 -15783118.14 -15783117.91 0.0282 0.0075
 Jupiter -47925-03-09 06:57 J -15783115.34 -15783115.21 -15783115.07 0.0486 0.0391
 Saturn -47911-08-28 09:06 J -15777830.29 -15777830.12 -15777829.96 0.0275 0.0203
 Saturn -47910-09-10 01:54 J -15777452.64 -15777452.42 -15777452.18 0.0277 0.0098
 Uranus -47908-09-17 18:57 J -15776713.94 -15776713.71 -15776713.48 0.0132 0.0056
 Uranus -47907-09-21 23:16 J -15776344.76 -15776344.53 -15776344.28 0.0132 0.0048
 Saturn -47896-02-28 17:59 J -15772531.98 -15772531.75 -15772531.51 0.0284 0.0072
 Jupiter -47896-09-04 11:59 J -15772344.19 -15772344.00 -15772343.81 0.0541 0.0314
 Saturn -47895-03-14 05:02 J -15772153.40 -15772153.29 -15772153.18 0.0281 0.0252

Mars -47884-08-02 10:04 J -15767994.24 -15767994.08 -15767993.91 0.1614 0.0784
 Jupiter -47884-09-09 19:54 J -15767955.86 -15767955.67 -15767955.46 0.0541 0.0268
 Saturn -47881-09-03 15:21 J -15766866.10 -15766865.86 -15766865.62 0.0276 0.0043
 Saturn -47880-09-16 09:35 J -15766488.17 -15766488.10 -15766488.01 0.0279 0.0262
 Pluto -47876-08-21 05:59 J -15765053.50 -15765053.25 -15765052.99 0.0080 0.0004
 Saturn -47867-02-23 02:23 J -15761945.54 -15761945.40 -15761945.24 0.0284 0.0222
 Jupiter -47866-03-01 01:40 J -15761574.49 -15761574.43 -15761574.37 0.0487 0.0470
 Saturn -47866-03-08 15:21 J -15761567.08 -15761566.86 -15761566.62 0.0282 0.0108
 Uranus -47866-03-18 18:42 J -15761556.98 -15761556.72 -15761556.47 0.0146 0.0004
 Uranus -47865-03-22 23:02 J -15761186.59 -15761186.54 -15761186.45 0.0146 0.0140
 Neptune -47854-02-06 14:38 J -15757214.03 -15757213.89 -15757213.70 0.0089 0.0067
 Jupiter -47854-03-05 08:23 J -15757187.39 -15757187.15 -15757186.92 0.0487 0.0066
 Neptune -47853-02-09 02:09 J -15756846.62 -15756846.41 -15756846.15 0.0089 0.0039
 Neptune -47852-02-10 14:23 J -15756479.16 -15756478.90 -15756478.64 0.0089 0.0010
 Saturn -47852-08-29 17:16 J -15756278.97 -15756278.78 -15756278.58 0.0275 0.0170
 Neptune -47851-02-13 02:09 J -15756111.66 -15756111.41 -15756111.16 0.0089 0.0018
 Saturn -47851-09-11 10:47 J -15755901.25 -15755901.05 -15755900.83 0.0278 0.0133
 Neptune -47850-02-15 13:11 J -15755744.15 -15755743.95 -15755743.71 0.0089 0.0047
 Neptune -47849-02-18 00:57 J -15755376.57 -15755376.46 -15755376.30 0.0089 0.0075
 Jupiter -47842-03-09 12:14 J -15752800.15 -15752799.99 -15752799.81 0.0486 0.0331
 Saturn -47837-03-02 04:33 J -15750980.56 -15750980.31 -15750980.07 0.0283 0.0036
 Uranus -47824-09-18 07:11 J -15746032.43 -15746032.20 -15746031.96 0.0132 0.0049
 Uranus -47823-09-22 11:45 J -15745663.24 -15745663.01 -15745662.78 0.0132 0.0055
 Saturn -47822-09-06 00:57 J -15745314.71 -15745314.46 -15745314.22 0.0277 0.0009
 Jupiter -47813-09-03 12:28 J -15742029.13 -15742028.98 -15742028.83 0.0541 0.0408
 Saturn -47808-02-24 12:42 J -15740394.14 -15740393.97 -15740393.77 0.0284 0.0185
 Saturn -47807-03-10 01:26 J -15740015.64 -15740015.44 -15740015.22 0.0282 0.0145
 Mars -47805-08-04 12:14 J -15739137.17 -15739136.99 -15739136.80 0.1616 0.0395
 Jupiter -47801-09-08 12:42 J -15737641.19 -15737640.97 -15737640.74 0.0541 0.0138
 Saturn -47793-08-31 03:35 J -15734727.56 -15734727.35 -15734727.14 0.0276 0.0135

Saturn -47792-09-12 21:50 J -15734349.78 -15734349.59 -15734349.40 0.0278 0.0169
 Uranus -47783-03-13 23:30 J -15731245.56 -15731245.52 -15731245.44 0.0146 0.0143
 Uranus -47782-03-19 04:47 J -15730875.55 -15730875.30 -15730875.04 0.0146 0.0003
 Uranus -47781-03-23 09:21 J -15730505.12 -15730505.11 -15730505.08 0.0146 0.0146
 Saturn -47778-03-04 17:02 J -15729429.03 -15729428.79 -15729428.54 0.0283 0.0005
 Neptune -47772-08-10 09:21 J -15727078.22 -15727078.11 -15727077.98 0.0088 0.0078
 Jupiter -47771-03-04 11:59 J -15726872.22 -15726872.00 -15726871.77 0.0487 0.0134
 Neptune -47771-08-12 20:38 J -15726710.83 -15726710.64 -15726710.41 0.0088 0.0051
 Neptune -47770-08-15 08:23 J -15726343.39 -15726343.15 -15726342.88 0.0088 0.0022
 Neptune -47769-08-16 20:09 J -15725975.91 -15725975.66 -15725975.40 0.0088 0.0006
 Neptune -47768-08-19 07:40 J -15725608.41 -15725608.18 -15725607.93 0.0088 0.0034
 Neptune -47767-08-21 18:57 J -15725240.88 -15725240.71 -15725240.51 0.0088 0.0063
 Mars -47766-01-29 14:38 J -15725080.05 -15725079.89 -15725079.73 0.1922 0.1108
 Saturn -47764-08-25 18:57 J -15724140.73 -15724140.71 -15724140.67 0.0275 0.0272
 Saturn -47763-09-07 11:45 J -15723763.26 -15723763.01 -15723762.77 0.0277 0.0028
 Jupiter -47759-03-08 17:02 J -15722484.98 -15722484.79 -15722484.59 0.0486 0.0265
 Saturn -47749-02-27 01:26 J -15718842.65 -15718842.44 -15718842.23 0.0284 0.0147
 Saturn -47748-03-11 13:26 J -15718464.11 -15718463.94 -15718463.74 0.0282 0.0183
 Uranus -47740-09-18 19:11 J -15715350.93 -15715350.70 -15715350.45 0.0132 0.0042
 Uranus -47739-09-22 23:45 J -15714981.73 -15714981.51 -15714981.28 0.0132 0.0062
 Saturn -47734-09-02 13:54 J -15713176.14 -15713175.92 -15713175.69 0.0276 0.0101
 Saturn -47733-09-14 08:23 J -15712798.30 -15712798.15 -15712797.97 0.0278 0.0207
 Mars -47726-08-07 15:21 J -15710279.88 -15710279.86 -15710279.83 0.1619 0.1599
 Saturn -47719-03-06 07:26 J -15707877.43 -15707877.19 -15707876.95 0.0283 0.0043
 Jupiter -47718-09-08 11:16 J -15707326.26 -15707326.03 -15707325.80 0.0541 0.0036
 Pluto -47717-02-18 06:14 J -15707163.48 -15707163.24 -15707162.97 0.0065 0.0009
 Saturn -47705-08-27 05:59 J -15702589.36 -15702589.25 -15702589.11 0.0275 0.0238
 Saturn -47704-09-08 23:16 J -15702211.77 -15702211.53 -15702211.29 0.0277 0.0065
 Uranus -47699-03-14 08:52 J -15700564.20 -15700564.13 -15700564.03 0.0146 0.0138
 Uranus -47698-03-19 13:40 J -15700194.18 -15700193.93 -15700193.67 0.0146 0.0007

Neptune -47690-02-05 21:35 J -15697313.67 -15697313.60 -15697313.47 0.0089 0.0082
 Saturn -47690-02-28 15:06 J -15697291.10 -15697290.87 -15697290.64 0.0284 0.0108
 Neptune -47689-02-08 09:50 J -15696946.29 -15696946.09 -15696945.88 0.0089 0.0053
 Saturn -47689-03-13 02:38 J -15696912.53 -15696912.39 -15696912.23 0.0281 0.0221
 Neptune -47688-02-09 21:35 J -15696578.84 -15696578.60 -15696578.35 0.0089 0.0025
 Jupiter -47688-03-03 16:18 J -15696557.03 -15696556.82 -15696556.61 0.0487 0.0201
 Neptune -47687-02-12 09:21 J -15696211.36 -15696211.11 -15696210.85 0.0089 0.0004
 Neptune -47686-02-14 20:52 J -15695843.85 -15695843.63 -15695843.37 0.0089 0.0033
 Neptune -47685-02-17 08:38 J -15695476.32 -15695476.14 -15695475.94 0.0089 0.0061
 Jupiter -47676-03-07 22:04 J -15692169.79 -15692169.58 -15692169.37 0.0487 0.0202
 Saturn -47675-09-04 00:14 J -15691624.72 -15691624.49 -15691624.24 0.0277 0.0067
 Saturn -47674-09-16 19:26 J -15691246.80 -15691246.69 -15691246.56 0.0279 0.0242
 Saturn -47661-02-23 08:52 J -15686704.23 -15686704.13 -15686704.01 0.0285 0.0251
 Saturn -47660-03-07 21:50 J -15686325.82 -15686325.59 -15686325.35 0.0282 0.0082
 Uranus -47656-09-19 06:14 J -15684669.47 -15684669.24 -15684668.99 0.0132 0.0036
 Uranus -47655-09-23 10:47 J -15684300.26 -15684300.05 -15684299.83 0.0132 0.0069
 Saturn -47646-08-29 16:47 J -15681037.95 -15681037.80 -15681037.62 0.0275 0.0204
 Saturn -47645-09-10 10:04 J -15680660.30 -15680660.08 -15680659.84 0.0277 0.0101
 Jupiter -47635-09-07 11:45 J -15677011.24 -15677011.01 -15677010.78 0.0541 0.0058
 Saturn -47631-03-02 04:18 J -15675739.55 -15675739.32 -15675739.08 0.0283 0.0070
 Saturn -47630-03-15 15:35 J -15675360.94 -15675360.85 -15675360.75 0.0281 0.0258
 Pluto -47630-08-22 15:21 J -15675201.01 -15675200.86 -15675200.68 0.0080 0.0061
 Jupiter -47623-09-12 13:40 J -15672623.01 -15672622.93 -15672622.83 0.0541 0.0496
 Saturn -47616-09-05 09:50 J -15670073.33 -15670073.09 -15670072.85 0.0277 0.0033
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 Saturn -47615-09-18 05:02 J -15669695.30 -15669695.29 -15669695.25 0.0279 0.0277
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 Neptune -47607-08-12 05:02 J -15666810.44 -15666810.29 -15666810.09 0.0088 0.0064
 Neptune -47606-08-14 17:02 J -15666443.02 -15666442.79 -15666442.55 0.0088 0.0036
 Jupiter -47605-03-02 19:11 J -15666241.89 -15666241.70 -15666241.50 0.0487 0.0269

Neptune -47605-08-16 04:47 J -15666075.56 -15666075.30 -15666075.04 0.0088 0.0007
 Neptune -47604-08-18 16:04 J -15665708.08 -15665707.83 -15665707.58 0.0088 0.0021
 Neptune -47603-08-21 03:06 J -15665340.56 -15665340.37 -15665340.13 0.0088 0.0050
 Saturn -47602-02-24 22:33 J -15665152.71 -15665152.56 -15665152.39 0.0284 0.0213
 Neptune -47602-08-23 14:38 J -15664972.99 -15664972.89 -15664972.75 0.0088 0.0078
 Saturn -47601-03-09 11:16 J -15664774.25 -15664774.03 -15664773.80 0.0282 0.0120
 Mars -47600-08-03 15:50 J -15664262.02 -15664261.84 -15664261.65 0.1611 0.0489
 Jupiter -47593-03-07 01:54 J -15661854.64 -15661854.42 -15661854.19 0.0486 0.0137
 Saturn -47587-08-31 02:52 J -15659486.56 -15659486.38 -15659486.18 0.0275 0.0171
 Saturn -47586-09-12 20:09 J -15659108.87 -15659108.66 -15659108.44 0.0277 0.0135
 Saturn -47572-03-03 16:04 J -15654188.08 -15654187.83 -15654187.59 0.0283 0.0033
 Uranus -47572-09-19 17:45 J -15653988.00 -15653987.76 -15653987.51 0.0132 0.0029
 Uranus -47571-09-23 22:18 J -15653618.78 -15653618.57 -15653618.36 0.0132 0.0075
 Saturn -47557-09-06 17:45 J -15648522.01 -15648521.76 -15648521.52 0.0277 0.0005
 Jupiter -47552-09-06 05:59 J -15646696.47 -15646696.25 -15646696.03 0.0540 0.0179
 Saturn -47543-02-26 10:04 J -15643601.27 -15643601.08 -15643600.89 0.0284 0.0177
 Saturn -47542-03-11 22:33 J -15643222.76 -15643222.56 -15643222.35 0.0282 0.0156
 Jupiter -47540-09-11 11:02 J -15642308.20 -15642308.04 -15642307.88 0.0542 0.0392
 Uranus -47531-03-15 05:59 J -15639201.37 -15639201.25 -15639201.10 0.0146 0.0125
 Uranus -47530-03-20 10:33 J -15638831.31 -15638831.06 -15638830.80 0.0146 0.0019
 Saturn -47528-09-01 10:47 J -15637935.25 -15637935.05 -15637934.83 0.0275 0.0140
 Saturn -47527-09-14 04:18 J -15637557.51 -15637557.32 -15637557.12 0.0277 0.0167
 Neptune -47525-02-07 17:16 J -15637045.92 -15637045.78 -15637045.59 0.0089 0.0068
 Neptune -47524-02-09 05:30 J -15636678.50 -15636678.27 -15636678.04 0.0089 0.0039
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 Neptune -47522-02-14 04:47 J -15635943.55 -15635943.30 -15635943.04 0.0089 0.0018
 Jupiter -47522-03-03 01:11 J -15635926.62 -15635926.45 -15635926.27 0.0487 0.0330
 Neptune -47521-02-16 16:33 J -15635576.02 -15635575.81 -15635575.58 0.0089 0.0047
 Mars -47521-08-05 18:14 J -15635404.91 -15635404.74 -15635404.57 0.1614 0.0693
 Neptune -47520-02-18 04:04 J -15635208.44 -15635208.33 -15635208.17 0.0089 0.0076

Saturn -47513-03-05 01:40 J -15632636.67 -15632636.43 -15632636.18 0.0283 0.0003
 Jupiter -47510-03-07 07:26 J -15631539.42 -15631539.19 -15631538.95 0.0487 0.0075
 Saturn -47499-08-27 07:11 J -15627348.22 -15627348.20 -15627348.17 0.0275 0.0273
 Jupiter -47498-03-11 13:11 J -15627151.98 -15627151.95 -15627151.90 0.0487 0.0480
 Saturn -47498-09-08 23:45 J -15626970.76 -15626970.51 -15626970.27 0.0277 0.0029
 Uranus -47489-09-15 23:30 J -15623675.57 -15623675.52 -15623675.44 0.0132 0.0128
 Uranus -47488-09-20 04:04 J -15623306.57 -15623306.33 -15623306.08 0.0132 0.0024
 Uranus -47487-09-24 08:23 J -15622937.34 -15622937.15 -15622936.94 0.0133 0.0081
 Saturn -47484-02-27 18:14 J -15622049.95 -15622049.74 -15622049.53 0.0284 0.0145
 Saturn -47483-03-13 06:42 J -15621671.39 -15621671.22 -15621671.03 0.0282 0.0189
 Pluto -47471-02-18 23:16 J -15617310.77 -15617310.53 -15617310.28 0.0065 0.0021
 Pluto -47470-02-20 11:45 J -15616944.13 -15616944.01 -15616943.85 0.0065 0.0054
 Saturn -47469-09-02 17:16 J -15616384.00 -15616383.78 -15616383.55 0.0275 0.0110
 Jupiter -47469-09-05 07:11 J -15616381.40 -15616381.20 -15616380.99 0.0541 0.0267
 Saturn -47468-09-15 10:04 J -15616006.24 -15616006.08 -15616005.90 0.0277 0.0197
 Jupiter -47457-09-10 15:35 J -15611993.03 -15611992.85 -15611992.66 0.0541 0.0318
 Saturn -47454-03-07 08:23 J -15611085.39 -15611085.15 -15611084.90 0.0283 0.0033
 Uranus -47447-03-15 17:02 J -15608519.94 -15608519.79 -15608519.64 0.0146 0.0118
 Uranus -47446-03-20 21:06 J -15608149.86 -15608149.62 -15608149.36 0.0146 0.0027
 Neptune -47443-08-11 14:23 J -15606910.00 -15606909.90 -15606909.76 0.0088 0.0078
 Neptune -47442-08-14 02:09 J -15606542.61 -15606542.41 -15606542.18 0.0088 0.0050
 Neptune -47441-08-15 13:40 J -15606175.17 -15606174.93 -15606174.67 0.0088 0.0021
 Neptune -47440-08-18 01:26 J -15605807.69 -15605807.44 -15605807.18 0.0088 0.0008
 Saturn -47440-08-28 11:16 J -15605797.14 -15605797.03 -15605796.92 0.0275 0.0246
 Jupiter -47439-03-02 08:23 J -15605611.29 -15605611.15 -15605611.01 0.0488 0.0385
 Neptune -47439-08-20 12:28 J -15605440.19 -15605439.98 -15605439.72 0.0088 0.0037
 Saturn -47439-09-10 03:35 J -15605419.59 -15605419.35 -15605419.11 0.0277 0.0057
 Neptune -47438-08-22 23:59 J -15605072.66 -15605072.50 -15605072.31 0.0088 0.0065
 Jupiter -47427-03-06 14:52 J -15601224.12 -15601223.88 -15601223.65 0.0487 0.0024
 Saturn -47425-02-29 23:16 J -15600498.75 -15600498.53 -15600498.30 0.0284 0.0115

Saturn -47424-03-14 12:14 J -15600120.14 -15600119.99 -15600119.83 0.0282 0.0219
 Jupiter -47415-03-10 22:04 J -15596836.69 -15596836.58 -15596836.48 0.0486 0.0432
 Saturn -47410-09-04 21:35 J -15594832.83 -15594832.60 -15594832.36 0.0275 0.0081
 Saturn -47409-09-16 14:09 J -15594455.03 -15594454.91 -15594454.75 0.0277 0.0226
 Uranus -47405-09-16 09:50 J -15592994.17 -15592994.09 -15592993.98 0.0132 0.0123
 Uranus -47404-09-20 14:23 J -15592625.15 -15592624.90 -15592624.64 0.0132 0.0018
 Mars -47403-02-01 02:52 J -15592491.57 -15592491.38 -15592491.18 0.1922 0.0546
 Uranus -47403-09-24 18:28 J -15592255.90 -15592255.73 -15592255.52 0.0133 0.0087
 Saturn -47396-02-22 21:50 J -15589912.64 -15589912.59 -15589912.52 0.0285 0.0276
 Saturn -47395-03-08 12:14 J -15589534.23 -15589533.99 -15589533.75 0.0283 0.0062
 Mars -47395-08-02 20:23 J -15589386.75 -15589386.65 -15589386.54 0.1607 0.1331
 Jupiter -47386-09-05 11:16 J -15586066.21 -15586066.03 -15586065.85 0.0540 0.0343
 Pluto -47383-08-25 10:04 J -15584981.29 -15584981.08 -15584980.83 0.0080 0.0037
 Saturn -47381-08-29 13:40 J -15584246.06 -15584245.93 -15584245.77 0.0275 0.0220
 Saturn -47380-09-11 05:45 J -15583868.49 -15583868.26 -15583868.02 0.0277 0.0084
 Jupiter -47374-09-10 16:18 J -15581678.03 -15581677.82 -15581677.61 0.0541 0.0225
 Saturn -47366-03-03 01:11 J -15578947.68 -15578947.45 -15578947.21 0.0284 0.0087
 Saturn -47365-03-15 14:23 J -15578569.02 -15578568.90 -15578568.78 0.0282 0.0246
 Uranus -47363-03-16 02:52 J -15577838.53 -15577838.38 -15577838.20 0.0146 0.0112
 Uranus -47362-03-21 07:11 J -15577468.44 -15577468.20 -15577467.94 0.0146 0.0031
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 Neptune -47360-02-08 14:52 J -15576778.08 -15576777.88 -15576777.68 0.0089 0.0053
 Neptune -47359-02-11 01:54 J -15576410.65 -15576410.42 -15576410.16 0.0089 0.0025
 Neptune -47358-02-13 14:09 J -15576043.17 -15576042.91 -15576042.65 0.0089 0.0005
 Neptune -47357-02-16 01:26 J -15575675.66 -15575675.44 -15575675.18 0.0089 0.0034
 Neptune -47356-02-17 13:11 J -15575308.11 -15575307.95 -15575307.74 0.0089 0.0063
 Jupiter -47356-03-01 19:26 J -15575295.80 -15575295.69 -15575295.57 0.0487 0.0424
 Saturn -47351-09-06 00:28 J -15573281.72 -15573281.48 -15573281.24 0.0275 0.0054
 Saturn -47350-09-18 16:47 J -15572903.89 -15572903.80 -15572903.69 0.0277 0.0253
 Jupiter -47344-03-06 01:11 J -15570908.69 -15570908.45 -15570908.22 0.0487 0.0022

Saturn -47337-02-24 23:30 J -15568361.63 -15568361.52 -15568361.39 0.0285 0.0249
 Saturn -47336-03-09 13:54 J -15567983.15 -15567982.92 -15567982.68 0.0283 0.0089
 Jupiter -47332-03-10 07:11 J -15566521.33 -15566521.20 -15566521.05 0.0486 0.0386
 Saturn -47322-08-31 14:52 J -15562695.04 -15562694.88 -15562694.70 0.0275 0.0195
 Saturn -47321-09-12 06:42 J -15562317.45 -15562317.22 -15562317.00 0.0277 0.0110
 Uranus -47321-09-16 18:57 J -15562312.79 -15562312.71 -15562312.57 0.0132 0.0119
 Uranus -47320-09-20 23:59 J -15561943.75 -15561943.50 -15561943.25 0.0132 0.0014
 Uranus -47319-09-25 04:18 J -15561574.50 -15561574.32 -15561574.13 0.0133 0.0091
 Mars -47316-08-04 22:33 J -15560529.74 -15560529.56 -15560529.37 0.1609 0.0178
 Saturn -47307-03-04 00:57 J -15557396.70 -15557396.46 -15557396.22 0.0284 0.0062
 Saturn -47306-03-17 13:54 J -15557017.97 -15557017.92 -15557017.84 0.0282 0.0272
 Jupiter -47303-09-04 09:35 J -15555751.23 -15555751.10 -15555750.97 0.0541 0.0448
 Saturn -47292-09-07 02:38 J -15551730.63 -15551730.39 -15551730.14 0.0275 0.0027
 Jupiter -47291-09-09 18:14 J -15551362.97 -15551362.74 -15551362.52 0.0542 0.0139
 Uranus -47279-03-16 11:30 J -15547157.18 -15547157.02 -15547156.84 0.0146 0.0109
 Saturn -47278-02-25 23:02 J -15546810.68 -15546810.54 -15546810.38 0.0285 0.0224
 Uranus -47278-03-21 15:50 J -15546787.08 -15546786.84 -15546786.59 0.0146 0.0035
 Neptune -47278-08-13 12:14 J -15546642.17 -15546641.99 -15546641.81 0.0088 0.0063
 Saturn -47277-03-10 13:40 J -15546432.15 -15546431.93 -15546431.70 0.0283 0.0114
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 Neptune -47275-08-19 22:47 J -15545539.79 -15545539.55 -15545539.29 0.0088 0.0024
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 Jupiter -47273-03-01 05:30 J -15544980.32 -15544980.27 -15544980.21 0.0487 0.0470
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 Saturn -47262-09-14 06:57 J -15540766.42 -15540766.21 -15540766.00 0.0277 0.0136
 Jupiter -47261-03-05 11:16 J -15540593.26 -15540593.03 -15540592.80 0.0487 0.0064
 Jupiter -47249-03-09 18:28 J -15536205.88 -15536205.73 -15536205.56 0.0486 0.0350
 Saturn -47248-03-04 23:30 J -15535845.76 -15535845.52 -15535845.27 0.0284 0.0038

Mars -47237-08-07 01:11 J -15531672.60 -15531672.45 -15531672.30 0.1611 0.1009
 Uranus -47237-09-17 05:16 J -15531631.40 -15531631.28 -15531631.15 0.0132 0.0114
 Uranus -47236-09-21 09:50 J -15531262.35 -15531262.09 -15531261.84 0.0132 0.0010
 Uranus -47235-09-25 14:09 J -15530893.09 -15530892.91 -15530892.74 0.0133 0.0095
 Saturn -47233-09-08 04:04 J -15530179.57 -15530179.33 -15530179.08 0.0275 0.0005
 Pluto -47225-02-20 19:11 J -15527457.88 -15527457.70 -15527457.49 0.0065 0.0042
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 Saturn -47219-02-26 22:04 J -15525259.74 -15525259.58 -15525259.39 0.0285 0.0200
 Saturn -47218-03-12 12:42 J -15524881.18 -15524880.97 -15524880.75 0.0283 0.0139
 Jupiter -47208-09-09 02:23 J -15521047.62 -15521047.40 -15521047.17 0.0541 0.0082
 Saturn -47204-09-02 16:47 J -15519593.00 -15519592.80 -15519592.59 0.0275 0.0143
 Saturn -47203-09-15 08:09 J -15519215.36 -15519215.16 -15519214.96 0.0277 0.0163
 Neptune -47196-02-08 00:14 J -15516877.65 -15516877.49 -15516877.32 0.0089 0.0067
 Neptune -47195-02-10 11:59 J -15516510.23 -15516510.00 -15516509.76 0.0089 0.0038
 Uranus -47195-03-16 18:57 J -15516475.86 -15516475.71 -15516475.51 0.0146 0.0107
 Neptune -47194-02-12 23:45 J -15516142.77 -15516142.51 -15516142.26 0.0089 0.0009
 Uranus -47194-03-21 23:30 J -15516105.76 -15516105.52 -15516105.27 0.0146 0.0038
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 Neptune -47191-02-19 11:02 J -15515040.16 -15515040.04 -15515039.92 0.0089 0.0078
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 Jupiter -47178-03-06 00:42 J -15510277.70 -15510277.47 -15510277.24 0.0487 0.0095
 Saturn -47175-08-28 16:18 J -15509005.83 -15509005.82 -15509005.79 0.0273 0.0272
 Saturn -47174-09-10 05:59 J -15508628.49 -15508628.25 -15508628.00 0.0275 0.0029
 Jupiter -47166-03-10 05:59 J -15505890.43 -15505890.25 -15505890.07 0.0486 0.0309
 Saturn -47160-02-27 21:50 J -15503708.78 -15503708.59 -15503708.39 0.0285 0.0174
 Saturn -47159-03-13 11:59 J -15503330.19 -15503330.00 -15503329.80 0.0283 0.0165
 Uranus -47153-09-17 13:26 J -15500950.05 -15500949.94 -15500949.78 0.0132 0.0111
 Uranus -47152-09-21 18:28 J -15500580.98 -15500580.73 -15500580.48 0.0132 0.0006

Uranus -47151-09-25 22:33 J -15500211.71 -15500211.56 -15500211.38 0.0133 0.0100
 Saturn -47145-09-03 18:28 J -15498041.95 -15498041.73 -15498041.50 0.0275 0.0115
 Saturn -47144-09-16 09:50 J -15497664.26 -15497664.09 -15497663.91 0.0277 0.0191
 Pluto -47137-08-26 03:50 J -15495128.60 -15495128.34 -15495128.08 0.0080 0.0003
 Saturn -47130-03-07 20:09 J -15492743.90 -15492743.66 -15492743.41 0.0284 0.0013
 Jupiter -47125-09-07 23:45 J -15490732.74 -15490732.51 -15490732.28 0.0541 0.0030
 Mars -47119-01-31 01:11 J -15488761.61 -15488761.45 -15488761.29 0.1927 0.1118
 Saturn -47116-08-29 19:11 J -15487454.79 -15487454.70 -15487454.58 0.0274 0.0245
 Saturn -47115-09-11 09:21 J -15487077.35 -15487077.11 -15487076.87 0.0275 0.0058
 Neptune -47114-08-12 22:18 J -15486741.67 -15486741.57 -15486741.42 0.0088 0.0077
 Neptune -47113-08-14 10:18 J -15486374.28 -15486374.07 -15486373.84 0.0088 0.0048
 Neptune -47112-08-16 22:04 J -15486006.82 -15486006.58 -15486006.31 0.0088 0.0019
 Uranus -47111-03-17 02:38 J -15485794.55 -15485794.39 -15485794.20 0.0146 0.0104
 Mars -47111-08-04 03:50 J -15485654.49 -15485654.34 -15485654.19 0.1605 0.1004
 Neptune -47111-08-19 10:04 J -15485639.34 -15485639.08 -15485638.82 0.0088 0.0011
 Uranus -47110-03-22 06:57 J -15485424.45 -15485424.21 -15485423.96 0.0146 0.0040
 Neptune -47110-08-21 21:21 J -15485271.84 -15485271.61 -15485271.37 0.0088 0.0040
 Neptune -47109-08-23 08:38 J -15484904.28 -15484904.14 -15484903.96 0.0088 0.0069
 Saturn -47101-02-29 22:33 J -15482157.76 -15482157.56 -15482157.34 0.0285 0.0147
 Saturn -47100-03-14 12:28 J -15481779.15 -15481778.98 -15481778.79 0.0283 0.0193
 Jupiter -47095-03-05 10:04 J -15479962.30 -15479962.08 -15479961.85 0.0487 0.0143
 Saturn -47086-09-05 21:50 J -15476490.82 -15476490.59 -15476490.35 0.0275 0.0086
 Saturn -47085-09-17 13:11 J -15476113.08 -15476112.95 -15476112.79 0.0277 0.0221
 Jupiter -47083-03-09 15:35 J -15475575.04 -15475574.85 -15475574.65 0.0487 0.0264
 Saturn -47071-03-08 20:23 J -15471192.89 -15471192.65 -15471192.40 0.0284 0.0041
 Uranus -47069-09-17 23:02 J -15470268.68 -15470268.54 -15470268.38 0.0132 0.0106
 Uranus -47068-09-22 03:50 J -15469899.60 -15469899.34 -15469899.09 0.0132 0.0002
 Uranus -47067-09-26 07:54 J -15469530.31 -15469530.17 -15469530.00 0.0133 0.0104
 Saturn -47057-08-30 23:45 J -15465903.66 -15465903.51 -15465903.36 0.0274 0.0215
 Saturn -47056-09-12 13:54 J -15465526.15 -15465525.92 -15465525.69 0.0276 0.0089

Saturn -47042-03-03 02:09 J -15460606.63 -15460606.41 -15460606.19 0.0285 0.0116

Jupiter -47042-09-08 05:30 J -15460417.49 -15460417.27 -15460417.04 0.0541 0.0102

Saturn -47041-03-15 15:50 J -15460227.99 -15460227.84 -15460227.69 0.0283 0.0222

Neptune -47032-02-07 10:47 J -15456977.13 -15456977.05 -15456976.92 0.0089 0.0081

Mars -47032-08-06 05:59 J -15456797.44 -15456797.25 -15456797.06 0.1607 0.0159

Neptune -47031-02-09 22:18 J -15456609.75 -15456609.57 -15456609.34 0.0089 0.0052

Neptune -47030-02-12 10:33 J -15456242.31 -15456242.06 -15456241.81 0.0089 0.0022

Jupiter -47030-09-13 14:09 J -15456029.00 -15456028.91 -15456028.81 0.0542 0.0490

Neptune -47029-02-14 22:04 J -15455874.83 -15455874.58 -15455874.32 0.0089 0.0007

Neptune -47028-02-16 09:35 J -15455507.33 -15455507.10 -15455506.86 0.0089 0.0036

Neptune -47027-02-18 20:52 J -15455139.78 -15455139.63 -15455139.43 0.0089 0.0066

Uranus -47027-03-17 11:16 J -15455113.20 -15455113.03 -15455112.83 0.0146 0.0099

Saturn -47027-09-07 02:52 J -15454939.61 -15454939.38 -15454939.13 0.0275 0.0055

Uranus -47026-03-22 15:21 J -15454743.09 -15454742.86 -15454742.60 0.0146 0.0045

Saturn -47026-09-19 18:42 J -15454561.81 -15454561.72 -15454561.62 0.0277 0.0253

Saturn -47013-02-25 08:23 J -15450020.22 -15450020.15 -15450020.08 0.0286 0.0272

Jupiter -47012-03-04 19:26 J -15449646.90 -15449646.69 -15449646.47 0.0487 0.0191

Saturn -47012-03-09 23:45 J -15449641.75 -15449641.51 -15449641.27 0.0284 0.0071

47TH MILLENNIUM BCE

This is a list of transits of Earth in the 47th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Jupiter -47000-03-09 02:23 J -15445259.61 -15445259.40 -15445259.19 0.0487 0.0221

Saturn -46998-09-02 05:30 J -15444352.45 -15444352.27 -15444352.09 0.0274 0.0184
 Saturn -46997-09-13 20:23 J -15443974.86 -15443974.65 -15443974.42 0.0276 0.0122
 Uranus -46985-09-18 07:11 J -15439587.34 -15439587.20 -15439587.02 0.0132 0.0103
 Uranus -46984-09-22 12:14 J -15439218.25 -15439217.99 -15439217.74 0.0132 0.0003
 Saturn -46983-03-04 07:54 J -15439055.40 -15439055.17 -15439054.93 0.0285 0.0083
 Uranus -46983-09-26 16:33 J -15438848.94 -15438848.81 -15438848.65 0.0133 0.0108
 Saturn -46982-03-17 21:06 J -15438676.72 -15438676.62 -15438676.51 0.0282 0.0255
 Pluto -46979-02-21 14:38 J -15437604.91 -15437604.89 -15437604.85 0.0064 0.0064
 Pluto -46978-02-23 03:35 J -15437238.60 -15437238.35 -15437238.09 0.0065 0.0010
 Saturn -46968-09-08 10:04 J -15433388.33 -15433388.08 -15433387.84 0.0275 0.0022
 Jupiter -46959-09-07 07:54 J -15430102.38 -15430102.17 -15430101.95 0.0541 0.0189
 Saturn -46954-02-26 14:38 J -15428469.01 -15428468.89 -15428468.75 0.0285 0.0239
 Saturn -46953-03-11 05:45 J -15428090.48 -15428090.26 -15428090.03 0.0283 0.0104
 Mars -46953-08-08 08:38 J -15427940.25 -15427940.14 -15427940.04 0.1609 0.1332
 Neptune -46949-08-13 20:52 J -15426473.80 -15426473.63 -15426473.42 0.0088 0.0061
 Neptune -46948-08-16 08:38 J -15426106.36 -15426106.14 -15426105.88 0.0088 0.0032
 Neptune -46947-08-18 20:38 J -15425738.90 -15425738.64 -15425738.38 0.0088 0.0002
 Jupiter -46947-09-12 08:09 J -15425714.32 -15425714.16 -15425713.98 0.0541 0.0364
 Neptune -46946-08-21 08:09 J -15425371.39 -15425371.16 -15425370.90 0.0088 0.0028
 Neptune -46945-08-22 19:26 J -15425003.86 -15425003.69 -15425003.47 0.0088 0.0057
 Neptune -46944-08-25 06:57 J -15424636.25 -15424636.21 -15424636.12 0.0088 0.0086
 Uranus -46943-03-17 20:23 J -15424431.83 -15424431.65 -15424431.45 0.0146 0.0094
 Uranus -46942-03-23 00:28 J -15424061.71 -15424061.48 -15424061.23 0.0146 0.0049
 Saturn -46939-09-03 12:57 J -15422801.16 -15422800.96 -15422800.76 0.0275 0.0152
 Saturn -46938-09-16 04:33 J -15422423.51 -15422423.31 -15422423.11 0.0276 0.0157
 Jupiter -46929-03-04 01:54 J -15419331.62 -15419331.42 -15419331.21 0.0487 0.0249
 Saturn -46924-03-05 17:02 J -15417504.03 -15417503.79 -15417503.54 0.0284 0.0048
 Jupiter -46917-03-08 08:09 J -15414944.38 -15414944.16 -15414943.93 0.0487 0.0160
 Saturn -46909-09-09 18:42 J -15411836.96 -15411836.72 -15411836.47 0.0275 0.0014
 Uranus -46901-09-18 16:04 J -15408905.98 -15408905.83 -15408905.65 0.0132 0.0098

Uranus -46900-09-22 21:06 J -15408536.87 -15408536.62 -15408536.36 0.0132 0.0007
 Uranus -46899-09-27 01:40 J -15408167.55 -15408167.43 -15408167.28 0.0133 0.0112
 Saturn -46895-02-27 23:59 J -15406917.67 -15406917.50 -15406917.33 0.0285 0.0204
 Saturn -46894-03-13 14:23 J -15406539.10 -15406538.90 -15406538.68 0.0283 0.0140
 Pluto -46891-08-27 20:09 J -15405275.88 -15405275.66 -15405275.40 0.0080 0.0030
 Saturn -46880-09-04 21:50 J -15401249.81 -15401249.59 -15401249.36 0.0275 0.0118
 Saturn -46879-09-17 13:40 J -15400872.09 -15400871.93 -15400871.74 0.0277 0.0193
 Jupiter -46876-09-06 00:42 J -15399787.65 -15399787.47 -15399787.28 0.0540 0.0319
 Neptune -46867-02-09 09:35 J -15396709.25 -15396709.10 -15396708.91 0.0089 0.0065
 Neptune -46866-02-11 21:21 J -15396341.83 -15396341.61 -15396341.36 0.0089 0.0036
 Neptune -46865-02-14 09:06 J -15395974.37 -15395974.12 -15395973.86 0.0089 0.0006
 Saturn -46865-03-07 05:02 J -15395952.54 -15395952.29 -15395952.04 0.0284 0.0008
 Neptune -46864-02-15 20:38 J -15395606.88 -15395606.64 -15395606.38 0.0089 0.0024
 Jupiter -46864-09-11 08:23 J -15395399.35 -15395399.15 -15395398.95 0.0541 0.0268
 Neptune -46863-02-18 08:23 J -15395239.35 -15395239.15 -15395238.94 0.0089 0.0053
 Neptune -46862-02-20 19:40 J -15394871.74 -15394871.68 -15394871.56 0.0089 0.0083
 Uranus -46859-03-18 05:45 J -15393750.45 -15393750.26 -15393750.04 0.0146 0.0089
 Uranus -46858-03-23 09:50 J -15393380.31 -15393380.09 -15393379.84 0.0146 0.0055
 Saturn -46851-08-30 13:40 J -15390663.00 -15390662.93 -15390662.84 0.0274 0.0258
 Saturn -46850-09-12 04:47 J -15390285.54 -15390285.30 -15390285.06 0.0276 0.0049
 Jupiter -46846-03-04 06:42 J -15389016.39 -15389016.22 -15389016.03 0.0488 0.0317
 Saturn -46836-03-01 11:45 J -15385366.20 -15385366.01 -15385365.80 0.0285 0.0165
 Saturn -46835-03-15 01:54 J -15384987.60 -15384987.42 -15384987.22 0.0283 0.0179
 Jupiter -46834-03-08 13:26 J -15384629.17 -15384628.94 -15384628.71 0.0487 0.0095
 Mars -46827-08-05 11:16 J -15381922.20 -15381922.03 -15381921.86 0.1604 0.0672
 Saturn -46821-09-06 07:26 J -15379698.42 -15379698.19 -15379697.95 0.0275 0.0083
 Saturn -46820-09-18 23:59 J -15379320.63 -15379320.50 -15379320.36 0.0277 0.0229
 Uranus -46817-09-19 00:14 J -15378224.65 -15378224.49 -15378224.30 0.0132 0.0095
 Uranus -46816-09-23 05:16 J -15377855.53 -15377855.28 -15377855.03 0.0132 0.0010
 Uranus -46815-09-27 09:50 J -15377486.20 -15377486.09 -15377485.95 0.0133 0.0115

Saturn -46806-03-09 18:57 J -15374400.96 -15374400.71 -15374400.47 0.0284 0.0032
 Jupiter -46793-09-05 02:09 J -15369472.56 -15369472.41 -15369472.26 0.0540 0.0409
 Saturn -46792-09-01 00:28 J -15369111.61 -15369111.48 -15369111.33 0.0274 0.0223
 Saturn -46791-09-13 15:35 J -15368734.07 -15368733.85 -15368733.61 0.0276 0.0086
 Neptune -46785-08-13 08:23 J -15366573.27 -15366573.15 -15366572.99 0.0088 0.0074
 Neptune -46784-08-15 19:54 J -15366205.87 -15366205.67 -15366205.42 0.0088 0.0045
 Neptune -46783-08-18 08:09 J -15365838.41 -15365838.16 -15365837.90 0.0088 0.0015
 Neptune -46782-08-20 19:40 J -15365470.93 -15365470.68 -15365470.42 0.0088 0.0015
 Neptune -46781-08-22 07:11 J -15365103.41 -15365103.20 -15365102.96 0.0088 0.0044
 Jupiter -46781-09-10 08:38 J -15365084.35 -15365084.14 -15365083.91 0.0541 0.0173
 Neptune -46780-08-24 18:28 J -15364735.84 -15364735.73 -15364735.56 0.0088 0.0074
 Saturn -46777-03-03 00:42 J -15363814.68 -15363814.47 -15363814.24 0.0285 0.0125
 Saturn -46776-03-16 14:52 J -15363436.03 -15363435.88 -15363435.72 0.0283 0.0218
 Uranus -46775-03-18 14:38 J -15363069.09 -15363068.89 -15363068.68 0.0146 0.0085
 Uranus -46774-03-23 18:28 J -15362698.95 -15362698.73 -15362698.48 0.0146 0.0058
 Jupiter -46763-03-03 11:30 J -15358701.16 -15358701.02 -15358700.87 0.0488 0.0383
 Saturn -46762-09-08 17:16 J -15358147.02 -15358146.78 -15358146.54 0.0276 0.0048
 Saturn -46761-09-20 10:04 J -15357769.14 -15357769.08 -15357769.00 0.0278 0.0266
 Mars -46756-02-02 13:40 J -15356173.13 -15356172.93 -15356172.74 0.1928 0.0559
 Jupiter -46751-03-07 16:33 J -15354314.04 -15354313.81 -15354313.58 0.0487 0.0027
 Saturn -46748-02-25 18:42 J -15353227.78 -15353227.72 -15353227.64 0.0285 0.0273
 Mars -46748-08-07 13:11 J -15353065.13 -15353064.95 -15353064.77 0.1605 0.0479
 Saturn -46747-03-11 09:35 J -15352849.33 -15352849.10 -15352848.86 0.0283 0.0073
 Jupiter -46739-03-11 22:47 J -15349926.65 -15349926.55 -15349926.44 0.0486 0.0437
 Saturn -46733-09-02 11:02 J -15347560.21 -15347560.04 -15347559.86 0.0274 0.0188
 Uranus -46733-09-19 08:38 J -15347543.30 -15347543.14 -15347542.94 0.0132 0.0093
 Pluto -46732-02-24 01:40 J -15347385.69 -15347385.43 -15347385.17 0.0065 0.0006
 Saturn -46732-09-15 02:23 J -15347182.62 -15347182.40 -15347182.18 0.0276 0.0122
 Uranus -46732-09-23 13:54 J -15347174.16 -15347173.92 -15347173.66 0.0132 0.0013
 Uranus -46731-09-27 18:42 J -15346804.83 -15346804.72 -15346804.60 0.0133 0.0118

Saturn -46718-03-05 14:23 J -15342263.13 -15342262.90 -15342262.66 0.0284 0.0085
 Saturn -46717-03-18 03:50 J -15341884.42 -15341884.34 -15341884.23 0.0282 0.0258
 Jupiter -46710-09-04 21:21 J -15339157.65 -15339157.61 -15339157.55 0.0539 0.0525
 Neptune -46703-02-08 20:52 J -15336808.72 -15336808.63 -15336808.49 0.0089 0.0079
 Saturn -46703-09-10 02:52 J -15336595.62 -15336595.38 -15336595.13 0.0276 0.0013
 Neptune -46702-02-11 08:38 J -15336441.34 -15336441.14 -15336440.91 0.0089 0.0049
 Neptune -46701-02-13 20:23 J -15336073.89 -15336073.65 -15336073.39 0.0089 0.0019
 Neptune -46700-02-15 08:09 J -15335706.41 -15335706.16 -15335705.90 0.0089 0.0011
 Neptune -46699-02-17 19:26 J -15335338.90 -15335338.69 -15335338.44 0.0089 0.0041
 Neptune -46698-02-20 07:26 J -15334971.34 -15334971.19 -15334971.03 0.0089 0.0070
 Jupiter -46698-09-10 01:40 J -15334769.66 -15334769.43 -15334769.20 0.0540 0.0043
 Uranus -46691-03-18 22:04 J -15332387.77 -15332387.58 -15332387.35 0.0146 0.0083
 Uranus -46690-03-24 02:23 J -15332017.62 -15332017.40 -15332017.16 0.0146 0.0061
 Saturn -46689-02-28 08:52 J -15331676.27 -15331676.13 -15331675.99 0.0285 0.0233
 Saturn -46688-03-12 23:30 J -15331297.75 -15331297.52 -15331297.30 0.0283 0.0114
 Jupiter -46680-03-02 15:50 J -15328385.92 -15328385.84 -15328385.74 0.0488 0.0448
 Saturn -46674-09-04 20:52 J -15326008.82 -15326008.63 -15326008.42 0.0274 0.0154
 Saturn -46673-09-16 12:14 J -15325631.18 -15325630.99 -15325630.78 0.0276 0.0158
 Jupiter -46668-03-06 21:06 J -15323998.85 -15323998.62 -15323998.38 0.0487 0.0042
 Saturn -46659-03-07 03:21 J -15320711.60 -15320711.36 -15320711.11 0.0284 0.0046
 Jupiter -46656-03-11 02:52 J -15319611.52 -15319611.38 -15319611.22 0.0487 0.0370
 Uranus -46649-09-19 16:47 J -15316861.97 -15316861.80 -15316861.60 0.0132 0.0090
 Uranus -46648-09-23 21:50 J -15316492.84 -15316492.59 -15316492.33 0.0132 0.0016
 Uranus -46647-09-28 02:23 J -15316123.49 -15316123.40 -15316123.29 0.0133 0.0121
 Pluto -46645-08-28 15:35 J -15315423.01 -15315422.85 -15315422.65 0.0080 0.0058
 Saturn -46644-09-11 11:02 J -15315044.29 -15315044.04 -15315043.80 0.0276 0.0020
 Saturn -46630-03-01 20:52 J -15310124.80 -15310124.63 -15310124.44 0.0285 0.0195
 Saturn -46629-03-14 11:30 J -15309746.22 -15309746.02 -15309745.81 0.0283 0.0152
 Mars -46622-08-04 17:02 J -15307046.86 -15307046.79 -15307046.73 0.1601 0.1502
 Neptune -46621-08-12 19:40 J -15306672.71 -15306672.68 -15306672.61 0.0088 0.0087

Neptune -46620-08-15 07:26 J -15306305.36 -15306305.19 -15306304.97 0.0088 0.0058
 Neptune -46619-08-17 19:26 J -15305937.93 -15305937.69 -15305937.44 0.0088 0.0028
 Neptune -46618-08-20 07:11 J -15305570.46 -15305570.20 -15305569.94 0.0088 0.0002
 Neptune -46617-08-21 18:42 J -15305202.96 -15305202.72 -15305202.47 0.0088 0.0032
 Neptune -46616-08-24 05:59 J -15304835.41 -15304835.25 -15304835.04 0.0088 0.0061
 Saturn -46615-09-06 05:59 J -15304457.46 -15304457.25 -15304457.02 0.0274 0.0120
 Jupiter -46615-09-09 01:26 J -15304454.67 -15304454.44 -15304454.20 0.0541 0.0054
 Saturn -46614-09-18 21:06 J -15304079.78 -15304079.62 -15304079.43 0.0276 0.0192
 Uranus -46607-03-19 05:16 J -15301706.48 -15301706.28 -15301706.05 0.0146 0.0081
 Uranus -46606-03-24 09:21 J -15301336.33 -15301336.11 -15301335.87 0.0146 0.0063
 Jupiter -46603-09-14 09:35 J -15300066.12 -15300066.10 -15300066.07 0.0541 0.0538
 Saturn -46600-03-08 14:09 J -15299160.16 -15299159.91 -15299159.66 0.0284 0.0009
 Saturn -46586-09-01 02:38 J -15293870.45 -15293870.39 -15293870.29 0.0274 0.0258
 Jupiter -46585-03-06 02:23 J -15293683.63 -15293683.40 -15293683.17 0.0488 0.0104
 Saturn -46585-09-12 17:45 J -15293493.00 -15293492.76 -15293492.52 0.0276 0.0052
 Jupiter -46573-03-10 08:09 J -15289296.34 -15289296.16 -15289295.97 0.0487 0.0309
 Saturn -46571-03-03 06:28 J -15288573.43 -15288573.23 -15288573.02 0.0285 0.0160
 Saturn -46570-03-16 21:06 J -15288194.79 -15288194.62 -15288194.43 0.0283 0.0188
 Uranus -46565-09-20 01:11 J -15286180.62 -15286180.45 -15286180.24 0.0132 0.0086
 Uranus -46564-09-24 06:28 J -15285811.48 -15285811.23 -15285810.98 0.0132 0.0019
 Uranus -46563-09-28 10:33 J -15285442.13 -15285442.06 -15285441.95 0.0133 0.0124
 Saturn -46556-09-07 13:11 J -15282906.18 -15282905.95 -15282905.71 0.0274 0.0088
 Saturn -46555-09-20 04:04 J -15282528.46 -15282528.33 -15282528.18 0.0276 0.0225
 Mars -46543-08-06 18:57 J -15278189.90 -15278189.71 -15278189.52 0.1602 0.0342
 Saturn -46541-03-09 22:04 J -15277608.82 -15277608.58 -15277608.33 0.0284 0.0026
 Neptune -46538-02-10 20:23 J -15276540.82 -15276540.65 -15276540.46 0.0089 0.0062
 Neptune -46537-02-13 08:09 J -15276173.40 -15276173.16 -15276172.92 0.0089 0.0032
 Neptune -46536-02-14 19:54 J -15275805.92 -15275805.67 -15275805.41 0.0089 0.0003
 Neptune -46535-02-17 07:26 J -15275438.42 -15275438.19 -15275437.94 0.0089 0.0028
 Neptune -46534-02-19 18:57 J -15275070.89 -15275070.71 -15275070.50 0.0089 0.0058

Neptune -46533-02-22 06:14 J -15274703.25 -15274703.24 -15274703.17 0.0089 0.0088
 Jupiter -46532-09-08 02:52 J -15274139.60 -15274139.38 -15274139.15 0.0540 0.0142
 Saturn -46527-09-02 08:09 J -15272319.29 -15272319.16 -15272319.02 0.0274 0.0228
 Saturn -46526-09-14 22:47 J -15271941.78 -15271941.55 -15271941.31 0.0276 0.0083
 Uranus -46523-03-19 12:57 J -15271025.17 -15271024.96 -15271024.74 0.0146 0.0078
 Uranus -46522-03-24 16:47 J -15270655.02 -15270654.80 -15270654.56 0.0146 0.0065
 Jupiter -46520-09-13 07:26 J -15269751.32 -15269751.19 -15269751.05 0.0541 0.0433
 Saturn -46512-03-04 12:42 J -15267022.19 -15267021.97 -15267021.75 0.0285 0.0127
 Saturn -46511-03-18 03:21 J -15266643.50 -15266643.36 -15266643.19 0.0283 0.0221
 Jupiter -46502-03-06 11:16 J -15263368.25 -15263368.03 -15263367.81 0.0487 0.0152
 Saturn -46497-09-08 18:57 J -15261354.95 -15261354.71 -15261354.47 0.0274 0.0058
 Saturn -46496-09-21 09:21 J -15260977.19 -15260977.11 -15260977.00 0.0276 0.0256
 Jupiter -46490-03-10 16:33 J -15258981.00 -15258980.81 -15258980.60 0.0487 0.0257
 Pluto -46486-02-25 23:16 J -15257532.77 -15257532.53 -15257532.29 0.0065 0.0023
 Pluto -46485-02-27 11:30 J -15257166.14 -15257166.02 -15257165.83 0.0065 0.0052
 Saturn -46482-03-12 03:06 J -15256057.61 -15256057.37 -15256057.13 0.0284 0.0057
 Uranus -46481-09-20 09:06 J -15255499.30 -15255499.12 -15255498.91 0.0132 0.0084
 Uranus -46480-09-24 14:09 J -15255130.16 -15255129.91 -15255129.66 0.0132 0.0021
 Uranus -46479-09-28 18:14 J -15254760.79 -15254760.74 -15254760.65 0.0133 0.0127
 Mars -46472-02-01 10:18 J -15252443.22 -15252443.07 -15252442.91 0.1932 0.1193
 Saturn -46468-09-03 11:45 J -15250768.17 -15250768.01 -15250767.84 0.0274 0.0200
 Saturn -46467-09-16 01:54 J -15250390.64 -15250390.42 -15250390.19 0.0276 0.0111
 Mars -46464-08-08 19:54 J -15249332.83 -15249332.67 -15249332.50 0.1604 0.0797
 Neptune -46456-08-14 19:40 J -15246404.84 -15246404.68 -15246404.53 0.0088 0.0070
 Neptune -46455-08-17 06:57 J -15246037.42 -15246037.21 -15246036.96 0.0088 0.0041
 Neptune -46454-08-19 18:42 J -15245669.97 -15245669.72 -15245669.46 0.0088 0.0011
 Saturn -46453-03-05 15:50 J -15245471.07 -15245470.84 -15245470.61 0.0285 0.0097
 Neptune -46453-08-21 05:59 J -15245302.49 -15245302.25 -15245301.98 0.0088 0.0020
 Saturn -46452-03-19 06:57 J -15245092.32 -15245092.21 -15245092.09 0.0283 0.0250
 Neptune -46452-08-23 17:45 J -15244934.97 -15244934.76 -15244934.54 0.0088 0.0049

Neptune -46451-08-26 05:02 J -15244567.39 -15244567.29 -15244567.15 0.0088 0.0079
 Jupiter -46449-09-06 23:45 J -15243824.71 -15243824.51 -15243824.30 0.0540 0.0254
 Uranus -46439-03-19 21:21 J -15240343.82 -15240343.61 -15240343.39 0.0146 0.0075
 Uranus -46438-03-25 00:57 J -15239973.67 -15239973.46 -15239973.22 0.0146 0.0069
 Saturn -46438-09-10 22:47 J -15239803.79 -15239803.55 -15239803.31 0.0274 0.0028
 Jupiter -46437-09-12 08:23 J -15239436.33 -15239436.15 -15239435.97 0.0541 0.0341
 Saturn -46424-02-27 13:40 J -15234885.01 -15234884.93 -15234884.83 0.0286 0.0265
 Saturn -46423-03-13 05:30 J -15234506.50 -15234506.27 -15234506.03 0.0284 0.0086
 Jupiter -46419-03-05 19:54 J -15233052.88 -15233052.67 -15233052.45 0.0488 0.0204
 Saturn -46409-09-04 13:54 J -15229217.11 -15229216.92 -15229216.73 0.0274 0.0172
 Saturn -46408-09-17 03:50 J -15228839.54 -15228839.34 -15228839.12 0.0276 0.0139
 Jupiter -46407-03-10 01:26 J -15228665.65 -15228665.44 -15228665.22 0.0487 0.0208
 Pluto -46398-09-01 16:18 J -15225203.00 -15225202.82 -15225202.62 0.0080 0.0055
 Uranus -46397-09-20 17:45 J -15224817.96 -15224817.76 -15224817.55 0.0132 0.0080
 Uranus -46396-09-24 22:18 J -15224448.80 -15224448.57 -15224448.31 0.0133 0.0026
 Uranus -46395-09-29 02:52 J -15224079.42 -15224079.38 -15224079.32 0.0133 0.0130
 Saturn -46394-03-07 16:04 J -15223920.06 -15223919.83 -15223919.59 0.0285 0.0070
 Saturn -46393-03-20 07:26 J -15223541.23 -15223541.19 -15223541.14 0.0283 0.0277
 Saturn -46379-09-12 01:26 J -15218252.68 -15218252.44 -15218252.19 0.0274 0.0002
 Neptune -46374-02-10 06:57 J -15216640.32 -15216640.21 -15216640.06 0.0089 0.0076
 Neptune -46373-02-12 18:57 J -15216272.92 -15216272.71 -15216272.48 0.0089 0.0046
 Neptune -46372-02-14 06:42 J -15215905.46 -15215905.22 -15215904.96 0.0089 0.0016
 Neptune -46371-02-16 18:28 J -15215537.98 -15215537.73 -15215537.47 0.0089 0.0015
 Neptune -46370-02-19 05:59 J -15215170.45 -15215170.25 -15215170.01 0.0089 0.0045
 Neptune -46369-02-21 17:45 J -15214802.88 -15214802.76 -15214802.61 0.0089 0.0075
 Jupiter -46366-09-07 07:40 J -15213509.36 -15213509.18 -15213508.99 0.0540 0.0316
 Saturn -46365-02-29 14:09 J -15213334.04 -15213333.91 -15213333.77 0.0286 0.0238
 Saturn -46364-03-14 06:14 J -15212955.46 -15212955.24 -15212955.01 0.0284 0.0113
 Uranus -46355-03-20 05:59 J -15209662.46 -15209662.25 -15209662.01 0.0146 0.0070
 Uranus -46354-03-25 10:18 J -15209292.29 -15209292.07 -15209291.85 0.0146 0.0073

Jupiter -46354-09-12 15:35 J -15209121.04 -15209120.85 -15209120.65 0.0541 0.0278
 Saturn -46350-09-06 14:52 J -15207666.08 -15207665.88 -15207665.66 0.0274 0.0145
 Saturn -46349-09-18 04:47 J -15207288.49 -15207288.30 -15207288.10 0.0276 0.0167
 Mars -46338-08-05 23:45 J -15203314.63 -15203314.51 -15203314.38 0.1600 0.1181
 Jupiter -46336-03-05 06:42 J -15202737.42 -15202737.22 -15202737.02 0.0488 0.0246
 Saturn -46335-03-08 15:06 J -15202369.11 -15202368.87 -15202368.63 0.0285 0.0044
 Jupiter -46324-03-09 14:38 J -15198350.11 -15198349.89 -15198349.67 0.0487 0.0175
 Saturn -46320-09-13 03:21 J -15196701.60 -15196701.36 -15196701.12 0.0274 0.0029
 Uranus -46313-09-21 01:26 J -15194136.63 -15194136.44 -15194136.22 0.0132 0.0077
 Uranus -46312-09-25 06:14 J -15193767.48 -15193767.24 -15193766.98 0.0132 0.0028
 Uranus -46311-09-29 10:47 J -15193398.05 -15193398.05 -15193398.04 0.0133 0.0132
 Saturn -46306-03-02 13:11 J -15191783.10 -15191782.95 -15191782.78 0.0286 0.0212
 Saturn -46305-03-15 05:16 J -15191404.48 -15191404.28 -15191404.06 0.0284 0.0140
 Neptune -46292-08-14 06:28 J -15186504.28 -15186504.23 -15186504.12 0.0088 0.0084
 Neptune -46291-08-16 18:28 J -15186136.92 -15186136.73 -15186136.51 0.0088 0.0054
 Saturn -46291-09-07 16:18 J -15186115.04 -15186114.82 -15186114.59 0.0274 0.0117
 Neptune -46290-08-19 06:14 J -15185769.48 -15185769.24 -15185768.98 0.0088 0.0024
 Saturn -46290-09-20 05:45 J -15185737.42 -15185737.26 -15185737.08 0.0276 0.0195
 Neptune -46289-08-20 17:59 J -15185402.01 -15185401.75 -15185401.49 0.0088 0.0006
 Neptune -46288-08-23 05:16 J -15185034.50 -15185034.28 -15185034.03 0.0088 0.0037
 Neptune -46287-08-25 16:33 J -15184666.96 -15184666.81 -15184666.62 0.0088 0.0067
 Jupiter -46283-09-06 12:28 J -15183194.13 -15183193.98 -15183193.82 0.0540 0.0392
 Saturn -46276-03-09 12:57 J -15180818.20 -15180817.96 -15180817.71 0.0285 0.0019
 Uranus -46271-03-20 15:21 J -15178981.08 -15178980.86 -15178980.62 0.0146 0.0066
 Jupiter -46271-09-11 13:11 J -15178806.17 -15178805.95 -15178805.72 0.0541 0.0168
 Uranus -46270-03-25 19:11 J -15178610.90 -15178610.70 -15178610.47 0.0146 0.0078
 Saturn -46262-09-02 16:18 J -15175527.90 -15175527.82 -15175527.71 0.0273 0.0251
 Saturn -46261-09-14 04:47 J -15175150.53 -15175150.30 -15175150.05 0.0274 0.0059
 Mars -46259-08-08 01:54 J -15174457.61 -15174457.42 -15174457.23 0.1601 0.0046
 Jupiter -46253-03-04 18:28 J -15172421.92 -15172421.73 -15172421.54 0.0488 0.0286

Saturn -46247-03-03 13:11 J -15170232.14 -15170231.95 -15170231.76 0.0286 0.0185
 Saturn -46246-03-17 04:47 J -15169853.49 -15169853.30 -15169853.09 0.0284 0.0167
 Jupiter -46241-03-09 00:57 J -15168034.69 -15168034.46 -15168034.24 0.0487 0.0129
 Pluto -46240-02-27 01:54 J -15167679.65 -15167679.42 -15167679.19 0.0065 0.0029
 Pluto -46239-02-28 14:52 J -15167313.06 -15167312.88 -15167312.69 0.0065 0.0046
 Saturn -46232-09-08 17:45 J -15164563.99 -15164563.76 -15164563.52 0.0274 0.0089
 Saturn -46231-09-21 07:11 J -15164186.33 -15164186.20 -15164186.05 0.0276 0.0224
 Uranus -46229-09-21 09:50 J -15163455.28 -15163455.09 -15163454.87 0.0132 0.0074
 Uranus -46228-09-25 14:52 J -15163086.13 -15163085.88 -15163085.63 0.0132 0.0031
 Saturn -46217-03-10 11:45 J -15159267.26 -15159267.01 -15159266.77 0.0285 0.0009
 Neptune -46209-02-12 05:59 J -15156372.42 -15156372.25 -15156372.04 0.0089 0.0060
 Neptune -46208-02-13 17:59 J -15156004.99 -15156004.75 -15156004.50 0.0089 0.0029
 Neptune -46207-02-16 05:45 J -15155637.52 -15155637.26 -15155637.00 0.0089 0.0001
 Neptune -46206-02-18 17:02 J -15155270.01 -15155269.79 -15155269.53 0.0089 0.0032
 Neptune -46205-02-21 05:02 J -15154902.46 -15154902.29 -15154902.09 0.0089 0.0062
 Saturn -46203-09-03 18:57 J -15153976.85 -15153976.71 -15153976.56 0.0273 0.0222
 Saturn -46202-09-16 07:26 J -15153599.41 -15153599.19 -15153598.95 0.0275 0.0089
 Jupiter -46200-09-05 10:47 J -15152879.12 -15152879.05 -15152878.95 0.0540 0.0500
 Saturn -46188-03-04 13:40 J -15148681.13 -15148680.93 -15148680.72 0.0286 0.0157
 Jupiter -46188-09-10 20:52 J -15148490.86 -15148490.63 -15148490.40 0.0541 0.0103
 Saturn -46187-03-18 05:02 J -15148302.46 -15148302.29 -15148302.10 0.0284 0.0196
 Uranus -46187-03-20 23:45 J -15148299.73 -15148299.51 -15148299.27 0.0146 0.0062
 Uranus -46186-03-26 03:35 J -15147929.54 -15147929.35 -15147929.12 0.0146 0.0082
 Mars -46180-08-10 03:06 J -15145600.51 -15145600.37 -15145600.24 0.1603 0.1119
 Saturn -46173-09-09 20:09 J -15143012.90 -15143012.66 -15143012.42 0.0274 0.0060
 Saturn -46172-09-22 09:35 J -15142635.18 -15142635.10 -15142635.00 0.0276 0.0254
 Jupiter -46170-03-05 03:35 J -15142106.51 -15142106.35 -15142106.17 0.0488 0.0335
 Jupiter -46158-03-09 11:30 J -15137719.26 -15137719.02 -15137718.79 0.0487 0.0086
 Saturn -46158-03-12 12:14 J -15137716.24 -15137715.99 -15137715.75 0.0285 0.0037
 Pluto -46152-09-02 17:45 J -15135349.95 -15135349.76 -15135349.53 0.0079 0.0047

Uranus -46145-09-21 17:59 J -15132773.95 -15132773.75 -15132773.53 0.0132 0.0072
 Saturn -46144-09-04 22:18 J -15132425.74 -15132425.57 -15132425.40 0.0273 0.0193
 Uranus -46144-09-25 22:47 J -15132404.79 -15132404.55 -15132404.30 0.0132 0.0034
 Saturn -46143-09-17 11:16 J -15132048.25 -15132048.03 -15132047.81 0.0275 0.0119
 Saturn -46129-03-05 16:18 J -15127130.03 -15127129.82 -15127129.59 0.0285 0.0127
 Saturn -46128-03-19 07:40 J -15126751.33 -15126751.18 -15126751.03 0.0284 0.0226
 Neptune -46127-08-16 05:02 J -15126236.43 -15126236.29 -15126236.09 0.0088 0.0068
 Neptune -46126-08-18 17:16 J -15125869.01 -15125868.78 -15125868.54 0.0088 0.0037
 Neptune -46125-08-20 05:02 J -15125501.55 -15125501.29 -15125501.03 0.0088 0.0007
 Neptune -46124-08-22 16:18 J -15125134.06 -15125133.82 -15125133.56 0.0088 0.0024
 Neptune -46123-08-25 03:50 J -15124766.53 -15124766.34 -15124766.12 0.0088 0.0054
 Neptune -46122-08-27 15:06 J -15124398.93 -15124398.87 -15124398.77 0.0088 0.0084
 Saturn -46114-09-12 00:28 J -15121461.73 -15121461.48 -15121461.24 0.0274 0.0028
 Mars -46109-02-04 22:04 J -15119854.78 -15119854.58 -15119854.39 0.1932 0.0496
 Jupiter -46105-09-10 00:57 J -15118175.69 -15118175.46 -15118175.23 0.0540 0.0023
 Uranus -46103-03-21 07:54 J -15117618.39 -15117618.17 -15117617.92 0.0146 0.0059
 Uranus -46102-03-26 11:59 J -15117248.19 -15117248.00 -15117247.78 0.0146 0.0085
 Saturn -46099-03-13 14:23 J -15116165.14 -15116164.90 -15116164.66 0.0284 0.0067
 Jupiter -46087-03-04 14:23 J -15111791.03 -15111790.90 -15111790.74 0.0489 0.0380
 Saturn -46085-09-06 03:06 J -15110874.56 -15110874.37 -15110874.17 0.0274 0.0162
 Saturn -46084-09-18 16:18 J -15110497.01 -15110496.82 -15110496.61 0.0275 0.0152
 Jupiter -46075-03-08 20:09 J -15107403.90 -15107403.66 -15107403.43 0.0488 0.0036
 Saturn -46070-03-07 21:50 J -15105578.81 -15105578.59 -15105578.35 0.0285 0.0093
 Saturn -46069-03-20 12:42 J -15105200.05 -15105199.97 -15105199.86 0.0284 0.0260
 Jupiter -46063-03-13 02:09 J -15103016.49 -15103016.41 -15103016.31 0.0487 0.0451
 Uranus -46061-09-22 03:06 J -15102092.58 -15102092.37 -15102092.15 0.0132 0.0068
 Uranus -46060-09-26 07:40 J -15101723.42 -15101723.18 -15101722.93 0.0132 0.0037
 Saturn -46055-09-13 06:14 J -15099910.48 -15099910.24 -15099909.99 0.0274 0.0007
 Mars -46054-08-07 06:42 J -15099582.38 -15099582.22 -15099582.06 0.1599 0.0862
 Neptune -46045-02-11 16:33 J -15096471.93 -15096471.81 -15096471.64 0.0089 0.0074

Neptune -46044-02-13 04:33 J -15096104.53 -15096104.31 -15096104.08 0.0089 0.0043

Neptune -46043-02-15 16:04 J -15095737.08 -15095736.83 -15095736.57 0.0089 0.0013

Neptune -46042-02-18 03:50 J -15095369.59 -15095369.34 -15095369.08 0.0089 0.0018

Neptune -46041-02-20 15:06 J -15095002.06 -15095001.87 -15095001.63 0.0089 0.0049

Saturn -46041-03-01 02:52 J -15094992.47 -15094992.38 -15094992.26 0.0286 0.0256

Neptune -46040-02-22 03:06 J -15094634.47 -15094634.37 -15094634.24 0.0089 0.0079

Saturn -46040-03-14 19:26 J -15094613.91 -15094613.69 -15094613.45 0.0284 0.0102

Saturn -46026-09-08 09:35 J -15089323.31 -15089323.10 -15089322.88 0.0274 0.0129

Saturn -46025-09-19 23:45 J -15088945.69 -15088945.51 -15088945.33 0.0276 0.0187

Jupiter -46022-09-09 19:26 J -15087860.92 -15087860.69 -15087860.46 0.0540 0.0102

Uranus -46019-03-21 15:50 J -15086937.07 -15086936.84 -15086936.60 0.0146 0.0056

Uranus -46018-03-26 19:40 J -15086566.87 -15086566.68 -15086566.46 0.0146 0.0088

Saturn -46011-03-09 06:14 J -15084027.48 -15084027.24 -15084027.00 0.0285 0.0057

Jupiter -46010-09-15 03:35 J -15083472.44 -15083472.35 -15083472.25 0.0541 0.0495

Jupiter -46004-03-03 21:06 J -15081475.71 -15081475.62 -15081475.51 0.0489 0.0439

46TH MILLENNIUM BCE

This is a list of transits of Earth in the 46th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Saturn -45996-09-14 14:09 J -15078359.15 -15078358.91 -15078358.66 0.0275 0.0039

Pluto -45994-03-01 03:21 J -15077826.55 -15077826.36 -15077826.11 0.0065 0.0036

Pluto -45993-03-01 16:47 J -15077459.99 -15077459.80 -15077459.58 0.0065 0.0040

Jupiter -45992-03-08 02:23 J -15077088.64 -15077088.40 -15077088.17 0.0488 0.0027

Saturn -45982-03-03 11:30 J -15073441.17 -15073441.02 -15073440.86 0.0286 0.0220
 Saturn -45981-03-16 03:35 J -15073062.56 -15073062.35 -15073062.13 0.0284 0.0138
 Jupiter -45980-03-12 08:52 J -15072701.26 -15072701.13 -15072700.99 0.0487 0.0391
 Uranus -45977-09-22 11:16 J -15071411.23 -15071411.03 -15071410.79 0.0132 0.0065
 Uranus -45976-09-26 16:18 J -15071042.06 -15071041.82 -15071041.58 0.0132 0.0041
 Mars -45975-08-09 08:09 J -15070725.34 -15070725.16 -15070724.97 0.1600 0.0286
 Saturn -45967-09-09 17:30 J -15067772.00 -15067771.77 -15067771.54 0.0274 0.0095
 Saturn -45966-09-22 07:40 J -15067394.31 -15067394.18 -15067394.02 0.0276 0.0223
 Neptune -45963-08-15 15:35 J -15066335.92 -15066335.85 -15066335.72 0.0088 0.0082
 Neptune -45962-08-18 03:50 J -15065968.54 -15065968.34 -15065968.12 0.0088 0.0051
 Neptune -45961-08-19 15:35 J -15065601.09 -15065600.85 -15065600.58 0.0088 0.0021
 Neptune -45960-08-22 03:21 J -15065233.61 -15065233.36 -15065233.09 0.0088 0.0011
 Neptune -45959-08-24 14:52 J -15064866.10 -15064865.88 -15064865.64 0.0088 0.0041
 Neptune -45958-08-27 02:23 J -15064498.54 -15064498.40 -15064498.24 0.0088 0.0071
 Saturn -45952-03-10 17:30 J -15062476.02 -15062475.77 -15062475.53 0.0285 0.0018
 Jupiter -45939-09-08 22:18 J -15057545.78 -15057545.57 -15057545.35 0.0540 0.0186
 Saturn -45938-09-04 10:04 J -15057185.19 -15057185.08 -15057184.95 0.0273 0.0239
 Saturn -45937-09-15 23:45 J -15056807.75 -15056807.51 -15056807.27 0.0275 0.0076
 Uranus -45935-03-22 00:14 J -15056255.71 -15056255.49 -15056255.23 0.0146 0.0053
 Uranus -45934-03-27 04:33 J -15055885.49 -15055885.31 -15055885.10 0.0146 0.0092
 Jupiter -45927-09-14 04:47 J -15053157.45 -15053157.30 -15053157.14 0.0541 0.0403
 Saturn -45923-03-04 22:18 J -15051889.75 -15051889.57 -15051889.37 0.0286 0.0182
 Saturn -45922-03-18 14:23 J -15051511.09 -15051510.90 -15051510.71 0.0284 0.0176
 Jupiter -45909-03-07 08:09 J -15046773.39 -15046773.16 -15046772.93 0.0488 0.0089
 Saturn -45908-09-11 02:38 J -15046220.63 -15046220.39 -15046220.15 0.0275 0.0060
 Saturn -45907-09-23 17:16 J -15045842.85 -15045842.78 -15045842.68 0.0276 0.0260
 Pluto -45906-09-04 21:21 J -15045496.81 -15045496.61 -15045496.38 0.0079 0.0043
 Jupiter -45897-03-11 13:11 J -15042386.12 -15042385.95 -15042385.77 0.0487 0.0326
 Mars -45896-08-11 09:50 J -15041868.17 -15041868.09 -15041868.01 0.1601 0.1434
 Saturn -45893-03-12 06:28 J -15040924.48 -15040924.23 -15040923.99 0.0285 0.0024

Uranus -45893-09-22 21:06 J -15040729.84 -15040729.62 -15040729.38 0.0132 0.0059
 Uranus -45892-09-27 01:54 J -15040360.65 -15040360.42 -15040360.18 0.0132 0.0046
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 Neptune -45880-02-12 14:23 J -15036204.07 -15036203.90 -15036203.68 0.0089 0.0058
 Neptune -45879-02-15 02:23 J -15035836.64 -15035836.40 -15035836.15 0.0089 0.0027
 Saturn -45879-09-05 20:23 J -15035633.81 -15035633.65 -15035633.49 0.0273 0.0204
 Neptune -45878-02-17 13:54 J -15035469.17 -15035468.92 -15035468.66 0.0089 0.0004
 Saturn -45878-09-18 09:50 J -15035256.30 -15035256.09 -15035255.86 0.0275 0.0113
 Neptune -45877-02-20 01:11 J -15035101.67 -15035101.45 -15035101.20 0.0089 0.0035
 Neptune -45876-02-21 12:28 J -15034734.12 -15034733.98 -15034733.78 0.0089 0.0066
 Saturn -45864-03-06 11:02 J -15030338.24 -15030338.04 -15030337.82 0.0285 0.0141
 Saturn -45863-03-20 02:38 J -15029959.53 -15029959.39 -15029959.22 0.0284 0.0217
 Jupiter -45856-09-07 17:16 J -15027230.97 -15027230.78 -15027230.58 0.0539 0.0305
 Uranus -45851-03-22 09:50 J -15025574.32 -15025574.09 -15025573.84 0.0146 0.0047
 Uranus -45850-03-27 14:09 J -15025204.09 -15025203.91 -15025203.71 0.0146 0.0097
 Saturn -45849-09-12 12:14 J -15024669.23 -15024668.99 -15024668.75 0.0275 0.0025
 Jupiter -45844-09-12 21:21 J -15022842.81 -15022842.61 -15022842.40 0.0540 0.0269
 Saturn -45834-03-14 20:38 J -15019372.88 -15019372.64 -15019372.40 0.0284 0.0065
 Jupiter -45826-03-07 12:42 J -15016458.19 -15016457.97 -15016457.75 0.0488 0.0156
 Mars -45825-02-03 16:33 J -15016124.95 -15016124.81 -15016124.67 0.1934 0.1354
 Saturn -45820-09-07 06:28 J -15014082.41 -15014082.23 -15014082.02 0.0274 0.0169
 Saturn -45819-09-19 20:38 J -15013704.84 -15013704.64 -15013704.43 0.0275 0.0150
 Jupiter -45814-03-11 17:45 J -15012070.96 -15012070.76 -15012070.56 0.0487 0.0256
 Uranus -45809-09-23 06:14 J -15010048.46 -15010048.24 -15010048.00 0.0132 0.0055
 Uranus -45808-09-27 11:02 J -15009679.26 -15009679.04 -15009678.79 0.0132 0.0050
 Saturn -45805-03-08 00:14 J -15008786.71 -15008786.49 -15008786.25 0.0285 0.0101
 Saturn -45804-03-21 15:35 J -15008407.94 -15008407.85 -15008407.74 0.0283 0.0257
 Neptune -45798-08-17 12:57 J -15006068.11 -15006067.96 -15006067.76 0.0088 0.0066
 Neptune -45797-08-19 01:11 J -15005700.68 -15005700.45 -15005700.20 0.0088 0.0035
 Neptune -45796-08-21 13:11 J -15005333.21 -15005332.95 -15005332.69 0.0088 0.0004

Neptune -45795-08-24 00:42 J -15004965.71 -15004965.47 -15004965.21 0.0088 0.0027
 Neptune -45794-08-26 12:14 J -15004598.17 -15004597.99 -15004597.77 0.0088 0.0058
 Neptune -45793-08-27 23:45 J -15004230.53 -15004230.51 -15004230.46 0.0088 0.0088
 Saturn -45790-09-14 21:50 J -15003117.84 -15003117.59 -15003117.35 0.0275 0.0012
 Saturn -45776-03-02 18:28 J -14998199.83 -14998199.73 -14998199.61 0.0286 0.0253
 Saturn -45775-03-16 10:33 J -14997821.29 -14997821.06 -14997820.83 0.0284 0.0107
 Jupiter -45773-09-06 12:42 J -14996916.11 -14996915.97 -14996915.82 0.0539 0.0424
 Mars -45770-08-08 13:54 J -14995850.10 -14995849.92 -14995849.74 0.1598 0.0539
 Uranus -45767-03-22 20:38 J -14994892.88 -14994892.64 -14994892.39 0.0146 0.0040
 Uranus -45766-03-28 00:42 J -14994522.63 -14994522.47 -14994522.27 0.0146 0.0104
 Saturn -45761-09-08 16:47 J -14992531.01 -14992530.80 -14992530.58 0.0274 0.0132
 Jupiter -45761-09-11 20:52 J -14992527.85 -14992527.63 -14992527.41 0.0540 0.0171
 Saturn -45760-09-21 06:42 J -14992153.39 -14992153.22 -14992153.04 0.0275 0.0187
 Pluto -45748-03-02 09:50 J -14987973.29 -14987973.09 -14987972.84 0.0065 0.0033
 Pluto -45747-03-03 23:02 J -14987606.72 -14987606.54 -14987606.32 0.0065 0.0043
 Saturn -45746-03-10 13:40 J -14987235.17 -14987234.93 -14987234.69 0.0285 0.0059
 Jupiter -45743-03-06 16:33 J -14986143.02 -14986142.81 -14986142.60 0.0489 0.0229
 Saturn -45732-09-03 15:50 J -14981943.85 -14981943.84 -14981943.79 0.0274 0.0272
 Jupiter -45731-03-10 21:35 J -14981755.81 -14981755.60 -14981755.38 0.0488 0.0189
 Saturn -45731-09-16 05:59 J -14981566.48 -14981566.25 -14981566.00 0.0275 0.0047
 Uranus -45725-09-23 16:47 J -14979367.03 -14979366.80 -14979366.56 0.0132 0.0049
 Uranus -45724-09-27 21:21 J -14978997.83 -14978997.61 -14978997.37 0.0132 0.0055
 Saturn -45717-03-04 06:57 J -14976648.36 -14976648.21 -14976648.04 0.0286 0.0213
 Neptune -45716-02-12 00:14 J -14976303.61 -14976303.49 -14976303.32 0.0089 0.0073
 Saturn -45716-03-17 22:47 J -14976269.75 -14976269.55 -14976269.33 0.0284 0.0148
 Neptune -45715-02-14 11:59 J -14975936.21 -14975936.00 -14975935.76 0.0089 0.0042
 Neptune -45714-02-16 23:45 J -14975568.76 -14975568.51 -14975568.25 0.0089 0.0011
 Neptune -45713-02-19 11:16 J -14975201.28 -14975201.03 -14975200.78 0.0089 0.0020
 Neptune -45712-02-20 22:47 J -14974833.75 -14974833.55 -14974833.33 0.0089 0.0051
 Neptune -45711-02-23 10:04 J -14974466.16 -14974466.08 -14974465.96 0.0089 0.0082

Saturn -45702-09-11 02:09 J -14970979.63 -14970979.41 -14970979.17 0.0274 0.0097
 Saturn -45701-09-22 16:04 J -14970601.97 -14970601.83 -14970601.68 0.0275 0.0223
 Mars -45691-08-10 15:35 J -14966993.03 -14966992.85 -14966992.68 0.1599 0.0613
 Jupiter -45690-09-06 15:21 J -14966600.93 -14966600.86 -14966600.79 0.0539 0.0512
 Saturn -45687-03-12 00:57 J -14965683.71 -14965683.46 -14965683.22 0.0285 0.0020
 Uranus -45683-03-23 06:57 J -14964211.45 -14964211.21 -14964210.95 0.0146 0.0035
 Uranus -45682-03-28 11:16 J -14963841.19 -14963841.03 -14963840.85 0.0146 0.0110
 Jupiter -45678-09-11 20:09 J -14962212.89 -14962212.66 -14962212.43 0.0539 0.0071
 Saturn -45673-09-04 23:02 J -14960392.65 -14960392.54 -14960392.41 0.0274 0.0239
 Saturn -45672-09-17 12:57 J -14960015.19 -14960014.96 -14960014.72 0.0275 0.0079
 Jupiter -45660-03-05 21:06 J -14955827.81 -14955827.62 -14955827.43 0.0489 0.0294
 Pluto -45660-09-06 06:28 J -14955643.42 -14955643.23 -14955643.04 0.0079 0.0054
 Saturn -45658-03-06 17:30 J -14955096.96 -14955096.77 -14955096.57 0.0286 0.0175
 Saturn -45657-03-19 09:35 J -14954718.28 -14954718.10 -14954717.91 0.0284 0.0186
 Jupiter -45648-03-10 04:47 J -14951440.53 -14951440.30 -14951440.07 0.0488 0.0132
 Saturn -45643-09-12 10:04 J -14949428.32 -14949428.08 -14949427.84 0.0274 0.0063
 Saturn -45642-09-24 23:45 J -14949050.59 -14949050.51 -14949050.42 0.0275 0.0257
 Uranus -45641-09-24 02:23 J -14948685.63 -14948685.40 -14948685.15 0.0132 0.0045
 Uranus -45640-09-28 06:57 J -14948316.42 -14948316.21 -14948315.97 0.0132 0.0060
 Neptune -45634-08-16 22:18 J -14946167.66 -14946167.57 -14946167.44 0.0088 0.0081
 Neptune -45633-08-18 10:18 J -14945800.27 -14945800.07 -14945799.85 0.0088 0.0050
 Neptune -45632-08-20 22:18 J -14945432.82 -14945432.57 -14945432.32 0.0088 0.0019
 Neptune -45631-08-23 09:50 J -14945065.33 -14945065.09 -14945064.82 0.0088 0.0013
 Neptune -45630-08-25 21:50 J -14944697.81 -14944697.59 -14944697.36 0.0088 0.0043
 Neptune -45629-08-27 09:06 J -14944330.24 -14944330.12 -14944329.96 0.0088 0.0074
 Saturn -45628-03-13 09:50 J -14944132.33 -14944132.09 -14944131.84 0.0285 0.0017
 Saturn -45614-09-07 05:02 J -14938841.44 -14938841.29 -14938841.12 0.0274 0.0207
 Saturn -45613-09-18 18:42 J -14938463.94 -14938463.72 -14938463.49 0.0275 0.0112
 Saturn -45599-03-08 00:28 J -14933545.69 -14933545.48 -14933545.26 0.0285 0.0140
 Uranus -45599-03-23 17:16 J -14933530.02 -14933529.78 -14933529.52 0.0146 0.0029

Saturn -45598-03-21 16:33 J -14933166.95 -14933166.81 -14933166.65 0.0284 0.0222
 Uranus -45598-03-28 21:35 J -14933159.74 -14933159.60 -14933159.43 0.0146 0.0116
 Jupiter -45595-09-10 15:35 J -14931898.08 -14931897.85 -14931897.62 0.0540 0.0050
 Saturn -45584-09-13 16:04 J -14927877.07 -14927876.83 -14927876.58 0.0274 0.0030
 Jupiter -45577-03-05 05:16 J -14925512.43 -14925512.28 -14925512.11 0.0489 0.0349
 Saturn -45569-03-14 16:33 J -14922581.06 -14922580.81 -14922580.57 0.0285 0.0052
 Jupiter -45565-03-09 11:45 J -14921125.24 -14921125.01 -14921124.78 0.0488 0.0072
 Mars -45565-08-06 19:54 J -14920974.77 -14920974.67 -14920974.57 0.1597 0.1346
 Uranus -45557-09-24 13:26 J -14918004.18 -14918003.94 -14918003.69 0.0132 0.0039
 Uranus -45556-09-28 17:59 J -14917634.97 -14917634.75 -14917634.53 0.0132 0.0066
 Saturn -45555-09-08 09:21 J -14917290.29 -14917290.11 -14917289.92 0.0274 0.0176
 Saturn -45554-09-20 22:33 J -14916912.76 -14916912.56 -14916912.34 0.0275 0.0143
 Neptune -45552-02-11 09:21 J -14916403.12 -14916403.11 -14916403.07 0.0089 0.0088
 Neptune -45551-02-13 20:52 J -14916035.81 -14916035.63 -14916035.42 0.0089 0.0057
 Neptune -45550-02-16 08:23 J -14915668.39 -14915668.15 -14915667.90 0.0089 0.0026
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 Neptune -45548-02-20 07:26 J -14914933.42 -14914933.19 -14914932.95 0.0089 0.0036
 Neptune -45547-02-22 19:11 J -14914565.87 -14914565.70 -14914565.53 0.0089 0.0067
 Saturn -45540-03-09 05:02 J -14911994.52 -14911994.29 -14911994.07 0.0285 0.0107
 Saturn -45539-03-22 20:52 J -14911615.72 -14911615.63 -14911615.51 0.0284 0.0255
 Saturn -45525-09-14 20:52 J -14906325.87 -14906325.63 -14906325.38 0.0274 0.0002
 Uranus -45515-03-24 03:06 J -14902848.62 -14902848.37 -14902848.11 0.0146 0.0024
 Uranus -45514-03-29 07:11 J -14902478.32 -14902478.20 -14902478.04 0.0146 0.0122
 Jupiter -45512-09-09 22:04 J -14901582.81 -14901582.58 -14901582.36 0.0540 0.0121
 Saturn -45511-03-03 03:06 J -14901408.41 -14901408.37 -14901408.32 0.0286 0.0280
 Saturn -45510-03-16 19:54 J -14901029.90 -14901029.67 -14901029.43 0.0285 0.0084
 Pluto -45502-03-04 15:21 J -14898120.07 -14898119.86 -14898119.63 0.0065 0.0033
 Pluto -45501-03-05 04:18 J -14897753.49 -14897753.32 -14897753.10 0.0065 0.0043
 Jupiter -45500-09-15 05:30 J -14897194.38 -14897194.27 -14897194.16 0.0540 0.0477
 Saturn -45496-09-09 12:14 J -14895739.19 -14895738.99 -14895738.78 0.0274 0.0147

Saturn -45495-09-22 01:11 J -14895361.63 -14895361.45 -14895361.25 0.0275 0.0173
 Jupiter -45494-03-05 12:57 J -14895197.09 -14895196.96 -14895196.83 0.0490 0.0405
 Mars -45486-08-09 21:50 J -14892117.78 -14892117.59 -14892117.41 0.1598 0.0198
 Jupiter -45482-03-09 20:38 J -14890809.88 -14890809.64 -14890809.41 0.0488 0.0024
 Saturn -45481-03-10 06:28 J -14890443.46 -14890443.23 -14890442.99 0.0285 0.0077
 Uranus -45473-09-24 23:59 J -14887322.75 -14887322.50 -14887322.26 0.0132 0.0033
 Uranus -45472-09-29 04:04 J -14886953.53 -14886953.33 -14886953.10 0.0132 0.0071
 Jupiter -45470-03-14 04:18 J -14886422.40 -14886422.32 -14886422.22 0.0487 0.0450
 Neptune -45469-08-17 18:14 J -14885899.89 -14885899.74 -14885899.55 0.0088 0.0066
 Neptune -45468-08-20 06:14 J -14885532.47 -14885532.24 -14885531.99 0.0088 0.0035
 Neptune -45467-08-22 18:14 J -14885165.00 -14885164.74 -14885164.48 0.0088 0.0003
 Neptune -45466-08-25 05:59 J -14884797.49 -14884797.25 -14884797.00 0.0088 0.0028
 Saturn -45466-09-16 23:59 J -14884774.74 -14884774.50 -14884774.25 0.0274 0.0033
 Neptune -45465-08-26 17:30 J -14884429.95 -14884429.77 -14884429.57 0.0088 0.0059
 Mars -45462-02-06 04:04 J -14883536.53 -14883536.33 -14883536.13 0.1934 0.0342
 Saturn -45452-03-04 04:33 J -14879857.41 -14879857.31 -14879857.18 0.0286 0.0251
 Saturn -45451-03-17 21:35 J -14879478.82 -14879478.60 -14879478.37 0.0285 0.0114
 Saturn -45437-09-10 14:38 J -14874188.11 -14874187.89 -14874187.67 0.0274 0.0117
 Saturn -45436-09-23 02:52 J -14873810.53 -14873810.38 -14873810.20 0.0275 0.0203
 Uranus -45431-03-24 12:42 J -14872167.22 -14872166.97 -14872166.71 0.0147 0.0018
 Uranus -45430-03-29 17:02 J -14871796.90 -14871796.79 -14871796.65 0.0146 0.0127
 Jupiter -45429-09-09 01:40 J -14871267.64 -14871267.43 -14871267.21 0.0539 0.0202
 Saturn -45422-03-12 05:59 J -14868892.49 -14868892.25 -14868892.01 0.0285 0.0049
 Jupiter -45417-09-14 02:23 J -14866879.57 -14866879.40 -14866879.22 0.0540 0.0364
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 Jupiter -45411-03-05 01:54 J -14864881.52 -14864881.42 -14864881.32 0.0490 0.0442
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 Mars -45407-08-11 23:16 J -14863260.68 -14863260.53 -14863260.37 0.1599 0.0952
 Saturn -45407-09-18 02:38 J -14863223.63 -14863223.39 -14863223.15 0.0274 0.0063

Jupiter -45399-03-09 08:09 J -14860494.39 -14860494.16 -14860493.93 0.0488 0.0018
 Saturn -45393-03-05 04:33 J -14858306.45 -14858306.31 -14858306.15 0.0286 0.0223
 Saturn -45392-03-18 21:35 J -14857927.81 -14857927.60 -14857927.38 0.0285 0.0143
 Uranus -45390-09-22 06:28 J -14857010.24 -14857010.23 -14857010.18 0.0132 0.0131
 Uranus -45389-09-25 11:16 J -14856641.27 -14856641.03 -14856640.78 0.0132 0.0027
 Uranus -45388-09-29 15:21 J -14856272.05 -14856271.86 -14856271.64 0.0132 0.0078
 Neptune -45387-02-13 05:30 J -14856135.41 -14856135.27 -14856135.13 0.0089 0.0073
 Jupiter -45387-03-13 14:52 J -14856107.01 -14856106.88 -14856106.75 0.0487 0.0403
 Neptune -45386-02-15 16:47 J -14855768.02 -14855767.80 -14855767.56 0.0089 0.0042
 Neptune -45385-02-18 04:18 J -14855400.56 -14855400.32 -14855400.05 0.0089 0.0011
 Neptune -45384-02-19 15:50 J -14855033.08 -14855032.84 -14855032.58 0.0089 0.0021
 Neptune -45383-02-22 03:21 J -14854665.56 -14854665.36 -14854665.15 0.0089 0.0052
 Neptune -45382-02-24 14:52 J -14854297.96 -14854297.88 -14854297.79 0.0089 0.0083
 Saturn -45378-09-12 16:04 J -14852637.06 -14852636.83 -14852636.60 0.0273 0.0088
 Saturn -45377-09-24 04:04 J -14852259.44 -14852259.33 -14852259.19 0.0275 0.0232
 Saturn -45363-03-13 04:47 J -14847341.55 -14847341.30 -14847341.06 0.0285 0.0022
 Saturn -45349-09-06 17:02 J -14842049.92 -14842049.79 -14842049.65 0.0273 0.0225
 Saturn -45348-09-19 04:47 J -14841672.53 -14841672.30 -14841672.06 0.0274 0.0093
 Uranus -45347-03-24 23:16 J -14841485.78 -14841485.53 -14841485.27 0.0147 0.0012
 Uranus -45346-03-30 03:21 J -14841115.44 -14841115.36 -14841115.23 0.0146 0.0134
 Jupiter -45346-09-09 00:42 J -14840952.66 -14840952.47 -14840952.28 0.0539 0.0308
 Saturn -45334-03-07 04:18 J -14836755.49 -14836755.32 -14836755.13 0.0286 0.0195
 Jupiter -45334-09-14 10:18 J -14836564.25 -14836564.07 -14836563.87 0.0540 0.0302
 Saturn -45333-03-19 21:21 J -14836376.81 -14836376.61 -14836376.41 0.0285 0.0171
 Jupiter -45328-03-04 12:28 J -14834566.00 -14834565.98 -14834565.96 0.0490 0.0488
 Saturn -45319-09-13 17:45 J -14831086.00 -14831085.76 -14831085.52 0.0273 0.0059
 Saturn -45318-09-26 05:45 J -14830708.32 -14830708.26 -14830708.17 0.0275 0.0262
 Jupiter -45316-03-08 17:45 J -14830178.99 -14830178.76 -14830178.53 0.0489 0.0067
 Uranus -45306-09-22 17:45 J -14826328.82 -14826328.76 -14826328.65 0.0132 0.0124
 Neptune -45305-08-17 01:40 J -14825999.51 -14825999.43 -14825999.31 0.0088 0.0082

Uranus -45305-09-25 22:33 J -14825959.81 -14825959.56 -14825959.31 0.0132 0.0020
 Jupiter -45304-03-13 01:26 J -14825791.59 -14825791.44 -14825791.28 0.0488 0.0360
 Saturn -45304-03-14 03:21 J -14825790.61 -14825790.36 -14825790.12 0.0285 0.0006
 Neptune -45304-08-19 13:26 J -14825632.13 -14825631.94 -14825631.71 0.0088 0.0051
 Uranus -45304-09-30 02:23 J -14825590.58 -14825590.40 -14825590.19 0.0132 0.0085
 Neptune -45303-08-22 01:26 J -14825264.69 -14825264.44 -14825264.18 0.0088 0.0019
 Neptune -45302-08-24 13:11 J -14824897.21 -14824896.95 -14824896.69 0.0088 0.0012
 Neptune -45301-08-26 00:14 J -14824529.69 -14824529.49 -14824529.24 0.0088 0.0044
 Neptune -45300-08-28 11:59 J -14824162.11 -14824162.00 -14824161.83 0.0088 0.0074
 Saturn -45290-09-08 19:26 J -14820498.85 -14820498.69 -14820498.52 0.0273 0.0196
 Saturn -45289-09-20 07:11 J -14820121.41 -14820121.20 -14820120.98 0.0274 0.0124
 Mars -45281-08-08 03:50 J -14817242.49 -14817242.34 -14817242.19 0.1597 0.1004
 Saturn -45275-03-08 04:47 J -14815204.49 -14815204.30 -14815204.09 0.0286 0.0166
 Saturn -45274-03-21 21:21 J -14814825.77 -14814825.61 -14814825.42 0.0285 0.0201
 Uranus -45263-03-25 10:33 J -14810804.31 -14810804.06 -14810803.80 0.0147 0.0004
 Jupiter -45263-09-08 09:50 J -14810637.26 -14810637.09 -14810636.92 0.0539 0.0365
 Uranus -45262-03-30 14:52 J -14810433.94 -14810433.88 -14810433.80 0.0146 0.0141
 Saturn -45260-09-14 20:09 J -14809534.91 -14809534.66 -14809534.42 0.0274 0.0029
 Pluto -45256-03-05 23:16 J -14808266.75 -14808266.53 -14808266.27 0.0065 0.0026
 Pluto -45255-03-07 12:42 J -14807900.12 -14807899.97 -14807899.79 0.0065 0.0050
 Jupiter -45251-09-13 15:50 J -14806249.05 -14806248.84 -14806248.63 0.0540 0.0225
 Saturn -45245-03-15 03:06 J -14804239.61 -14804239.37 -14804239.12 0.0285 0.0035
 Jupiter -45233-03-08 06:14 J -14799863.47 -14799863.24 -14799863.01 0.0489 0.0106
 Saturn -45231-09-09 22:18 J -14798947.75 -14798947.57 -14798947.36 0.0273 0.0166
 Saturn -45230-09-22 10:18 J -14798570.26 -14798570.07 -14798569.86 0.0274 0.0155
 Neptune -45222-02-14 23:45 J -14795867.69 -14795867.51 -14795867.30 0.0089 0.0059
 Uranus -45222-09-23 05:45 J -14795647.35 -14795647.26 -14795647.11 0.0132 0.0117
 Neptune -45221-02-17 11:16 J -14795500.26 -14795500.03 -14795499.77 0.0089 0.0028
 Jupiter -45221-03-12 11:59 J -14795476.17 -14795476.00 -14795475.82 0.0488 0.0317
 Uranus -45221-09-26 10:47 J -14795278.30 -14795278.05 -14795277.80 0.0132 0.0012

Neptune -45220-02-18 23:16 J -14795132.79 -14795132.53 -14795132.27 0.0089 0.0004
 Uranus -45220-09-30 14:52 J -14794909.06 -14794908.88 -14794908.69 0.0132 0.0092
 Neptune -45219-02-21 10:18 J -14794765.29 -14794765.07 -14794764.82 0.0089 0.0036
 Neptune -45218-02-23 21:50 J -14794397.73 -14794397.59 -14794397.40 0.0089 0.0068
 Saturn -45216-03-09 06:57 J -14793653.42 -14793653.21 -14793652.99 0.0286 0.0135
 Saturn -45215-03-22 23:02 J -14793274.66 -14793274.54 -14793274.38 0.0284 0.0232
 Mars -45202-08-11 05:59 J -14788385.44 -14788385.25 -14788385.06 0.1598 0.0154
 Saturn -45201-09-15 23:45 J -14787983.75 -14787983.51 -14787983.26 0.0274 0.0005
 Saturn -45186-03-17 04:47 J -14782688.54 -14782688.30 -14782688.06 0.0285 0.0065
 Uranus -45180-03-20 17:59 J -14780492.80 -14780492.75 -14780492.66 0.0147 0.0141
 Jupiter -45180-09-07 06:42 J -14780322.32 -14780322.22 -14780322.11 0.0538 0.0479
 Uranus -45179-03-25 22:47 J -14780122.80 -14780122.55 -14780122.29 0.0147 0.0004
 Mars -45178-02-05 00:42 J -14779806.60 -14779806.47 -14779806.33 0.1934 0.1434
 Saturn -45172-09-11 02:09 J -14777396.61 -14777396.41 -14777396.18 0.0273 0.0136
 Saturn -45171-09-23 14:38 J -14777019.06 -14777018.89 -14777018.70 0.0275 0.0188
 Pluto -45169-09-07 20:38 J -14776303.79 -14776303.64 -14776303.43 0.0080 0.0057
 Jupiter -45168-09-12 12:14 J -14775934.22 -14775933.99 -14775933.76 0.0539 0.0108
 Saturn -45157-03-10 11:59 J -14772102.23 -14772102.00 -14772101.77 0.0286 0.0102
 Saturn -45156-03-24 03:50 J -14771723.42 -14771723.34 -14771723.25 0.0284 0.0265
 Jupiter -45150-03-08 14:38 J -14769548.11 -14769547.89 -14769547.67 0.0489 0.0158
 Saturn -45142-09-18 05:02 J -14766432.54 -14766432.29 -14766432.05 0.0274 0.0036
 Neptune -45140-08-18 19:54 J -14765731.81 -14765731.67 -14765731.48 0.0088 0.0068
 Neptune -45139-08-21 07:40 J -14765364.40 -14765364.18 -14765363.93 0.0088 0.0037
 Jupiter -45138-03-12 19:54 J -14765160.86 -14765160.67 -14765160.47 0.0488 0.0260
 Neptune -45138-08-23 19:40 J -14764996.93 -14764996.68 -14764996.42 0.0088 0.0005
 Uranus -45138-09-23 17:59 J -14764965.87 -14764965.75 -14764965.59 0.0132 0.0109
 Neptune -45137-08-25 07:11 J -14764629.43 -14764629.20 -14764628.94 0.0088 0.0027
 Uranus -45137-09-26 22:33 J -14764596.81 -14764596.56 -14764596.30 0.0132 0.0006
 Neptune -45136-08-27 18:57 J -14764261.90 -14764261.71 -14764261.51 0.0088 0.0058
 Uranus -45136-10-01 02:23 J -14764227.55 -14764227.40 -14764227.22 0.0132 0.0099

Saturn -45128-03-04 15:21 J -14761515.92 -14761515.86 -14761515.77 0.0286 0.0271
 Saturn -45127-03-18 08:52 J -14761137.35 -14761137.13 -14761136.89 0.0285 0.0099
 Mars -45123-08-13 07:11 J -14759528.31 -14759528.20 -14759528.09 0.1598 0.1296
 Saturn -45113-09-12 07:54 J -14755845.39 -14755845.17 -14755844.93 0.0274 0.0103
 Saturn -45112-09-24 20:52 J -14755467.76 -14755467.63 -14755467.48 0.0275 0.0222
 Saturn -45098-03-12 19:26 J -14750550.93 -14750550.69 -14750550.45 0.0285 0.0065
 Uranus -45096-03-21 05:45 J -14749811.36 -14749811.26 -14749811.15 0.0147 0.0133
 Uranus -45095-03-26 10:18 J -14749441.32 -14749441.07 -14749440.81 0.0147 0.0013
 Jupiter -45085-09-11 17:16 J -14745619.01 -14745618.78 -14745618.55 0.0539 0.0034
 Saturn -45084-09-06 22:47 J -14745258.62 -14745258.55 -14745258.44 0.0273 0.0252
 Saturn -45083-09-19 11:30 J -14744881.25 -14744881.02 -14744880.78 0.0274 0.0071
 Saturn -45069-03-05 23:45 J -14739964.65 -14739964.51 -14739964.37 0.0286 0.0234
 Saturn -45068-03-19 16:33 J -14739586.02 -14739585.81 -14739585.59 0.0285 0.0136
 Jupiter -45067-03-07 21:06 J -14739232.83 -14739232.62 -14739232.41 0.0490 0.0222
 Neptune -45058-02-14 06:42 J -14735967.34 -14735967.22 -14735967.08 0.0089 0.0076
 Neptune -45057-02-16 17:59 J -14735599.95 -14735599.75 -14735599.51 0.0089 0.0045
 Neptune -45056-02-18 05:45 J -14735232.51 -14735232.26 -14735232.00 0.0089 0.0013
 Neptune -45055-02-20 17:30 J -14734865.02 -14734864.77 -14734864.52 0.0089 0.0019
 Jupiter -45055-03-12 03:35 J -14734845.56 -14734845.35 -14734845.14 0.0489 0.0205
 Neptune -45054-02-23 04:33 J -14734497.50 -14734497.31 -14734497.08 0.0089 0.0051
 Saturn -45054-09-14 14:52 J -14734294.12 -14734293.88 -14734293.64 0.0274 0.0069
 Uranus -45054-09-24 06:57 J -14734284.36 -14734284.21 -14734284.03 0.0132 0.0101
 Neptune -45053-02-25 15:50 J -14734129.90 -14734129.84 -14734129.71 0.0089 0.0083
 Saturn -45053-09-26 04:18 J -14733916.40 -14733916.32 -14733916.23 0.0275 0.0258
 Uranus -45053-09-27 11:30 J -14733915.27 -14733915.02 -14733914.76 0.0132 0.0003
 Uranus -45052-10-01 15:21 J -14733545.99 -14733545.86 -14733545.70 0.0132 0.0107
 Saturn -45039-03-14 05:30 J -14728999.51 -14728999.27 -14728999.02 0.0285 0.0026
 Saturn -45025-09-08 07:26 J -14723707.33 -14723707.19 -14723707.04 0.0273 0.0217
 Saturn -45024-09-20 20:09 J -14723329.88 -14723329.66 -14723329.43 0.0274 0.0107
 Uranus -45012-03-21 17:45 J -14719129.88 -14719129.76 -14719129.62 0.0147 0.0125

Uranus -45011-03-26 22:33 J -14718759.81 -14718759.56 -14718759.30 0.0147 0.0021
 Pluto -45010-03-08 06:14 J -14718413.47 -14718413.24 -14718412.98 0.0065 0.0022
 Saturn -45010-03-08 09:35 J -14718413.27 -14718413.10 -14718412.91 0.0286 0.0196 *
 Pluto -45009-03-08 19:26 J -14718046.82 -14718046.69 -14718046.53 0.0065 0.0054
 Saturn -45009-03-21 02:09 J -14718034.59 -14718034.41 -14718034.21 0.0284 0.0176
 Jupiter -45002-09-11 12:57 J -14715304.19 -14715303.96 -14715303.73 0.0538 0.0086

45TH MILLENNIUM BCE

This is a list of transits of Earth in the 45th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Mars	-44997-08-09 12:14 J	-14713510.16	-14713509.99	-14713509.82	0.1597	0.0652		
Saturn	-44995-09-15 23:02 J	-14712742.79	-14712742.54	-14712742.30	0.0274	0.0033		
Jupiter	-44990-09-16 17:02 J	-14710915.87	-14710915.79	-14710915.70	0.0539	0.0496		
Jupiter	-44984-03-07 01:40 J	-14708917.62	-14708917.43	-14708917.24	0.0490	0.0288		
Saturn	-44980-03-15 18:14 J	-14707447.98	-14707447.74	-14707447.49	0.0285	0.0017		
Neptune	-44976-08-18 00:42 J	-14705831.50	-14705831.47	-14705831.37	0.0088	0.0086		
Neptune	-44975-08-20 12:57 J	-14705464.15	-14705463.96	-14705463.74	0.0088	0.0054		
Neptune	-44974-08-23 00:42 J	-14705096.71	-14705096.47	-14705096.20	0.0088	0.0023		
Neptune	-44973-08-24 12:28 J	-14704729.23	-14704728.98	-14704728.71	0.0088	0.0010		
Jupiter	-44972-03-11 08:52 J	-14704530.35	-14704530.13	-14704529.90	0.0489	0.0140		
Neptune	-44972-08-27 00:28 J	-14704361.71	-14704361.48	-14704361.25	0.0088	0.0041		
Neptune	-44971-08-29 11:16 J	-14703994.15	-14703994.03	-14703993.85	0.0088	0.0073		
Uranus	-44970-09-24 19:40 J	-14703602.84	-14703602.68	-14703602.48	0.0132	0.0093		

Uranus -44969-09-28 00:28 J -14703233.73 -14703233.48 -14703233.23 0.0132 0.0011
 Uranus -44968-10-02 03:50 J -14702864.44 -14702864.34 -14702864.20 0.0132 0.0116
 Saturn -44966-09-10 16:33 J -14702155.98 -14702155.81 -14702155.62 0.0273 0.0182
 Saturn -44965-09-22 05:45 J -14701778.46 -14701778.26 -14701778.05 0.0274 0.0145
 Saturn -44951-03-09 22:04 J -14696861.78 -14696861.58 -14696861.37 0.0286 0.0154
 Saturn -44950-03-23 14:23 J -14696483.06 -14696482.90 -14696482.74 0.0284 0.0216
 Saturn -44936-09-17 08:09 J -14691191.40 -14691191.16 -14691190.91 0.0275 0.0004
 Uranus -44928-03-22 04:04 J -14688448.46 -14688448.33 -14688448.16 0.0147 0.0119
 Uranus -44927-03-27 09:21 J -14688078.35 -14688078.11 -14688077.85 0.0147 0.0028
 Pluto -44923-09-10 06:42 J -14686450.44 -14686450.22 -14686450.01 0.0080 0.0043
 Saturn -44921-03-17 07:54 J -14685896.41 -14685896.17 -14685895.93 0.0285 0.0060
 Jupiter -44919-09-10 09:21 J -14684989.33 -14684989.11 -14684988.89 0.0538 0.0201
 Mars -44918-08-12 13:54 J -14684653.10 -14684652.92 -14684652.74 0.1597 0.0497
 Saturn -44907-09-12 02:52 J -14680604.58 -14680604.38 -14680604.16 0.0273 0.0144
 Jupiter -44907-09-15 17:16 J -14680600.93 -14680600.78 -14680600.63 0.0540 0.0400
 Saturn -44906-09-24 16:04 J -14680227.00 -14680226.83 -14680226.64 0.0275 0.0183
 Jupiter -44901-03-06 05:59 J -14678602.40 -14678602.25 -14678602.08 0.0490 0.0361
 Neptune -44893-02-16 00:14 J -14675699.66 -14675699.49 -14675699.29 0.0089 0.0062
 Neptune -44892-02-17 11:59 J -14675332.24 -14675332.00 -14675331.76 0.0089 0.0030
 Saturn -44892-03-11 11:30 J -14675310.25 -14675310.02 -14675309.80 0.0286 0.0112
 Neptune -44891-02-19 23:30 J -14674964.78 -14674964.52 -14674964.26 0.0089 0.0002
 Saturn -44891-03-25 03:21 J -14674931.45 -14674931.36 -14674931.25 0.0284 0.0259
 Neptune -44890-02-22 10:47 J -14674597.27 -14674597.05 -14674596.80 0.0089 0.0034
 Neptune -44889-02-24 21:50 J -14674229.73 -14674229.59 -14674229.39 0.0089 0.0066
 Jupiter -44889-03-10 12:28 J -14674215.21 -14674214.98 -14674214.74 0.0489 0.0066
 Uranus -44886-09-25 09:21 J -14672921.29 -14672921.11 -14672920.89 0.0132 0.0084
 Uranus -44885-09-28 13:54 J -14672552.17 -14672551.92 -14672551.67 0.0132 0.0021
 Uranus -44884-10-02 17:59 J -14672182.83 -14672182.75 -14672182.66 0.0132 0.0124
 Saturn -44877-09-18 17:16 J -14669640.02 -14669639.78 -14669639.54 0.0275 0.0040
 Saturn -44863-03-06 05:45 J -14664723.33 -14664723.26 -14664723.17 0.0286 0.0269

Saturn -44862-03-19 22:04 J -14664344.80 -14664344.58 -14664344.35 0.0285 0.0103
 Saturn -44848-09-13 13:26 J -14659053.16 -14659052.94 -14659052.71 0.0273 0.0107
 Saturn -44847-09-26 02:38 J -14658675.53 -14658675.39 -14658675.24 0.0275 0.0221
 Uranus -44844-03-22 16:47 J -14657766.96 -14657766.80 -14657766.62 0.0147 0.0110
 Uranus -44843-03-27 21:50 J -14657396.83 -14657396.59 -14657396.34 0.0147 0.0036
 Jupiter -44836-09-09 11:02 J -14654674.23 -14654674.04 -14654673.84 0.0538 0.0293
 Saturn -44833-03-13 00:28 J -14653758.71 -14653758.48 -14653758.24 0.0285 0.0069
 Jupiter -44824-09-14 15:06 J -14650286.07 -14650285.87 -14650285.68 0.0539 0.0291
 Saturn -44819-09-08 12:28 J -14648466.06 -14648465.98 -14648465.87 0.0274 0.0251
 Jupiter -44818-03-06 09:21 J -14648287.22 -14648287.11 -14648287.01 0.0491 0.0435
 Saturn -44818-09-21 02:09 J -14648088.65 -14648088.41 -14648088.17 0.0275 0.0076
 Mars -44815-02-07 15:06 J -14647218.07 -14647217.87 -14647217.68 0.1934 0.0370
 Neptune -44811-08-19 17:16 J -14645563.90 -14645563.78 -14645563.60 0.0088 0.0072
 Neptune -44810-08-22 05:16 J -14645196.49 -14645196.28 -14645196.03 0.0088 0.0041
 Neptune -44809-08-23 17:30 J -14644829.03 -14644828.77 -14644828.51 0.0088 0.0008
 Neptune -44808-08-26 04:47 J -14644461.54 -14644461.30 -14644461.04 0.0088 0.0024
 Neptune -44807-08-28 16:47 J -14644094.00 -14644093.80 -14644093.60 0.0088 0.0055
 Jupiter -44806-03-10 15:50 J -14643900.07 -14643899.84 -14643899.60 0.0490 0.0009
 Neptune -44806-08-31 03:50 J -14643726.37 -14643726.34 -14643726.26 0.0088 0.0087
 Saturn -44804-03-07 18:28 J -14643171.87 -14643171.73 -14643171.58 0.0286 0.0228
 Saturn -44803-03-21 11:02 J -14642793.25 -14642793.04 -14642792.83 0.0285 0.0146
 Uranus -44802-09-25 23:16 J -14642239.73 -14642239.53 -14642239.31 0.0132 0.0074
 Uranus -44801-09-29 03:35 J -14641870.59 -14641870.35 -14641870.10 0.0132 0.0030
 Jupiter -44794-03-14 23:30 J -14639512.63 -14639512.52 -14639512.40 0.0488 0.0425
 Mars -44792-08-08 17:45 J -14638634.83 -14638634.76 -14638634.69 0.1597 0.1478
 Saturn -44789-09-14 23:16 J -14637501.76 -14637501.53 -14637501.29 0.0273 0.0070
 Saturn -44788-09-27 12:14 J -14637124.07 -14637123.99 -14637123.90 0.0275 0.0258
 Saturn -44774-03-15 12:28 J -14632207.22 -14632206.98 -14632206.73 0.0285 0.0028
 Pluto -44764-03-09 16:47 J -14628560.06 -14628559.80 -14628559.54 0.0065 0.0011
 Uranus -44760-03-23 04:04 J -14627085.49 -14627085.33 -14627085.13 0.0147 0.0102

Saturn -44760-09-09 20:23 J -14626914.79 -14626914.65 -14626914.49 0.0274 0.0216
 Uranus -44759-03-28 09:21 J -14626715.34 -14626715.11 -14626714.85 0.0147 0.0045
 Saturn -44759-09-22 09:50 J -14626537.31 -14626537.09 -14626536.86 0.0275 0.0112
 Jupiter -44753-09-08 07:40 J -14624359.33 -14624359.18 -14624359.03 0.0537 0.0407
 Saturn -44745-03-09 05:02 J -14621620.46 -14621620.29 -14621620.09 0.0286 0.0188
 Saturn -44744-03-22 21:50 J -14621241.77 -14621241.59 -14621241.40 0.0284 0.0187
 Jupiter -44741-09-13 09:06 J -14619971.33 -14619971.12 -14619970.89 0.0539 0.0165
 Saturn -44730-09-17 08:09 J -14615950.41 -14615950.16 -14615949.92 0.0273 0.0033
 Neptune -44729-02-15 05:45 J -14615799.35 -14615799.26 -14615799.13 0.0089 0.0080
 Neptune -44728-02-16 17:30 J -14615431.98 -14615431.77 -14615431.55 0.0089 0.0048
 Neptune -44727-02-19 05:02 J -14615064.54 -14615064.29 -14615064.04 0.0089 0.0016
 Neptune -44726-02-21 16:04 J -14614697.07 -14614696.83 -14614696.57 0.0089 0.0016
 Neptune -44725-02-24 03:21 J -14614329.56 -14614329.36 -14614329.13 0.0089 0.0048
 Neptune -44724-02-25 14:52 J -14613961.97 -14613961.88 -14613961.75 0.0089 0.0080
 Jupiter -44723-03-09 22:33 J -14613584.79 -14613584.56 -14613584.32 0.0490 0.0068
 Uranus -44718-09-26 13:40 J -14611558.14 -14611557.93 -14611557.70 0.0132 0.0064
 Uranus -44717-09-29 17:59 J -14611188.99 -14611188.75 -14611188.50 0.0132 0.0040
 Saturn -44715-03-16 22:18 J -14610655.82 -14610655.57 -14610655.33 0.0285 0.0011
 Mars -44713-08-10 19:40 J -14609777.86 -14609777.68 -14609777.49 0.1597 0.0319
 Jupiter -44711-03-14 04:47 J -14609197.45 -14609197.30 -14609197.14 0.0489 0.0359
 Saturn -44701-09-11 03:21 J -14605363.54 -14605363.36 -14605363.18 0.0274 0.0182
 Saturn -44700-09-23 16:04 J -14604986.02 -14604985.83 -14604985.61 0.0275 0.0147
 Saturn -44686-03-11 13:11 J -14600069.16 -14600068.95 -14600068.74 0.0286 0.0150
 Saturn -44685-03-24 05:45 J -14599690.40 -14599690.26 -14599690.10 0.0284 0.0225
 Pluto -44677-09-11 21:06 J -14596596.87 -14596596.62 -14596596.36 0.0079 0.0016
 Uranus -44676-03-23 18:28 J -14596403.91 -14596403.73 -14596403.51 0.0147 0.0091
 Uranus -44675-03-28 23:30 J -14596033.74 -14596033.52 -14596033.27 0.0147 0.0056
 Saturn -44671-09-18 14:52 J -14594399.12 -14594398.88 -14594398.63 0.0273 0.0005
 Jupiter -44670-09-08 05:30 J -14594044.33 -14594044.27 -14594044.21 0.0537 0.0518
 Jupiter -44658-09-13 13:54 J -14589656.15 -14589655.92 -14589655.69 0.0539 0.0086

Saturn -44656-03-18 05:45 J -14589104.50 -14589104.26 -14589104.02 0.0285 0.0049
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 Saturn -44642-09-13 08:23 J -14583812.35 -14583812.15 -14583811.93 0.0274 0.0149
 Saturn -44641-09-24 21:06 J -14583434.80 -14583434.62 -14583434.43 0.0275 0.0180
 Jupiter -44640-03-09 04:04 J -14583269.55 -14583269.33 -14583269.10 0.0490 0.0133
 Mars -44634-08-13 21:35 J -14580920.76 -14580920.60 -14580920.44 0.1598 0.0837
 Uranus -44634-09-27 03:50 J -14580876.56 -14580876.34 -14580876.09 0.0132 0.0054
 Uranus -44633-09-30 08:38 J -14580507.38 -14580507.14 -14580506.91 0.0132 0.0050
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 Saturn -44627-03-12 17:59 J -14578517.97 -14578517.75 -14578517.52 0.0286 0.0116
 Saturn -44626-03-26 10:47 J -14578139.13 -14578139.05 -14578138.94 0.0284 0.0260
 Saturn -44612-09-19 20:23 J -14572847.89 -14572847.65 -14572847.40 0.0273 0.0036
 Saturn -44597-03-19 10:04 J -14567553.31 -14567553.08 -14567552.84 0.0285 0.0083
 Uranus -44592-03-24 06:57 J -14565722.41 -14565722.21 -14565721.98 0.0147 0.0082
 Uranus -44591-03-29 12:14 J -14565352.21 -14565351.99 -14565351.75 0.0147 0.0065
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 Neptune -44564-02-15 23:02 J -14555531.70 -14555531.54 -14555531.36 0.0089 0.0066
 Neptune -44563-02-18 10:18 J -14555164.30 -14555164.07 -14555163.83 0.0089 0.0034
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 Jupiter -44557-03-08 15:35 J -14552954.07 -14552953.85 -14552953.63 0.0490 0.0176
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 Mars -44508-08-10 01:11 J -14534902.58 -14534902.45 -14534902.32 0.1598 0.1148
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 Jupiter -44474-03-09 01:26 J -14522638.65 -14522638.44 -14522638.23 0.0491 0.0226
 Uranus -44466-09-28 09:50 J -14519513.34 -14519513.09 -14519512.85 0.0132 0.0033
 Saturn -44465-09-16 16:04 J -14519159.06 -14519158.83 -14519158.58 0.0273 0.0056
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Saturn -44464-09-29 03:50 J -14518781.34 -14518781.34 -14518781.30 0.0274 0.0274
 Jupiter -44462-03-13 06:57 J -14518251.42 -14518251.21 -14518250.99 0.0490 0.0202
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 Mars -44429-08-12 02:23 J -14506045.59 -14506045.40 -14506045.21 0.1598 0.0006
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 Uranus -44423-03-30 14:23 J -14503989.10 -14503988.90 -14503988.68 0.0147 0.0083
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 Saturn -44420-03-23 13:11 J -14502900.14 -14502899.95 -14502899.75 0.0285 0.0176
 Jupiter -44409-09-10 23:59 J -14498710.72 -14498710.50 -14498710.28 0.0538 0.0171
 Saturn -44406-09-18 17:45 J -14497608.00 -14497607.76 -14497607.51 0.0273 0.0025
 Neptune -44400-02-15 03:35 J -14495631.41 -14495631.35 -14495631.26 0.0089 0.0085
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 Saturn -44391-03-17 18:57 J -14492313.96 -14492313.71 -14492313.47 0.0286 0.0006
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Mars -44350-08-15 04:18 J -14477188.45 -14477188.32 -14477188.19 0.1598 0.1160
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 Uranus -44340-03-25 22:33 J -14473677.78 -14473677.56 -14473677.31 0.0147 0.0054
 Uranus -44339-03-31 03:21 J -14473307.54 -14473307.36 -14473307.14 0.0147 0.0093
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 Jupiter -44326-09-10 21:35 J -14468395.79 -14468395.60 -14468395.39 0.0537 0.0282
 Saturn -44318-09-14 22:18 J -14465469.78 -14465469.57 -14465469.36 0.0273 0.0136
 Neptune -44317-08-21 02:52 J -14465128.54 -14465128.38 -14465128.19 0.0088 0.0066
 Saturn -44317-09-26 10:04 J -14465092.25 -14465092.08 -14465091.91 0.0274 0.0194
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 Jupiter -44308-03-07 22:18 J -14462007.75 -14462007.57 -14462007.39 0.0491 0.0319
 Saturn -44303-03-12 22:18 J -14460176.77 -14460176.57 -14460176.35 0.0286 0.0142
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 Saturn -44288-09-20 23:16 J -14454505.77 -14454505.53 -14454505.29 0.0273 0.0038
 Pluto -44273-03-11 22:18 J -14449219.58 -14449219.57 -14449219.49 0.0065 0.0064
 Saturn -44273-03-19 19:40 J -14449211.92 -14449211.68 -14449211.44 0.0285 0.0065
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 Uranus -44255-03-31 14:38 J -14442626.07 -14442625.89 -14442625.69 0.0147 0.0100
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 Jupiter -44231-09-15 10:18 J -14433692.27 -14433692.07 -14433691.86 0.0538 0.0245
 Saturn -44230-09-10 15:35 J -14433331.91 -14433331.85 -14433331.77 0.0273 0.0260
 Saturn -44229-09-22 03:35 J -14432954.58 -14432954.35 -14432954.10 0.0274 0.0072
 Jupiter -44225-03-07 05:59 J -14431692.39 -14431692.25 -14431692.10 0.0492 0.0378
 Mars -44224-08-11 07:54 J -14431170.33 -14431170.17 -14431170.01 0.1598 0.0830
 Saturn -44215-03-08 05:30 J -14428039.29 -14428039.27 -14428039.23 0.0286 0.0284
 Uranus -44215-09-26 00:57 J -14427837.58 -14427837.46 -14427837.29 0.0132 0.0107
 Saturn -44214-03-21 23:02 J -14427660.77 -14427660.54 -14427660.31 0.0285 0.0099
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 Saturn -44199-09-29 18:57 J -14421989.77 -14421989.71 -14421989.63 0.0275 0.0262
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 Pluto -44185-09-16 00:42 J -14416889.68 -14416889.47 -14416889.22 0.0079 0.0037
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 Saturn -44170-09-24 09:50 J -14411403.31 -14411403.09 -14411402.86 0.0274 0.0106
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 Jupiter -44160-09-09 06:28 J -14407765.35 -14407765.23 -14407765.09 0.0536 0.0441
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Neptune -44153-08-20 06:14 J -14405228.30 -14405228.24 -14405228.15 0.0088 0.0085
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 Mars -44145-08-13 09:21 J -14402313.29 -14402313.11 -14402312.92 0.1599 0.0337
 Jupiter -44142-03-07 13:11 J -14401377.05 -14401376.95 -14401376.85 0.0493 0.0438
 Saturn -44141-09-18 12:57 J -14400816.20 -14400815.96 -14400815.71 0.0274 0.0039
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 Jupiter -44130-03-11 20:09 J -14396989.89 -14396989.66 -14396989.42 0.0491 0.0005
 Uranus -44130-09-30 19:54 J -14396786.93 -14396786.67 -14396786.42 0.0132 0.0007
 Uranus -44129-10-03 23:30 J -14396417.64 -14396417.52 -14396417.37 0.0132 0.0111
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 Uranus -44087-04-01 16:18 J -14381262.96 -14381262.82 -14381262.66 0.0147 0.0118
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Jupiter -44065-09-13 05:45 J -14373062.49 -14373062.26 -14373062.03 0.0537 0.0024
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 Saturn -44052-09-27 02:52 J -14368300.56 -14368300.38 -14368300.19 0.0274 0.0180
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 Uranus -44046-10-01 09:35 J -14366105.34 -14366105.10 -14366104.84 0.0132 0.0017
 Uranus -44045-10-04 13:40 J -14365736.02 -14365735.93 -14365735.82 0.0132 0.0120
 Saturn -44038-03-13 08:52 J -14363385.33 -14363385.13 -14363384.93 0.0286 0.0168
 Saturn -44037-03-26 01:11 J -14363006.61 -14363006.45 -14363006.29 0.0285 0.0216
 Jupiter -44035-03-15 08:09 J -14362287.32 -14362287.16 -14362287.01 0.0490 0.0364
 Pluto -44027-03-14 07:26 J -14359366.31 -14359366.19 -14359366.04 0.0065 0.0056
 Pluto -44026-03-15 21:06 J -14358999.86 -14358999.62 -14358999.37 0.0066 0.0020
 Saturn -44023-09-22 04:47 J -14357713.55 -14357713.30 -14357713.06 0.0274 0.0035
 Saturn -44008-03-20 18:57 J -14352419.95 -14352419.71 -14352419.47 0.0285 0.0054
 Uranus -44004-03-28 01:11 J -14350951.70 -14350951.45 -14350951.19 0.0147 0.0018
 Uranus -44003-04-02 06:14 J -14350581.36 -14350581.24 -14350581.12 0.0147 0.0128

44TH MILLENNIUM BCE

This is a list of transits of Earth in the 44th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-43994-09-16 23:45 J	-14347126.73	-14347126.51	-14347126.29	0.0273	0.0117		
Saturn	-43993-09-28 12:28 J	-14346749.12	-14346748.98	-14346748.83	0.0274	0.0219		
Neptune	-43988-08-21 22:04 J	-14344960.70	-14344960.58	-14344960.40	0.0088	0.0072		

Neptune -43987-08-24 10:18 J -14344593.29 -14344593.07 -14344592.82 0.0088 0.0039
 Neptune -43986-08-26 22:04 J -14344225.83 -14344225.58 -14344225.31 0.0088 0.0007
 Neptune -43985-08-28 09:35 J -14343858.33 -14343858.10 -14343857.84 0.0088 0.0027
 Neptune -43984-08-30 21:21 J -14343490.78 -14343490.61 -14343490.40 0.0088 0.0060
 Jupiter -43982-09-13 07:54 J -14342747.40 -14342747.17 -14342746.94 0.0537 0.0069
 Saturn -43979-03-14 22:04 J -14341833.80 -14341833.58 -14341833.36 0.0286 0.0124
 Saturn -43978-03-28 14:09 J -14341455.00 -14341454.91 -14341454.80 0.0285 0.0260
 Jupiter -43970-09-18 10:47 J -14338359.11 -14338359.05 -14338358.99 0.0538 0.0517
 Saturn -43965-09-10 23:45 J -14336539.56 -14336539.51 -14336539.45 0.0274 0.0265
 Jupiter -43964-03-10 04:04 J -14336359.55 -14336359.33 -14336359.10 0.0492 0.0146
 Saturn -43964-09-23 13:26 J -14336162.18 -14336161.94 -14336161.70 0.0275 0.0072
 Uranus -43963-09-27 19:40 J -14335792.88 -14335792.68 -14335792.47 0.0132 0.0078
 Uranus -43962-10-01 23:45 J -14335423.76 -14335423.51 -14335423.26 0.0132 0.0026
 Uranus -43961-10-05 03:06 J -14335054.38 -14335054.37 -14335054.29 0.0132 0.0130
 Jupiter -43952-03-14 11:16 J -14331972.22 -14331972.03 -14331971.84 0.0491 0.0293
 Saturn -43950-03-09 16:33 J -14331246.81 -14331246.81 -14331246.79 0.0286 0.0285
 Saturn -43949-03-22 08:23 J -14330868.37 -14330868.15 -14330867.91 0.0285 0.0099
 Mars -43940-08-12 14:38 J -14327438.07 -14327437.89 -14327437.71 0.1600 0.0511
 Pluto -43940-09-16 08:23 J -14327403.15 -14327403.15 -14327403.12 0.0080 0.0079
 Pluto -43939-09-18 12:14 J -14327036.14 -14327035.99 -14327035.78 0.0079 0.0057
 Saturn -43935-09-18 10:04 J -14325575.31 -14325575.08 -14325574.84 0.0273 0.0078
 Saturn -43934-09-30 22:47 J -14325197.62 -14325197.55 -14325197.46 0.0274 0.0259
 Saturn -43920-03-16 11:16 J -14320282.27 -14320282.03 -14320281.80 0.0285 0.0080
 Uranus -43920-03-28 12:42 J -14320270.22 -14320269.97 -14320269.71 0.0147 0.0011
 Uranus -43919-04-02 17:16 J -14319899.86 -14319899.78 -14319899.67 0.0147 0.0136
 Neptune -43906-02-17 16:47 J -14315195.91 -14315195.80 -14315195.65 0.0089 0.0077
 Saturn -43906-09-13 08:09 J -14314988.28 -14314988.16 -14314988.01 0.0274 0.0229
 Neptune -43905-02-20 04:18 J -14314828.52 -14314828.32 -14314828.08 0.0089 0.0044
 Saturn -43905-09-24 22:04 J -14314610.80 -14314610.58 -14314610.35 0.0275 0.0110
 Neptune -43904-02-21 16:04 J -14314461.08 -14314460.83 -14314460.57 0.0089 0.0011

Neptune -43903-02-24 03:50 J -14314093.59 -14314093.34 -14314093.09 0.0089 0.0022
 Neptune -43902-02-26 15:21 J -14313726.06 -14313725.86 -14313725.66 0.0089 0.0055
 Neptune -43901-02-29 02:38 J -14313358.41 -14313358.39 -14313358.36 0.0089 0.0088
 Jupiter -43899-09-12 03:06 J -14312432.58 -14312432.37 -14312432.15 0.0536 0.0189
 Saturn -43891-03-11 05:30 J -14309695.38 -14309695.27 -14309695.12 0.0286 0.0242
 Saturn -43890-03-24 21:50 J -14309316.79 -14309316.59 -14309316.37 0.0285 0.0144
 Jupiter -43887-09-17 04:47 J -14308044.46 -14308044.30 -14308044.14 0.0538 0.0389
 Mars -43884-02-07 16:47 J -14307169.91 -14307169.80 -14307169.68 0.1930 0.1565
 Jupiter -43881-03-09 10:04 J -14306044.29 -14306044.08 -14306043.86 0.0492 0.0211
 Uranus -43879-09-28 08:38 J -14305111.34 -14305111.14 -14305110.90 0.0132 0.0070
 Uranus -43878-10-02 12:57 J -14304742.19 -14304741.96 -14304741.70 0.0132 0.0035
 Saturn -43876-09-19 19:54 J -14304023.92 -14304023.67 -14304023.43 0.0273 0.0039
 Jupiter -43869-03-13 16:33 J -14301657.02 -14301656.81 -14301656.60 0.0491 0.0224
 Saturn -43861-03-17 23:30 J -14298730.76 -14298730.52 -14298730.27 0.0285 0.0036
 Mars -43861-08-14 16:33 J -14298580.98 -14298580.81 -14298580.63 0.1599 0.0668
 Saturn -43847-09-14 17:02 J -14293436.96 -14293436.79 -14293436.61 0.0274 0.0191
 Saturn -43846-09-27 06:14 J -14293059.44 -14293059.24 -14293059.02 0.0275 0.0148
 Uranus -43836-03-29 01:11 J -14289588.71 -14289588.45 -14289588.20 0.0147 0.0002
 Uranus -43835-04-03 05:59 J -14289218.29 -14289218.25 -14289218.20 0.0147 0.0144
 Saturn -43832-03-12 17:02 J -14288143.97 -14288143.79 -14288143.62 0.0286 0.0199
 Saturn -43831-03-26 09:06 J -14287765.29 -14287765.12 -14287764.92 0.0285 0.0188
 Neptune -43823-08-23 15:21 J -14284693.05 -14284692.86 -14284692.65 0.0088 0.0057
 Neptune -43822-08-26 03:06 J -14284325.61 -14284325.37 -14284325.11 0.0088 0.0024
 Neptune -43821-08-27 15:06 J -14283958.13 -14283957.87 -14283957.61 0.0088 0.0009
 Neptune -43820-08-30 02:23 J -14283590.62 -14283590.40 -14283590.16 0.0088 0.0042
 Neptune -43819-09-01 13:54 J -14283223.04 -14283222.92 -14283222.76 0.0088 0.0074
 Saturn -43817-09-21 04:47 J -14282472.54 -14282472.30 -14282472.05 0.0273 0.0005
 Jupiter -43816-09-11 00:14 J -14282117.68 -14282117.49 -14282117.29 0.0536 0.0304
 Mars -43805-02-12 07:40 J -14278311.20 -14278311.18 -14278311.15 0.1931 0.1910
 Jupiter -43804-09-16 07:54 J -14277729.36 -14277729.17 -14277728.97 0.0538 0.0302

Saturn -43802-03-20 10:18 J -14277179.31 -14277179.07 -14277178.82 0.0285 0.0008
 Jupiter -43798-03-09 15:06 J -14275729.06 -14275728.87 -14275728.68 0.0492 0.0283
 Uranus -43795-09-28 22:18 J -14274429.79 -14274429.57 -14274429.34 0.0132 0.0061
 Uranus -43794-10-03 02:23 J -14274060.63 -14274060.40 -14274060.15 0.0132 0.0044
 Saturn -43788-09-15 23:59 J -14271885.69 -14271885.50 -14271885.29 0.0274 0.0155
 Saturn -43787-09-28 12:57 J -14271508.12 -14271507.96 -14271507.76 0.0275 0.0185
 Jupiter -43786-03-13 20:09 J -14271341.88 -14271341.66 -14271341.44 0.0491 0.0150
 Pluto -43781-03-15 16:18 J -14269512.98 -14269512.82 -14269512.62 0.0065 0.0047
 Pluto -43780-03-17 05:59 J -14269146.47 -14269146.25 -14269146.00 0.0066 0.0030
 Saturn -43773-03-14 01:54 J -14266592.62 -14266592.42 -14266592.22 0.0286 0.0159
 Saturn -43772-03-27 18:42 J -14266213.87 -14266213.72 -14266213.58 0.0285 0.0228
 Saturn -43758-09-23 12:57 J -14260921.20 -14260920.96 -14260920.72 0.0273 0.0037
 Uranus -43753-03-24 06:57 J -14259277.27 -14259277.21 -14259277.13 0.0147 0.0141
 Uranus -43752-03-29 11:45 J -14258907.27 -14258907.01 -14258906.76 0.0147 0.0005
 Saturn -43743-03-21 18:42 J -14255627.96 -14255627.72 -14255627.48 0.0285 0.0046
 Neptune -43741-02-19 09:50 J -14254928.25 -14254928.09 -14254927.89 0.0089 0.0063
 Neptune -43740-02-20 21:50 J -14254560.83 -14254560.59 -14254560.35 0.0089 0.0029
 Neptune -43739-02-23 09:35 J -14254193.36 -14254193.10 -14254192.84 0.0089 0.0004
 Neptune -43738-02-25 20:52 J -14253825.86 -14253825.63 -14253825.39 0.0089 0.0037
 Neptune -43737-02-28 08:38 J -14253458.29 -14253458.14 -14253457.98 0.0089 0.0070
 Mars -43735-08-11 19:11 J -14252562.80 -14252562.70 -14252562.60 0.1601 0.1355
 Jupiter -43733-09-10 04:18 J -14251802.48 -14251802.32 -14251802.15 0.0535 0.0383
 Saturn -43729-09-17 06:14 J -14250334.46 -14250334.24 -14250334.01 0.0274 0.0119
 Saturn -43728-09-29 18:42 J -14249956.85 -14249956.72 -14249956.56 0.0274 0.0220
 Jupiter -43721-09-15 07:54 J -14247414.38 -14247414.17 -14247413.95 0.0537 0.0201
 Jupiter -43715-03-08 20:23 J -14245413.81 -14245413.65 -14245413.49 0.0493 0.0351
 Saturn -43714-03-16 07:54 J -14245041.39 -14245041.17 -14245040.94 0.0286 0.0121
 Saturn -43713-03-29 00:42 J -14244662.55 -14244662.47 -14244662.38 0.0285 0.0266
 Uranus -43711-09-29 10:47 J -14243748.27 -14243748.05 -14243747.81 0.0132 0.0053
 Uranus -43710-10-03 14:52 J -14243379.10 -14243378.88 -14243378.63 0.0132 0.0052

Jupiter -43703-03-13 05:45 J -14241026.49 -14241026.26 -14241026.03 0.0491 0.0098
 Saturn -43700-09-12 06:57 J -14239747.26 -14239747.21 -14239747.14 0.0273 0.0264
 Saturn -43699-09-24 19:11 J -14239369.93 -14239369.70 -14239369.46 0.0273 0.0073
 Pluto -43694-09-18 22:33 J -14237549.73 -14237549.56 -14237549.34 0.0079 0.0053
 Saturn -43684-03-23 00:28 J -14234076.72 -14234076.48 -14234076.25 0.0285 0.0084
 Saturn -43670-09-19 10:47 J -14228783.27 -14228783.05 -14228782.81 0.0273 0.0085
 Uranus -43669-03-24 18:42 J -14228595.81 -14228595.72 -14228595.60 0.0147 0.0133
 Saturn -43669-09-30 23:02 J -14228405.61 -14228405.54 -14228405.44 0.0274 0.0255
 Uranus -43668-03-29 23:30 J -14228225.77 -14228225.52 -14228225.27 0.0147 0.0013
 Neptune -43659-08-22 21:35 J -14224792.72 -14224792.60 -14224792.44 0.0088 0.0075
 Neptune -43658-08-25 09:35 J -14224425.32 -14224425.10 -14224424.86 0.0088 0.0042
 Neptune -43657-08-26 21:21 J -14224057.87 -14224057.61 -14224057.35 0.0088 0.0009
 Mars -43656-08-13 21:35 J -14223705.78 -14223705.60 -14223705.41 0.1601 0.0180
 Neptune -43656-08-29 08:52 J -14223690.37 -14223690.13 -14223689.87 0.0088 0.0024
 Saturn -43655-03-17 11:16 J -14223490.26 -14223490.03 -14223489.79 0.0286 0.0087
 Neptune -43655-08-31 19:54 J -14223322.84 -14223322.67 -14223322.45 0.0088 0.0058
 Jupiter -43650-09-09 23:59 J -14221487.57 -14221487.50 -14221487.43 0.0535 0.0507
 Saturn -43641-09-13 11:59 J -14218196.11 -14218196.00 -14218195.85 0.0273 0.0230
 Saturn -43640-09-25 23:59 J -14217818.72 -14217818.50 -14217818.27 0.0273 0.0108
 Jupiter -43638-09-15 05:59 J -14217099.48 -14217099.25 -14217099.02 0.0537 0.0088
 Jupiter -43632-03-08 06:57 J -14215098.35 -14215098.21 -14215098.08 0.0493 0.0399
 Uranus -43627-09-29 23:30 J -14213066.75 -14213066.52 -14213066.27 0.0132 0.0045
 Saturn -43626-03-11 10:33 J -14212904.12 -14212904.06 -14212903.97 0.0286 0.0271
 Uranus -43626-10-04 04:04 J -14212697.55 -14212697.33 -14212697.10 0.0132 0.0060
 Saturn -43625-03-24 03:21 J -14212525.58 -14212525.36 -14212525.13 0.0285 0.0118
 Jupiter -43620-03-12 14:38 J -14210711.13 -14210710.89 -14210710.66 0.0492 0.0043
 Saturn -43611-09-20 14:23 J -14207232.14 -14207231.90 -14207231.65 0.0273 0.0051
 Jupiter -43608-03-16 20:09 J -14206323.71 -14206323.66 -14206323.60 0.0490 0.0475
 Saturn -43596-03-18 12:28 J -14201939.22 -14201938.98 -14201938.74 0.0286 0.0055
 Uranus -43585-03-25 05:45 J -14197914.37 -14197914.26 -14197914.11 0.0147 0.0126

Uranus -43584-03-30 10:47 J -14197544.31 -14197544.05 -14197543.80 0.0147 0.0020
 Saturn -43582-09-15 15:50 J -14196645.00 -14196644.84 -14196644.66 0.0273 0.0197
 Saturn -43581-09-27 03:35 J -14196267.56 -14196267.35 -14196267.14 0.0273 0.0141
 Neptune -43577-02-18 16:04 J -14195027.92 -14195027.83 -14195027.71 0.0089 0.0082
 Mars -43577-08-15 23:45 J -14194848.65 -14194848.51 -14194848.36 0.1600 0.1008
 Neptune -43576-02-20 03:35 J -14194660.55 -14194660.35 -14194660.12 0.0089 0.0048
 Neptune -43575-02-22 15:21 J -14194293.11 -14194292.86 -14194292.61 0.0089 0.0014
 Neptune -43574-02-25 02:52 J -14193925.62 -14193925.38 -14193925.12 0.0089 0.0019
 Neptune -43573-02-27 14:09 J -14193558.09 -14193557.91 -14193557.68 0.0089 0.0053
 Neptune -43572-03-01 01:54 J -14193190.46 -14193190.42 -14193190.34 0.0089 0.0086
 Saturn -43567-03-12 12:14 J -14191353.11 -14191352.99 -14191352.85 0.0286 0.0239
 Saturn -43566-03-26 04:47 J -14190974.50 -14190974.30 -14190974.08 0.0285 0.0151
 Jupiter -43555-09-14 14:23 J -14186784.13 -14186783.90 -14186783.67 0.0536 0.0027
 Saturn -43552-09-21 17:02 J -14185681.03 -14185680.79 -14185680.54 0.0273 0.0019
 Jupiter -43549-03-07 14:23 J -14184782.97 -14184782.90 -14184782.81 0.0494 0.0460
 Uranus -43543-09-30 11:30 J -14182385.26 -14182385.02 -14182384.77 0.0132 0.0037
 Uranus -43542-10-04 15:50 J -14182016.04 -14182015.84 -14182015.61 0.0132 0.0067
 Jupiter -43537-03-11 23:16 J -14180395.76 -14180395.53 -14180395.29 0.0492 0.0015
 Saturn -43537-03-19 11:45 J -14180388.25 -14180388.01 -14180387.77 0.0286 0.0025
 Pluto -43535-03-17 21:50 J -14179659.75 -14179659.59 -14179659.38 0.0065 0.0046
 Pluto -43534-03-19 11:45 J -14179293.23 -14179293.01 -14179292.77 0.0066 0.0030
 Jupiter -43525-03-16 08:23 J -14176008.25 -14176008.15 -14176008.04 0.0491 0.0436
 Saturn -43523-09-16 18:28 J -14175093.92 -14175093.73 -14175093.53 0.0273 0.0165
 Saturn -43522-09-29 05:59 J -14174716.42 -14174716.25 -14174716.05 0.0274 0.0175
 Mars -43521-02-11 06:57 J -14174581.41 -14174581.21 -14174581.01 0.1929 0.0245
 Saturn -43508-03-13 12:42 J -14169802.12 -14169801.97 -14169801.79 0.0286 0.0209
 Saturn -43507-03-27 05:16 J -14169423.46 -14169423.28 -14169423.08 0.0285 0.0182
 Uranus -43501-03-25 17:30 J -14167232.90 -14167232.77 -14167232.60 0.0147 0.0118
 Uranus -43500-03-30 22:18 J -14166862.82 -14166862.57 -14166862.32 0.0147 0.0028
 Neptune -43494-08-24 16:18 J -14164524.98 -14164524.82 -14164524.60 0.0088 0.0060

Neptune -43493-08-26 04:33 J -14164157.54 -14164157.31 -14164157.05 0.0088 0.0026
 Saturn -43493-09-22 18:57 J -14164129.96 -14164129.71 -14164129.47 0.0273 0.0014
 Neptune -43492-08-28 16:18 J -14163790.07 -14163789.82 -14163789.56 0.0088 0.0008
 Neptune -43491-08-31 03:50 J -14163422.56 -14163422.34 -14163422.09 0.0088 0.0041
 Neptune -43490-09-02 15:06 J -14163054.99 -14163054.87 -14163054.70 0.0088 0.0074
 Saturn -43478-03-21 10:47 J -14158837.29 -14158837.05 -14158836.80 0.0285 0.0007
 Jupiter -43472-09-13 12:28 J -14156469.21 -14156468.98 -14156468.75 0.0535 0.0085
 Saturn -43464-09-17 20:38 J -14153542.85 -14153542.64 -14153542.42 0.0273 0.0134
 Saturn -43463-09-30 08:23 J -14153165.30 -14153165.15 -14153164.98 0.0274 0.0207
 Jupiter -43460-09-18 17:45 J -14152080.82 -14152080.76 -14152080.68 0.0537 0.0510
 Uranus -43459-09-30 23:30 J -14151703.76 -14151703.52 -14151703.27 0.0132 0.0030
 Uranus -43458-10-05 04:04 J -14151334.53 -14151334.33 -14151334.12 0.0132 0.0074
 Jupiter -43454-03-12 11:02 J -14150080.28 -14150080.04 -14150079.81 0.0492 0.0053
 Mars -43451-08-13 02:38 J -14148830.53 -14148830.39 -14148830.24 0.1603 0.1018
 Saturn -43449-03-14 13:11 J -14148251.14 -14148250.95 -14148250.75 0.0286 0.0178
 Saturn -43448-03-28 05:30 J -14147872.42 -14147872.27 -14147872.10 0.0285 0.0213
 Pluto -43448-09-20 04:33 J -14147696.49 -14147696.31 -14147696.09 0.0079 0.0050
 Jupiter -43442-03-16 18:57 J -14145692.85 -14145692.71 -14145692.57 0.0491 0.0390
 Saturn -43434-09-24 20:52 J -14142578.87 -14142578.63 -14142578.38 0.0273 0.0046
 Saturn -43419-03-22 10:04 J -14137286.32 -14137286.08 -14137285.83 0.0285 0.0035
 Uranus -43417-03-26 04:47 J -14136551.45 -14136551.30 -14136551.12 0.0146 0.0111
 Uranus -43416-03-31 09:21 J -14136181.36 -14136181.11 -14136180.86 0.0147 0.0035
 Neptune -43412-02-19 11:02 J -14134760.19 -14134760.04 -14134759.85 0.0089 0.0066
 Neptune -43411-02-21 22:47 J -14134392.78 -14134392.55 -14134392.30 0.0089 0.0032
 Neptune -43410-02-24 10:18 J -14134025.33 -14134025.07 -14134024.81 0.0089 0.0001
 Neptune -43409-02-26 21:50 J -14133657.82 -14133657.59 -14133657.35 0.0089 0.0035
 Neptune -43408-02-28 08:52 J -14133290.26 -14133290.13 -14133289.94 0.0089 0.0069
 Saturn -43405-09-18 22:47 J -14131991.77 -14131991.55 -14131991.32 0.0273 0.0103
 Saturn -43404-10-01 10:33 J -14131614.16 -14131614.06 -14131613.92 0.0274 0.0239
 Saturn -43390-03-16 15:06 J -14126700.08 -14126699.87 -14126699.66 0.0286 0.0146

Saturn -43389-03-29 07:11 J -14126321.31 -14126321.20 -14126321.07 0.0285 0.0246
 Jupiter -43389-09-12 18:14 J -14126153.96 -14126153.74 -14126153.52 0.0535 0.0159
 Jupiter -43377-09-18 02:09 J -14121765.53 -14121765.41 -14121765.28 0.0537 0.0450
 Saturn -43376-09-13 11:02 J -14121405.09 -14121405.04 -14121404.97 0.0273 0.0264
 Uranus -43376-09-27 05:30 J -14121391.32 -14121391.27 -14121391.20 0.0132 0.0128
 Saturn -43375-09-25 23:30 J -14121027.75 -14121027.52 -14121027.28 0.0273 0.0077
 Uranus -43375-10-01 10:33 J -14121022.31 -14121022.06 -14121021.81 0.0132 0.0024
 Uranus -43374-10-05 15:06 J -14120653.07 -14120652.87 -14120652.67 0.0132 0.0080
 Mars -43372-08-15 05:02 J -14119973.48 -14119973.29 -14119973.10 0.1602 0.0163
 Jupiter -43371-03-11 19:40 J -14119764.91 -14119764.68 -14119764.45 0.0493 0.0109
 Saturn -43360-03-23 10:47 J -14115735.29 -14115735.05 -14115734.81 0.0285 0.0067
 Jupiter -43359-03-16 03:35 J -14115377.51 -14115377.35 -14115377.17 0.0491 0.0337
 Saturn -43346-09-21 01:54 J -14110440.65 -14110440.42 -14110440.18 0.0274 0.0072
 Saturn -43345-10-02 13:54 J -14110062.93 -14110062.92 -14110062.87 0.0274 0.0272
 Uranus -43333-03-26 15:50 J -14105870.01 -14105869.84 -14105869.66 0.0146 0.0104
 Uranus -43332-03-31 19:54 J -14105499.91 -14105499.67 -14105499.42 0.0147 0.0041
 Saturn -43331-03-17 18:14 J -14105148.96 -14105148.74 -14105148.51 0.0285 0.0113
 Saturn -43330-03-31 10:18 J -14104770.10 -14104770.07 -14104770.02 0.0285 0.0280
 Neptune -43330-08-24 00:28 J -14104624.58 -14104624.48 -14104624.32 0.0088 0.0077
 Neptune -43329-08-25 12:14 J -14104257.19 -14104256.99 -14104256.74 0.0088 0.0044
 Neptune -43328-08-28 00:42 J -14103889.73 -14103889.47 -14103889.21 0.0088 0.0010
 Neptune -43327-08-30 11:59 J -14103522.23 -14103522.00 -14103521.73 0.0088 0.0025
 Neptune -43326-09-01 23:30 J -14103154.70 -14103154.52 -14103154.30 0.0088 0.0057
 Saturn -43317-09-14 14:23 J -14099854.01 -14099853.90 -14099853.76 0.0273 0.0233
 Saturn -43316-09-27 03:21 J -14099476.58 -14099476.36 -14099476.13 0.0274 0.0111
 Jupiter -43306-09-13 00:14 J -14095838.69 -14095838.49 -14095838.27 0.0535 0.0232
 Saturn -43301-03-24 13:54 J -14094184.15 -14094183.92 -14094183.69 0.0285 0.0101
 Jupiter -43294-09-18 00:42 J -14091450.65 -14091450.47 -14091450.30 0.0536 0.0342
 Mars -43293-08-17 07:26 J -14091116.28 -14091116.19 -14091116.09 0.1602 0.1356
 Uranus -43292-09-27 16:47 J -14090709.88 -14090709.80 -14090709.69 0.0132 0.0122

Uranus -43291-10-01 21:35 J -14090340.85 -14090340.60 -14090340.34 0.0132 0.0018
 Uranus -43290-10-06 02:23 J -14089971.59 -14089971.40 -14089971.21 0.0132 0.0086
 Pluto -43289-03-19 02:52 J -14089806.54 -14089806.38 -14089806.18 0.0065 0.0047
 Jupiter -43288-03-11 04:33 J -14089449.53 -14089449.31 -14089449.09 0.0494 0.0162
 Pluto -43288-03-20 16:33 J -14089440.02 -14089439.81 -14089439.56 0.0066 0.0030
 Saturn -43287-09-22 05:45 J -14088889.50 -14088889.26 -14088889.02 0.0274 0.0039
 Jupiter -43276-03-15 12:14 J -14085062.18 -14085061.99 -14085061.80 0.0492 0.0286
 Saturn -43272-03-19 00:14 J -14083597.73 -14083597.49 -14083597.25 0.0285 0.0076
 Saturn -43258-09-16 19:54 J -14078302.83 -14078302.67 -14078302.49 0.0273 0.0199
 Saturn -43257-09-28 08:52 J -14077925.33 -14077925.13 -14077924.92 0.0274 0.0146
 Uranus -43249-03-27 01:26 J -14075188.61 -14075188.44 -14075188.24 0.0146 0.0099
 Neptune -43248-02-18 19:26 J -14074859.77 -14074859.69 -14074859.59 0.0089 0.0083
 Uranus -43248-04-01 05:30 J -14074818.50 -14074818.27 -14074818.02 0.0147 0.0046
 Neptune -43247-02-21 06:28 J -14074492.42 -14074492.23 -14074492.00 0.0089 0.0050
 Neptune -43246-02-23 18:14 J -14074124.98 -14074124.74 -14074124.48 0.0089 0.0016
 Neptune -43245-02-26 05:45 J -14073757.50 -14073757.26 -14073757.00 0.0089 0.0018
 Neptune -43244-02-27 17:02 J -14073389.98 -14073389.79 -14073389.56 0.0089 0.0052
 Neptune -43243-03-02 04:18 J -14073022.35 -14073022.32 -14073022.22 0.0089 0.0086
 Saturn -43243-03-13 02:52 J -14073011.48 -14073011.38 -14073011.28 0.0286 0.0258
 Saturn -43242-03-26 19:11 J -14072632.91 -14072632.70 -14072632.48 0.0285 0.0137
 Mars -43237-02-10 06:42 J -14070851.36 -14070851.22 -14070851.08 0.1926 0.1381
 Saturn -43228-09-23 11:02 J -14067338.28 -14067338.04 -14067337.79 0.0274 0.0004
 Jupiter -43223-09-11 21:06 J -14065523.80 -14065523.62 -14065523.45 0.0534 0.0346
 Saturn -43213-03-20 08:38 J -14062046.38 -14062046.14 -14062045.89 0.0285 0.0036
 Jupiter -43211-09-17 00:57 J -14061135.66 -14061135.46 -14061135.24 0.0536 0.0244
 Uranus -43208-09-28 02:23 J -14060028.49 -14060028.40 -14060028.26 0.0132 0.0118
 Uranus -43207-10-02 07:26 J -14059659.43 -14059659.19 -14059658.93 0.0132 0.0013
 Uranus -43206-10-06 11:45 J -14059290.17 -14059290.01 -14059289.81 0.0132 0.0092
 Jupiter -43205-03-10 11:59 J -14059134.20 -14059134.00 -14059133.78 0.0494 0.0221
 Pluto -43202-09-22 11:16 J -14057843.23 -14057843.03 -14057842.81 0.0079 0.0045

Saturn -43199-09-18 02:52 J -14056751.58 -14056751.38 -14056751.18 0.0273 0.0164
 Saturn -43198-09-30 15:35 J -14056374.02 -14056373.85 -14056373.66 0.0274 0.0183
 Jupiter -43193-03-14 18:42 J -14054746.92 -14054746.72 -14054746.51 0.0492 0.0220
 Saturn -43184-03-14 11:02 J -14051460.18 -14051460.04 -14051459.87 0.0285 0.0220
 Saturn -43183-03-28 03:06 J -14051081.55 -14051081.37 -14051081.16 0.0285 0.0177
 Saturn -43169-09-24 17:45 J -14045787.00 -14045786.76 -14045786.51 0.0274 0.0032
 Mars -43167-08-14 09:50 J -14045098.27 -14045098.09 -14045097.92 0.1604 0.0687
 Uranus -43165-03-27 10:47 J -14044507.23 -14044507.05 -14044506.84 0.0146 0.0094
 Neptune -43165-08-24 21:35 J -14044356.77 -14044356.60 -14044356.39 0.0088 0.0060
 Uranus -43164-04-01 14:52 J -14044137.12 -14044136.88 -14044136.64 0.0147 0.0051
 Neptune -43164-08-27 09:35 J -14043989.33 -14043989.10 -14043988.84 0.0088 0.0026
 Neptune -43163-08-29 21:35 J -14043621.85 -14043621.60 -14043621.34 0.0088 0.0008
 Neptune -43162-09-01 09:06 J -14043254.33 -14043254.12 -14043253.87 0.0088 0.0042
 Neptune -43161-09-02 21:06 J -14042886.75 -14042886.62 -14042886.48 0.0088 0.0075
 Saturn -43154-03-22 19:11 J -14040494.95 -14040494.70 -14040494.45 0.0285 0.0006
 Jupiter -43140-09-10 22:33 J -14035208.68 -14035208.56 -14035208.42 0.0534 0.0439
 Saturn -43140-09-19 11:16 J -14035200.24 -14035200.03 -14035199.81 0.0273 0.0126
 Saturn -43139-10-02 00:14 J -14034822.63 -14034822.49 -14034822.34 0.0274 0.0221
 Jupiter -43128-09-16 04:33 J -14030820.53 -14030820.31 -14030820.08 0.0536 0.0158
 Saturn -43125-03-15 21:50 J -14029908.77 -14029908.59 -14029908.38 0.0285 0.0178
 Saturn -43124-03-29 13:40 J -14029530.08 -14029529.93 -14029529.77 0.0285 0.0219
 Uranus -43124-09-28 13:11 J -14029347.08 -14029346.95 -14029346.81 0.0132 0.0112
 Uranus -43123-10-02 17:59 J -14028978.01 -14028977.75 -14028977.50 0.0132 0.0007
 Jupiter -43122-03-10 16:18 J -14028819.00 -14028818.82 -14028818.63 0.0494 0.0296
 Uranus -43122-10-06 22:04 J -14028608.73 -14028608.58 -14028608.39 0.0132 0.0097
 Jupiter -43110-03-14 22:47 J -14024431.78 -14024431.55 -14024431.33 0.0493 0.0148
 Saturn -43110-09-27 01:40 J -14024235.67 -14024235.43 -14024235.19 0.0275 0.0070
 Saturn -43095-03-24 07:40 J -14018943.42 -14018943.18 -14018942.94 0.0285 0.0051
 Mars -43088-08-16 11:59 J -14016241.18 -14016241.00 -14016240.82 0.1604 0.0500
 Neptune -43083-02-20 15:35 J -14014591.99 -14014591.85 -14014591.65 0.0089 0.0068

Neptune -43082-02-23 03:21 J -14014224.58 -14014224.36 -14014224.10 0.0089 0.0033
 Neptune -43081-02-25 15:06 J -14013857.13 -14013856.87 -14013856.61 0.0089 0.0001
 Uranus -43081-03-27 20:09 J -14013825.84 -14013825.66 -14013825.44 0.0146 0.0089
 Saturn -43081-09-20 20:52 J -14013648.86 -14013648.63 -14013648.39 0.0274 0.0087
 Neptune -43080-02-27 02:23 J -14013489.63 -14013489.40 -14013489.16 0.0089 0.0035
 Uranus -43080-04-01 23:59 J -14013455.72 -14013455.50 -14013455.25 0.0146 0.0057
 Saturn -43080-10-03 09:35 J -14013271.16 -14013271.10 -14013271.01 0.0274 0.0262
 Neptune -43079-03-01 13:40 J -14013122.07 -14013121.93 -14013121.75 0.0089 0.0069
 Saturn -43066-03-18 10:18 J -14008357.27 -14008357.07 -14008356.84 0.0285 0.0134
 Saturn -43065-03-31 01:40 J -14007978.51 -14007978.43 -14007978.32 0.0285 0.0264
 Saturn -43052-09-15 19:54 J -14003061.78 -14003061.67 -14003061.55 0.0274 0.0242
 Saturn -43051-09-28 10:18 J -14002684.29 -14002684.07 -14002683.84 0.0275 0.0108
 Jupiter -43045-09-15 00:14 J -14000505.73 -14000505.49 -14000505.26 0.0534 0.0039
 Pluto -43043-03-21 05:59 J -13999953.40 -13999953.25 -13999953.08 0.0065 0.0052
 Pluto -43042-03-22 19:26 J -13999586.91 -13999586.69 -13999586.43 0.0066 0.0025
 Uranus -43040-09-28 21:50 J -13998665.72 -13998665.59 -13998665.42 0.0132 0.0108
 Jupiter -43039-03-09 18:42 J -13998503.86 -13998503.72 -13998503.56 0.0495 0.0375
 Uranus -43039-10-03 03:06 J -13998296.63 -13998296.37 -13998296.12 0.0132 0.0003
 Uranus -43038-10-07 07:26 J -13997927.34 -13997927.19 -13997927.02 0.0132 0.0102
 Saturn -43036-03-25 20:38 J -13997391.87 -13997391.64 -13997391.41 0.0285 0.0097
 Jupiter -43027-03-14 04:18 J -13994116.55 -13994116.32 -13994116.08 0.0493 0.0082
 Saturn -43022-09-23 06:57 J -13992097.45 -13992097.21 -13992096.96 0.0274 0.0047
 Saturn -43007-03-19 23:30 J -13986805.75 -13986805.52 -13986805.29 0.0285 0.0087
 Neptune -43001-08-24 07:26 J -13984456.31 -13984456.19 -13984456.04 0.0088 0.0076

43RD MILLENNIUM BCE

This is a list of transits of Earth in the 43rd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Neptune	-43000-08-26 18:57 J	-13984088.92	-13984088.71	-13984088.46	0.0088	0.0043		
Neptune	-42999-08-29 07:11 J	-13983721.45	-13983721.20	-13983720.93	0.0088	0.0009		
Neptune	-42998-08-31 18:57 J	-13983353.95	-13983353.71	-13983353.45	0.0088	0.0026		
Uranus	-42997-03-28 05:16 J	-13983144.47	-13983144.28	-13983144.05	0.0146	0.0084		
Neptune	-42997-09-02 06:28 J	-13982986.40	-13982986.23	-13982986.02	0.0088	0.0060		
Uranus	-42996-04-02 09:21 J	-13982774.34	-13982774.11	-13982773.87	0.0146	0.0061		
Saturn	-42993-09-17 04:47 J	-13981510.45	-13981510.30	-13981510.13	0.0274	0.0203		
Saturn	-42992-09-29 18:57 J	-13981132.91	-13981132.71	-13981132.50	0.0275	0.0148		
Saturn	-42978-03-14 18:14 J	-13976218.83	-13976218.74	-13976218.61	0.0285	0.0254		
Saturn	-42977-03-27 09:35 J	-13975840.30	-13975840.10	-13975839.88	0.0285	0.0144		
Saturn	-42963-09-24 17:16 J	-13970546.03	-13970545.78	-13970545.54	0.0274	0.0005		
Mars	-42962-08-13 13:54 J	-13970222.96	-13970222.92	-13970222.88	0.1607	0.1568		
Jupiter	-42962-09-14 21:21 J	-13970190.84	-13970190.61	-13970190.38	0.0534	0.0078		
Jupiter	-42956-03-09 00:28 J	-13968188.58	-13968188.48	-13968188.38	0.0495	0.0446		
Pluto	-42956-09-23 13:26 J	-13967990.12	-13967989.94	-13967989.76	0.0079	0.0056		
Uranus	-42956-09-29 07:11 J	-13967984.33	-13967984.20	-13967984.01	0.0132	0.0104		
Pluto	-42955-09-25 16:33 J	-13967622.81	-13967622.81	-13967622.77	0.0079	0.0079		
Uranus	-42955-10-03 12:28 J	-13967615.23	-13967614.98	-13967614.72	0.0132	0.0002		
Uranus	-42954-10-07 17:02 J	-13967245.93	-13967245.79	-13967245.63	0.0132	0.0106		
Jupiter	-42950-09-20 04:04 J	-13965802.36	-13965802.33	-13965802.28	0.0536	0.0528		
Saturn	-42948-03-21 11:45 J	-13965254.25	-13965254.01	-13965253.77	0.0285	0.0042		
Jupiter	-42944-03-13 08:09 J	-13963801.40	-13963801.16	-13963800.93	0.0494	0.0004		
Saturn	-42934-09-19 13:40 J	-13959959.12	-13959958.93	-13959958.73	0.0274	0.0163		
Saturn	-42933-10-01 03:21 J	-13959581.53	-13959581.36	-13959581.17	0.0275	0.0188		
Jupiter	-42932-03-17 13:11 J	-13959414.04	-13959413.95	-13959413.84	0.0492	0.0443		

Neptune -42919-02-20 02:09 J -13954691.49 -13954691.41 -13954691.32 0.0089 0.0084
 Saturn -42919-03-16 06:14 J -13954667.41 -13954667.24 -13954667.08 0.0285 0.0209
 Neptune -42918-02-22 13:26 J -13954324.14 -13954323.94 -13954323.71 0.0089 0.0049
 Saturn -42918-03-29 21:35 J -13954288.78 -13954288.60 -13954288.42 0.0285 0.0189
 Neptune -42917-02-25 01:11 J -13953956.70 -13953956.45 -13953956.19 0.0089 0.0015
 Neptune -42916-02-26 12:28 J -13953589.22 -13953588.98 -13953588.72 0.0089 0.0019
 Neptune -42915-03-01 00:14 J -13953221.69 -13953221.49 -13953221.28 0.0089 0.0053
 Neptune -42914-03-03 11:45 J -13952854.05 -13952854.01 -13952853.97 0.0089 0.0088
 Uranus -42913-03-28 14:38 J -13952463.08 -13952462.89 -13952462.66 0.0146 0.0079
 Uranus -42912-04-02 18:28 J -13952092.94 -13952092.73 -13952092.49 0.0146 0.0067
 Saturn -42904-09-26 02:38 J -13948994.63 -13948994.39 -13948994.14 0.0274 0.0035
 Saturn -42889-03-22 23:16 J -13943702.78 -13943702.53 -13943702.29 0.0285 0.0004
 Mars -42883-08-15 15:50 J -13941366.03 -13941365.84 -13941365.65 0.1606 0.0371
 Jupiter -42879-09-13 23:45 J -13939875.73 -13939875.51 -13939875.28 0.0534 0.0167
 Saturn -42875-09-20 21:21 J -13938407.83 -13938407.61 -13938407.39 0.0274 0.0124
 Mars -42874-02-12 18:57 J -13938262.91 -13938262.71 -13938262.51 0.1924 0.0333
 Saturn -42874-10-03 11:02 J -13938030.17 -13938030.04 -13938029.90 0.0275 0.0227
 Uranus -42872-09-29 15:50 J -13937302.99 -13937302.84 -13937302.66 0.0132 0.0099
 Uranus -42871-10-03 21:06 J -13936933.88 -13936933.62 -13936933.37 0.0132 0.0005
 Uranus -42870-10-08 01:26 J -13936564.56 -13936564.44 -13936564.28 0.0132 0.0110
 Jupiter -42867-09-19 02:23 J -13935487.54 -13935487.40 -13935487.25 0.0535 0.0417
 Jupiter -42861-03-12 11:30 J -13933486.25 -13933486.02 -13933485.79 0.0494 0.0075
 Saturn -42860-03-17 15:21 J -13933116.05 -13933115.86 -13933115.66 0.0285 0.0166
 Saturn -42859-03-31 06:57 J -13932737.34 -13932737.21 -13932737.06 0.0285 0.0233
 Jupiter -42849-03-16 21:06 J -13929098.76 -13929098.62 -13929098.47 0.0493 0.0382
 Saturn -42845-09-27 11:16 J -13927443.27 -13927443.03 -13927442.79 0.0274 0.0075
 Neptune -42836-08-26 05:59 J -13924188.43 -13924188.25 -13924188.04 0.0088 0.0058
 Neptune -42835-08-28 17:30 J -13923821.00 -13923820.77 -13923820.50 0.0088 0.0025
 Neptune -42834-08-31 05:45 J -13923453.52 -13923453.26 -13923453.00 0.0088 0.0010
 Neptune -42833-09-01 17:02 J -13923086.00 -13923085.79 -13923085.55 0.0088 0.0044

Neptune -42832-09-04 05:02 J -13922718.40 -13922718.29 -13922718.16 0.0088 0.0078
 Saturn -42830-03-25 08:09 J -13922151.40 -13922151.16 -13922150.91 0.0285 0.0046
 Uranus -42829-03-28 23:30 J -13921781.72 -13921781.52 -13921781.28 0.0146 0.0075
 Uranus -42828-04-03 03:21 J -13921411.57 -13921411.36 -13921411.12 0.0146 0.0070
 Saturn -42816-09-22 03:50 J -13916856.57 -13916856.34 -13916856.10 0.0274 0.0086
 Saturn -42815-10-04 17:02 J -13916478.84 -13916478.79 -13916478.71 0.0275 0.0265
 Mars -42804-08-17 18:28 J -13912508.90 -13912508.73 -13912508.57 0.1606 0.0828
 Saturn -42801-03-18 22:18 J -13911564.78 -13911564.57 -13911564.34 0.0285 0.0126
 Saturn -42800-04-01 14:09 J -13911185.96 -13911185.91 -13911185.83 0.0285 0.0274
 Pluto -42797-03-22 09:21 J -13910100.21 -13910100.11 -13910099.94 0.0065 0.0057
 Pluto -42796-03-23 23:45 J -13909733.75 -13909733.51 -13909733.26 0.0066 0.0020
 Jupiter -42796-09-12 17:59 J -13909560.94 -13909560.75 -13909560.55 0.0533 0.0297
 Uranus -42788-09-30 01:11 J -13906621.62 -13906621.45 -13906621.27 0.0132 0.0095
 Saturn -42787-09-17 05:02 J -13906269.40 -13906269.29 -13906269.16 0.0273 0.0237
 Uranus -42787-10-04 06:14 J -13906252.50 -13906252.24 -13906251.99 0.0132 0.0009
 Saturn -42786-09-29 17:59 J -13905891.97 -13905891.75 -13905891.52 0.0274 0.0114
 Uranus -42786-10-08 10:33 J -13905883.17 -13905883.06 -13905882.91 0.0132 0.0114
 Jupiter -42784-09-17 23:16 J -13905172.72 -13905172.53 -13905172.34 0.0535 0.0299
 Jupiter -42778-03-12 20:09 J -13903170.88 -13903170.66 -13903170.43 0.0494 0.0130
 Saturn -42771-03-26 14:52 J -13900600.11 -13900599.88 -13900599.65 0.0285 0.0085
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 Neptune -42754-02-21 23:30 J -13894423.66 -13894423.52 -13894423.32 0.0089 0.0066
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 Mars -42110-08-17 04:33 J -13659026.48 -13659026.31 -13659026.14 0.1615 0.0702
 Saturn -42109-09-27 03:06 J -13658619.62 -13658619.37 -13658619.13 0.0274 0.0012

Jupiter -42108-09-17 19:26 J -13658263.91 -13658263.69 -13658263.46 0.0533 0.0155
 Jupiter -42102-03-13 17:02 J -13656261.01 -13656260.79 -13656260.57 0.0497 0.0162
 Neptune -42096-02-23 19:54 J -13654086.85 -13654086.67 -13654086.47 0.0089 0.0061
 Neptune -42095-02-26 07:40 J -13653719.43 -13653719.18 -13653718.93 0.0089 0.0025
 Neptune -42094-02-28 18:57 J -13653351.96 -13653351.71 -13653351.45 0.0089 0.0010
 Saturn -42094-03-23 13:11 J -13653329.18 -13653328.95 -13653328.72 0.0285 0.0091
 Neptune -42093-03-02 05:59 J -13652984.45 -13652984.25 -13652984.00 0.0089 0.0045
 Neptune -42092-03-04 17:30 J -13652616.86 -13652616.77 -13652616.63 0.0089 0.0080
 Jupiter -42090-03-18 00:57 J -13651873.64 -13651873.46 -13651873.27 0.0495 0.0294
 Saturn -42080-09-21 23:30 J -13648032.69 -13648032.52 -13648032.32 0.0275 0.0175
 Saturn -42079-10-04 15:06 J -13647655.04 -13647654.87 -13647654.69 0.0275 0.0190
 Uranus -42073-04-01 02:09 J -13645649.64 -13645649.41 -13645649.15 0.0146 0.0043
 Uranus -42072-04-06 05:45 J -13645279.43 -13645279.26 -13645279.07 0.0146 0.0102
 Saturn -42065-03-17 09:06 J -13642742.22 -13642742.12 -13642742.02 0.0284 0.0260
 Saturn -42064-03-30 22:33 J -13642363.77 -13642363.56 -13642363.35 0.0284 0.0148
 Pluto -42058-03-29 00:14 J -13640174.73 -13640174.49 -13640174.23 0.0066 0.0018
 Pluto -42057-03-29 13:26 J -13639808.01 -13639807.94 -13639807.79 0.0066 0.0060
 Saturn -42050-09-29 13:11 J -13637068.19 -13637067.95 -13637067.70 0.0274 0.0032
 Jupiter -42037-09-11 17:30 J -13632336.78 -13632336.77 -13632336.74 0.0530 0.0527
 Saturn -42035-03-25 01:54 J -13631777.66 -13631777.42 -13631777.18 0.0285 0.0043
 Uranus -42032-10-03 03:35 J -13630489.57 -13630489.35 -13630489.13 0.0132 0.0067
 Mars -42031-08-19 07:26 J -13630169.37 -13630169.19 -13630169.01 0.1614 0.0530
 Uranus -42031-10-07 08:23 J -13630120.39 -13630120.15 -13630119.90 0.0132 0.0038
 Jupiter -42025-09-16 21:06 J -13627948.85 -13627948.62 -13627948.39 0.0532 0.0062
 Saturn -42021-09-23 08:38 J -13626481.35 -13626481.14 -13626480.92 0.0275 0.0133
 Saturn -42020-10-05 23:45 J -13626103.64 -13626103.51 -13626103.38 0.0275 0.0231
 Jupiter -42019-03-12 17:45 J -13625945.96 -13625945.76 -13625945.55 0.0498 0.0252
 Neptune -42014-08-28 14:09 J -13623951.07 -13623950.91 -13623950.73 0.0088 0.0067
 Neptune -42013-08-30 01:54 J -13623583.65 -13623583.42 -13623583.16 0.0088 0.0032
 Neptune -42012-09-01 14:09 J -13623216.17 -13623215.91 -13623215.65 0.0088 0.0003

Neptune -42011-09-04 01:40 J -13622848.65 -13622848.43 -13622848.18 0.0088 0.0038

Neptune -42010-09-06 13:11 J -13622481.07 -13622480.95 -13622480.78 0.0088 0.0073

Jupiter -42007-03-17 03:06 J -13621558.58 -13621558.37 -13621558.16 0.0496 0.0211

Saturn -42006-03-19 20:38 J -13621190.79 -13621190.64 -13621190.47 0.0284 0.0214

Saturn -42005-04-01 10:18 J -13620812.24 -13620812.07 -13620811.88 0.0284 0.0195

42ND MILLENNIUM BCE

This is a list of transits of Earth in the 42nd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-41991-09-30 23:16 J	-13615516.76	-13615516.53	-13615516.29	0.0274	0.0075		
Uranus	-41989-04-01 10:18 J	-13614968.30	-13614968.07	-13614967.81	0.0146	0.0039		
Uranus	-41988-04-06 13:54 J	-13614598.09	-13614597.92	-13614597.74	0.0146	0.0105		
Saturn	-41976-03-26 13:26 J	-13610226.19	-13610225.94	-13610225.70	0.0285	0.0004		
Pluto	-41971-10-01 19:54 J	-13608210.92	-13608210.67	-13608210.43	0.0079	0.0024		
Saturn	-41962-09-25 17:16 J	-13604930.00	-13604929.78	-13604929.54	0.0275	0.0092		
Saturn	-41961-10-07 07:54 J	-13604552.18	-13604552.17	-13604552.13	0.0275	0.0273		
Uranus	-41948-10-03 11:59 J	-13599808.21	-13599808.00	-13599807.77	0.0132	0.0063		
Saturn	-41947-03-21 06:28 J	-13599639.42	-13599639.23	-13599639.03	0.0284	0.0169		
Uranus	-41947-10-07 17:16 J	-13599439.02	-13599438.78	-13599438.54	0.0132	0.0041		
Saturn	-41946-04-03 20:38 J	-13599260.76	-13599260.64	-13599260.50	0.0284	0.0241		
Mars	-41943-02-13 10:18 J	-13598214.24	-13598214.07	-13598213.90	0.1912	0.1009		
Jupiter	-41942-09-16 14:38 J	-13597634.12	-13597633.89	-13597633.66	0.0531	0.0073		
Jupiter	-41936-03-12 00:42 J	-13595630.64	-13595630.47	-13595630.29	0.0498	0.0318		

Saturn -41933-09-19 17:45 J -13594342.85 -13594342.76 -13594342.64 0.0274 0.0247
 Neptune -41932-02-23 06:42 J -13594186.31 -13594186.22 -13594186.06 0.0089 0.0078
 Saturn -41932-10-02 08:23 J -13593965.37 -13593965.15 -13593964.92 0.0274 0.0117
 Neptune -41931-02-25 18:42 J -13593818.94 -13593818.72 -13593818.49 0.0089 0.0042
 Neptune -41930-02-28 06:14 J -13593451.49 -13593451.24 -13593450.98 0.0089 0.0006
 Jupiter -41930-09-21 18:42 J -13593245.75 -13593245.72 -13593245.66 0.0534 0.0521
 Neptune -41929-03-01 17:16 J -13593084.01 -13593083.78 -13593083.53 0.0089 0.0029
 Neptune -41928-03-04 04:33 J -13592716.46 -13592716.31 -13592716.11 0.0089 0.0064
 Jupiter -41924-03-16 10:04 J -13591243.30 -13591243.08 -13591242.85 0.0496 0.0147
 Saturn -41917-03-27 23:02 J -13588674.78 -13588674.54 -13588674.30 0.0285 0.0049
 Uranus -41905-04-01 18:28 J -13584286.96 -13584286.73 -13584286.47 0.0146 0.0036
 Uranus -41904-04-06 22:04 J -13583916.74 -13583916.58 -13583916.40 0.0146 0.0109
 Saturn -41903-09-27 00:57 J -13583378.70 -13583378.46 -13583378.22 0.0274 0.0050
 Saturn -41888-03-22 14:09 J -13578088.12 -13578087.91 -13578087.69 0.0285 0.0127
 Saturn -41887-04-05 04:33 J -13577709.32 -13577709.31 -13577709.29 0.0284 0.0284
 Saturn -41874-09-22 02:09 J -13572791.56 -13572791.41 -13572791.24 0.0274 0.0206
 Saturn -41873-10-03 16:33 J -13572414.01 -13572413.81 -13572413.61 0.0274 0.0158
 Uranus -41864-10-03 20:09 J -13569126.87 -13569126.66 -13569126.42 0.0132 0.0060
 Uranus -41863-10-08 01:26 J -13568757.68 -13568757.44 -13568757.20 0.0132 0.0044
 Jupiter -41859-09-15 18:42 J -13567318.94 -13567318.72 -13567318.50 0.0531 0.0158
 Saturn -41858-03-30 06:14 J -13567123.47 -13567123.24 -13567123.01 0.0285 0.0091
 Jupiter -41853-03-11 07:26 J -13565315.33 -13565315.19 -13565315.04 0.0498 0.0385
 Neptune -41850-08-28 00:14 J -13564050.55 -13564050.49 -13564050.37 0.0088 0.0083
 Neptune -41849-08-29 12:14 J -13563683.18 -13563682.99 -13563682.75 0.0088 0.0049
 Neptune -41848-09-01 00:28 J -13563315.73 -13563315.48 -13563315.21 0.0088 0.0014
 Neptune -41847-09-03 12:28 J -13562948.22 -13562947.98 -13562947.72 0.0088 0.0022
 Jupiter -41847-09-21 00:14 J -13562930.62 -13562930.49 -13562930.36 0.0533 0.0443
 Neptune -41846-09-06 00:28 J -13562580.67 -13562580.48 -13562580.28 0.0088 0.0057
 Saturn -41844-09-28 07:26 J -13561827.43 -13561827.19 -13561826.94 0.0274 0.0011
 Jupiter -41841-03-15 14:09 J -13560928.14 -13560927.91 -13560927.68 0.0496 0.0069

Saturn -41829-03-23 19:11 J -13556536.93 -13556536.70 -13556536.46 0.0285 0.0087
 Mars -41826-08-18 09:35 J -13555294.29 -13555294.10 -13555293.92 0.1618 0.0411
 Uranus -41821-04-02 03:21 J -13553605.60 -13553605.36 -13553605.11 0.0146 0.0031
 Uranus -41820-04-07 06:57 J -13553235.36 -13553235.21 -13553235.04 0.0146 0.0113
 Saturn -41815-09-23 08:52 J -13551240.33 -13551240.13 -13551239.94 0.0274 0.0167
 Saturn -41814-10-05 22:33 J -13550862.72 -13550862.56 -13550862.38 0.0274 0.0198
 Pluto -41812-03-29 19:54 J -13550321.84 -13550321.67 -13550321.43 0.0066 0.0041
 Pluto -41811-03-31 10:18 J -13549955.27 -13549955.07 -13549954.84 0.0066 0.0037
 Saturn -41800-03-17 21:50 J -13545950.62 -13545950.59 -13545950.53 0.0285 0.0280
 Saturn -41799-03-31 11:30 J -13545572.24 -13545572.02 -13545571.80 0.0285 0.0131
 Saturn -41785-09-29 12:14 J -13540276.23 -13540275.99 -13540275.74 0.0274 0.0028
 Uranus -41780-10-04 05:02 J -13538445.50 -13538445.29 -13538445.04 0.0132 0.0057
 Uranus -41779-10-08 10:18 J -13538076.30 -13538076.07 -13538075.82 0.0132 0.0049
 Jupiter -41776-09-14 23:02 J -13537003.75 -13537003.54 -13537003.34 0.0530 0.0241
 Jupiter -41770-03-11 12:42 J -13535000.06 -13534999.97 -13534999.88 0.0499 0.0459
 Saturn -41770-03-25 21:35 J -13534985.84 -13534985.60 -13534985.35 0.0285 0.0051
 Neptune -41767-02-25 05:30 J -13533918.44 -13533918.27 -13533918.06 0.0089 0.0058
 Neptune -41766-02-27 16:47 J -13533551.03 -13533550.80 -13533550.53 0.0089 0.0024
 Neptune -41765-03-01 04:33 J -13533183.56 -13533183.31 -13533183.05 0.0089 0.0013
 Neptune -41764-03-03 15:50 J -13532816.04 -13532815.84 -13532815.61 0.0089 0.0048
 Jupiter -41764-09-19 20:23 J -13532615.83 -13532615.65 -13532615.46 0.0532 0.0322
 Neptune -41763-03-06 03:21 J -13532448.44 -13532448.36 -13532448.26 0.0089 0.0083
 Jupiter -41758-03-16 00:14 J -13530612.72 -13530612.49 -13530612.25 0.0497 0.0019
 Saturn -41756-09-24 13:54 J -13529689.13 -13529688.92 -13529688.70 0.0274 0.0130
 Saturn -41755-10-07 03:35 J -13529311.46 -13529311.35 -13529311.21 0.0274 0.0236
 Mars -41747-08-20 12:42 J -13526437.13 -13526436.97 -13526436.81 0.1616 0.0841
 Jupiter -41746-03-20 09:35 J -13526225.14 -13526225.10 -13526225.04 0.0495 0.0484
 Saturn -41741-03-19 00:57 J -13524399.58 -13524399.46 -13524399.33 0.0285 0.0244
 Saturn -41740-04-01 14:23 J -13524021.09 -13524020.90 -13524020.69 0.0285 0.0168
 Uranus -41737-04-02 11:45 J -13522924.25 -13522924.01 -13522923.75 0.0146 0.0028

Uranus -41736-04-07 15:35 J -13522553.99 -13522553.85 -13522553.69 0.0146 0.0117
 Saturn -41726-10-01 15:50 J -13518725.08 -13518724.84 -13518724.60 0.0274 0.0064
 Pluto -41725-10-02 15:06 J -13518358.12 -13518357.87 -13518357.61 0.0079 0.0007
 Saturn -41711-03-26 22:33 J -13513434.80 -13513434.56 -13513434.31 0.0285 0.0018
 Saturn -41697-09-25 17:30 J -13508138.00 -13508137.77 -13508137.54 0.0274 0.0095
 Uranus -41696-10-04 13:54 J -13507764.14 -13507763.92 -13507763.67 0.0132 0.0053
 Saturn -41696-10-08 07:11 J -13507760.22 -13507760.20 -13507760.16 0.0274 0.0271
 Uranus -41695-10-08 19:11 J -13507394.93 -13507394.70 -13507394.46 0.0132 0.0052
 Jupiter -41693-09-13 21:21 J -13506688.78 -13506688.61 -13506688.43 0.0530 0.0350
 Neptune -41685-08-28 23:02 J -13503782.70 -13503782.54 -13503782.35 0.0088 0.0064
 Neptune -41684-08-31 11:02 J -13503415.28 -13503415.04 -13503414.79 0.0088 0.0029
 Neptune -41683-09-02 23:02 J -13503047.80 -13503047.54 -13503047.28 0.0088 0.0006
 Saturn -41682-03-21 02:23 J -13502848.56 -13502848.40 -13502848.24 0.0285 0.0210
 Neptune -41682-09-05 10:47 J -13502680.27 -13502680.05 -13502679.81 0.0088 0.0041
 Saturn -41681-04-02 15:50 J -13502470.00 -13502469.84 -13502469.66 0.0285 0.0203
 Neptune -41681-09-06 22:33 J -13502312.69 -13502312.56 -13502312.42 0.0088 0.0076
 Jupiter -41681-09-19 02:23 J -13502300.61 -13502300.40 -13502300.20 0.0532 0.0247
 Jupiter -41675-03-15 10:18 J -13500297.30 -13500297.07 -13500296.83 0.0497 0.0034
 Saturn -41668-09-20 03:35 J -13497551.38 -13497551.35 -13497551.29 0.0274 0.0269
 Saturn -41667-10-02 18:57 J -13497173.94 -13497173.71 -13497173.48 0.0274 0.0099
 Jupiter -41663-03-19 17:45 J -13495909.88 -13495909.76 -13495909.64 0.0495 0.0422
 Uranus -41653-04-02 21:06 J -13492242.86 -13492242.62 -13492242.36 0.0146 0.0023
 Saturn -41652-03-27 22:04 J -13491883.83 -13491883.58 -13491883.34 0.0285 0.0015
 Uranus -41652-04-08 00:42 J -13491872.59 -13491872.47 -13491872.31 0.0146 0.0122
 Saturn -41638-09-27 19:54 J -13486586.91 -13486586.67 -13486586.43 0.0274 0.0061
 Saturn -41623-03-22 03:06 J -13481297.55 -13481297.37 -13481297.16 0.0284 0.0178
 Saturn -41622-04-04 16:47 J -13480918.93 -13480918.80 -13480918.66 0.0285 0.0237
 Mars -41621-08-16 10:47 J -13480419.15 -13480419.05 -13480418.95 0.1622 0.1375
 Uranus -41612-10-04 23:59 J -13477082.74 -13477082.50 -13477082.26 0.0132 0.0048
 Uranus -41611-10-09 04:47 J -13476713.52 -13476713.30 -13476713.06 0.0132 0.0057

Jupiter -41610-09-14 05:59 J -13476373.39 -13476373.25 -13476373.10 0.0529 0.0410
 Saturn -41609-09-21 05:59 J -13476000.36 -13476000.25 -13476000.12 0.0274 0.0236
 Saturn -41608-10-03 21:06 J -13475622.83 -13475622.62 -13475622.40 0.0274 0.0133
 Neptune -41603-02-24 15:50 J -13474017.97 -13474017.84 -13474017.70 0.0089 0.0076
 Neptune -41602-02-27 02:52 J -13473650.59 -13473650.38 -13473650.13 0.0089 0.0040
 Neptune -41601-02-29 14:52 J -13473283.14 -13473282.88 -13473282.63 0.0089 0.0004
 Neptune -41600-03-03 02:09 J -13472915.64 -13472915.41 -13472915.16 0.0089 0.0032
 Neptune -41599-03-05 13:11 J -13472548.10 -13472547.95 -13472547.76 0.0089 0.0067
 Jupiter -41598-09-19 09:50 J -13471985.31 -13471985.09 -13471984.87 0.0531 0.0180
 Saturn -41593-03-28 21:21 J -13470332.85 -13470332.61 -13470332.37 0.0285 0.0047
 Jupiter -41592-03-14 18:14 J -13469981.97 -13469981.74 -13469981.51 0.0498 0.0095
 Mars -41580-02-16 00:28 J -13465625.67 -13465625.48 -13465625.30 0.1909 0.0752
 Jupiter -41580-03-19 04:04 J -13465594.47 -13465594.33 -13465594.17 0.0496 0.0377
 Saturn -41579-09-28 22:04 J -13465035.82 -13465035.58 -13465035.33 0.0275 0.0028
 Uranus -41569-04-03 06:14 J -13461561.49 -13461561.24 -13461560.98 0.0146 0.0018
 Uranus -41568-04-08 10:04 J -13461191.20 -13461191.08 -13461190.94 0.0146 0.0126
 Pluto -41565-04-01 04:47 J -13460102.55 -13460102.30 -13460102.03 0.0066 0.0010
 Saturn -41564-03-23 04:18 J -13459746.52 -13459746.32 -13459746.10 0.0284 0.0144
 Saturn -41563-04-05 17:30 J -13459367.83 -13459367.77 -13459367.68 0.0284 0.0271
 Saturn -41550-09-23 08:23 J -13454449.30 -13454449.15 -13454448.98 0.0274 0.0203
 Saturn -41549-10-04 23:30 J -13454071.71 -13454071.52 -13454071.32 0.0274 0.0167
 Mars -41542-08-19 14:09 J -13451562.10 -13451561.91 -13451561.72 0.1621 0.0114
 Saturn -41534-03-30 21:21 J -13448781.84 -13448781.61 -13448781.37 0.0284 0.0079
 Uranus -41528-10-05 09:06 J -13446401.35 -13446401.12 -13446400.87 0.0132 0.0043
 Jupiter -41527-09-13 07:26 J -13446058.25 -13446058.19 -13446058.11 0.0528 0.0501
 Uranus -41527-10-09 14:23 J -13446032.12 -13446031.90 -13446031.67 0.0132 0.0061
 Neptune -41521-08-28 08:52 J -13443882.21 -13443882.13 -13443882.01 0.0088 0.0081
 Neptune -41520-08-30 20:38 J -13443514.84 -13443514.64 -13443514.40 0.0088 0.0047
 Saturn -41520-09-30 00:14 J -13443484.73 -13443484.49 -13443484.24 0.0275 0.0007
 Neptune -41519-09-02 08:52 J -13443147.38 -13443147.13 -13443146.87 0.0088 0.0011

Neptune -41518-09-04 20:23 J -13442779.88 -13442779.65 -13442779.39 0.0088 0.0025
 Neptune -41517-09-06 08:09 J -13442412.33 -13442412.16 -13442411.95 0.0088 0.0060
 Jupiter -41515-09-18 09:06 J -13441670.35 -13441670.12 -13441669.88 0.0530 0.0076
 Jupiter -41509-03-14 03:50 J -13439666.56 -13439666.34 -13439666.11 0.0499 0.0144
 Saturn -41505-03-24 06:42 J -13438195.44 -13438195.22 -13438194.99 0.0284 0.0110
 Jupiter -41497-03-18 14:38 J -13435279.06 -13435278.89 -13435278.71 0.0497 0.0328
 Saturn -41491-09-24 11:30 J -13432898.20 -13432898.02 -13432897.82 0.0274 0.0170
 Saturn -41490-10-07 02:38 J -13432520.55 -13432520.39 -13432520.22 0.0274 0.0202
 Uranus -41485-04-03 15:50 J -13430880.09 -13430879.84 -13430879.58 0.0146 0.0013
 Uranus -41484-04-08 19:26 J -13430509.79 -13430509.69 -13430509.56 0.0146 0.0131
 Pluto -41479-10-04 04:18 J -13428505.49 -13428505.32 -13428505.11 0.0079 0.0053
 Saturn -41475-03-31 22:47 J -13427230.78 -13427230.55 -13427230.33 0.0284 0.0113
 Mars -41463-08-21 17:59 J -13422704.88 -13422704.75 -13422704.61 0.1619 0.1151
 Saturn -41461-10-01 03:21 J -13421933.60 -13421933.36 -13421933.12 0.0275 0.0040
 Saturn -41446-03-26 10:47 J -13416644.28 -13416644.05 -13416643.81 0.0284 0.0073
 Uranus -41444-10-05 19:54 J -13415719.92 -13415719.67 -13415719.43 0.0132 0.0037
 Uranus -41443-10-10 00:28 J -13415350.68 -13415350.48 -13415350.24 0.0132 0.0067
 Neptune -41438-02-26 13:11 J -13413750.14 -13413749.95 -13413749.76 0.0089 0.0057
 Neptune -41437-02-29 00:28 J -13413382.72 -13413382.48 -13413382.22 0.0089 0.0022
 Neptune -41436-03-02 11:59 J -13413015.25 -13413015.00 -13413014.74 0.0089 0.0014
 Neptune -41435-03-04 23:02 J -13412647.74 -13412647.54 -13412647.31 0.0089 0.0050
 Neptune -41434-03-07 11:02 J -13412280.11 -13412280.04 -13412279.98 0.0089 0.0086
 Jupiter -41432-09-17 15:21 J -13411355.09 -13411354.86 -13411354.63 0.0530 0.0004
 Saturn -41432-09-25 15:35 J -13411347.05 -13411346.85 -13411346.62 0.0274 0.0135
 Saturn -41431-10-08 06:42 J -13410969.33 -13410969.22 -13410969.09 0.0274 0.0239
 Jupiter -41426-03-14 11:45 J -13409351.22 -13409351.01 -13409350.80 0.0499 0.0205
 Saturn -41417-03-19 13:26 J -13406058.00 -13406057.94 -13406057.84 0.0284 0.0268
 Saturn -41416-04-02 02:23 J -13405679.60 -13405679.40 -13405679.19 0.0284 0.0149
 Jupiter -41414-03-18 21:21 J -13404963.81 -13404963.61 -13404963.41 0.0497 0.0262
 Saturn -41402-10-03 07:11 J -13400382.43 -13400382.20 -13400381.96 0.0275 0.0075

Uranus -41401-04-04 01:40 J -13400198.69 -13400198.43 -13400198.18 0.0146 0.0008
 Uranus -41400-04-09 04:47 J -13399828.36 -13399828.30 -13399828.18 0.0146 0.0137
 Saturn -41387-03-27 17:02 J -13395093.03 -13395092.79 -13395092.54 0.0284 0.0034
 Saturn -41373-09-26 21:21 J -13389795.83 -13389795.61 -13389795.37 0.0275 0.0098
 Uranus -41360-10-06 05:45 J -13385038.49 -13385038.26 -13385038.00 0.0132 0.0032
 Uranus -41359-10-10 11:02 J -13384669.24 -13384669.04 -13384668.82 0.0132 0.0072
 Saturn -41358-03-21 19:54 J -13384506.80 -13384506.67 -13384506.51 0.0284 0.0228
 Saturn -41357-04-03 08:23 J -13384128.32 -13384128.15 -13384127.95 0.0284 0.0189
 Neptune -41356-08-30 05:59 J -13383614.42 -13383614.25 -13383614.06 0.0088 0.0064
 Neptune -41355-09-01 17:45 J -13383247.00 -13383246.76 -13383246.51 0.0088 0.0029
 Neptune -41354-09-04 05:30 J -13382879.52 -13382879.27 -13382879.00 0.0088 0.0008
 Neptune -41353-09-05 17:02 J -13382512.00 -13382511.79 -13382511.54 0.0088 0.0043
 Neptune -41352-09-08 04:47 J -13382144.40 -13382144.30 -13382144.16 0.0088 0.0078
 Jupiter -41349-09-16 17:02 J -13381040.02 -13381039.79 -13381039.56 0.0529 0.0087
 Saturn -41344-09-21 19:11 J -13379208.76 -13379208.70 -13379208.63 0.0276 0.0265
 Jupiter -41343-03-13 15:50 J -13379036.02 -13379035.84 -13379035.64 0.0500 0.0280
 Saturn -41343-10-04 12:28 J -13378831.20 -13378830.98 -13378830.76 0.0275 0.0112
 Mars -41337-08-17 14:38 J -13376687.03 -13376686.89 -13376686.75 0.1626 0.1107
 Jupiter -41337-09-21 17:45 J -13376651.84 -13376651.76 -13376651.67 0.0531 0.0490
 Jupiter -41331-03-18 02:23 J -13374648.61 -13374648.40 -13374648.18 0.0498 0.0194
 Saturn -41328-03-29 01:40 J -13373541.67 -13373541.43 -13373541.18 0.0284 0.0010
 Pluto -41319-04-02 20:52 J -13370249.87 -13370249.63 -13370249.39 0.0066 0.0023
 Uranus -41318-03-31 07:26 J -13369887.21 -13369887.19 -13369887.13 0.0146 0.0145
 Pluto -41318-04-04 10:18 J -13369883.18 -13369883.07 -13369882.89 0.0066 0.0056
 Uranus -41317-04-04 11:30 J -13369517.27 -13369517.02 -13369516.76 0.0146 0.0003
 Uranus -41316-04-09 15:21 J -13369146.92 -13369146.86 -13369146.80 0.0147 0.0142
 Saturn -41314-09-29 04:18 J -13368244.55 -13368244.32 -13368244.07 0.0275 0.0059
 Saturn -41299-03-23 05:02 J -13362955.47 -13362955.29 -13362955.10 0.0284 0.0185
 Saturn -41298-04-05 17:16 J -13362576.91 -13362576.78 -13362576.63 0.0284 0.0232
 Mars -41296-02-15 06:57 J -13361895.40 -13361895.21 -13361895.02 0.1903 0.0566

Saturn -41285-09-23 01:40 J -13357657.56 -13357657.43 -13357657.29 0.0276 0.0227
 Saturn -41284-10-05 18:57 J -13357279.91 -13357279.71 -13357279.50 0.0276 0.0152
 Uranus -41277-10-02 11:45 J -13354726.05 -13354726.01 -13354725.95 0.0132 0.0130
 Uranus -41276-10-06 17:02 J -13354357.03 -13354356.79 -13354356.53 0.0132 0.0026
 Uranus -41275-10-10 22:04 J -13353987.78 -13353987.58 -13353987.37 0.0132 0.0078
 Neptune -41274-02-25 21:21 J -13353849.72 -13353849.61 -13353849.45 0.0089 0.0076
 Neptune -41273-02-28 09:06 J -13353482.34 -13353482.12 -13353481.88 0.0089 0.0040
 Neptune -41272-03-01 20:52 J -13353114.89 -13353114.63 -13353114.38 0.0089 0.0004
 Neptune -41271-03-04 07:54 J -13352747.39 -13352747.17 -13352746.91 0.0089 0.0033
 Neptune -41270-03-06 19:11 J -13352379.84 -13352379.70 -13352379.51 0.0089 0.0068
 Saturn -41269-03-30 12:14 J -13351990.23 -13351989.99 -13351989.75 0.0284 0.0055
 Jupiter -41266-09-16 14:38 J -13350725.11 -13350724.89 -13350724.68 0.0529 0.0202
 Jupiter -41260-03-12 22:33 J -13348720.72 -13348720.56 -13348720.39 0.0500 0.0347
 Mars -41258-08-20 18:42 J -13347829.91 -13347829.72 -13347829.53 0.1624 0.0180
 Saturn -41255-09-30 13:11 J -13346693.20 -13346692.95 -13346692.71 0.0275 0.0017
 Jupiter -41254-09-21 18:28 J -13346336.89 -13346336.73 -13346336.58 0.0531 0.0389
 Jupiter -41248-03-17 08:23 J -13344333.38 -13344333.15 -13344332.93 0.0498 0.0123
 Saturn -41240-03-24 16:04 J -13341404.04 -13341403.83 -13341403.61 0.0284 0.0140
 Saturn -41239-04-07 04:04 J -13341025.36 -13341025.33 -13341025.26 0.0284 0.0278
 Uranus -41234-03-31 17:45 J -13339205.82 -13339205.76 -13339205.67 0.0146 0.0139
 Uranus -41233-04-04 21:35 J -13338835.85 -13338835.60 -13338835.34 0.0147 0.0005
 Pluto -41232-10-06 20:09 J -13338285.88 -13338285.66 -13338285.40 0.0078 0.0032
 Saturn -41226-09-25 09:06 J -13336106.30 -13336106.12 -13336105.94 0.0276 0.0187
 Saturn -41225-10-07 02:23 J -13335728.57 -13335728.40 -13335728.22 0.0276 0.0193
 Saturn -41210-04-02 00:14 J -13330438.71 -13330438.49 -13330438.26 0.0284 0.0104
 Saturn -41196-10-01 22:47 J -13325141.80 -13325141.55 -13325141.31 0.0275 0.0027
 Uranus -41193-10-02 22:47 J -13324044.63 -13324044.55 -13324044.45 0.0132 0.0123
 Neptune -41192-08-29 13:54 J -13323713.98 -13323713.92 -13323713.79 0.0088 0.0082
 Uranus -41192-10-07 03:50 J -13323675.59 -13323675.34 -13323675.08 0.0132 0.0019
 Neptune -41191-09-01 02:09 J -13323346.62 -13323346.41 -13323346.17 0.0088 0.0047

Uranus -41191-10-11 08:38 J -13323306.32 -13323306.14 -13323305.93 0.0132 0.0084
 Neptune -41190-09-03 14:09 J -13322979.16 -13322978.91 -13322978.65 0.0088 0.0011
 Neptune -41189-09-05 01:54 J -13322611.66 -13322611.42 -13322611.16 0.0088 0.0025
 Neptune -41188-09-07 13:11 J -13322244.11 -13322243.95 -13322243.73 0.0088 0.0061
 Jupiter -41183-09-15 17:45 J -13320409.95 -13320409.76 -13320409.56 0.0528 0.0289
 Saturn -41181-03-26 04:18 J -13319852.55 -13319852.32 -13319852.09 0.0284 0.0092
 Mars -41179-08-22 22:18 J -13318972.65 -13318972.57 -13318972.48 0.1622 0.1449
 Jupiter -41177-03-12 02:09 J -13318405.53 -13318405.41 -13318405.29 0.0501 0.0430
 Jupiter -41171-09-20 19:54 J -13316021.86 -13316021.67 -13316021.48 0.0530 0.0296
 Saturn -41167-09-26 17:59 J -13314554.96 -13314554.75 -13314554.54 0.0276 0.0144
 Saturn -41166-10-09 11:02 J -13314177.16 -13314177.04 -13314176.91 0.0276 0.0236
 Jupiter -41165-03-16 09:06 J -13314018.35 -13314018.12 -13314017.88 0.0499 0.0033
 Saturn -41152-03-21 00:57 J -13309265.53 -13309265.46 -13309265.36 0.0283 0.0264
 Saturn -41151-04-03 12:42 J -13308887.17 -13308886.97 -13308886.76 0.0284 0.0153
 Uranus -41150-04-01 03:50 J -13308524.43 -13308524.34 -13308524.23 0.0146 0.0133
 Uranus -41149-04-05 07:40 J -13308154.43 -13308154.18 -13308153.92 0.0147 0.0010
 Saturn -41137-10-03 08:38 J -13303590.37 -13303590.14 -13303589.90 0.0275 0.0071
 Saturn -41122-03-28 17:16 J -13298301.02 -13298300.78 -13298300.54 0.0284 0.0042
 Neptune -41109-02-27 17:02 J -13293581.96 -13293581.79 -13293581.57 0.0089 0.0059
 Uranus -41109-10-03 10:33 J -13293363.17 -13293363.06 -13293362.94 0.0132 0.0116
 Neptune -41108-03-01 04:33 J -13293214.54 -13293214.31 -13293214.05 0.0089 0.0023
 Saturn -41108-09-28 02:52 J -13293003.60 -13293003.38 -13293003.15 0.0276 0.0100
 Uranus -41108-10-07 15:35 J -13292994.10 -13292993.85 -13292993.59 0.0132 0.0013
 Neptune -41107-03-03 16:18 J -13292847.07 -13292846.82 -13292846.57 0.0089 0.0013
 Uranus -41107-10-11 20:09 J -13292624.83 -13292624.66 -13292624.46 0.0132 0.0091
 Neptune -41106-03-06 03:50 J -13292479.55 -13292479.34 -13292479.12 0.0089 0.0049
 Neptune -41105-03-07 14:52 J -13292111.94 -13292111.88 -13292111.80 0.0089 0.0085
 Jupiter -41100-09-14 16:47 J -13290094.95 -13290094.80 -13290094.64 0.0527 0.0394
 Saturn -41093-03-22 12:57 J -13287714.11 -13287713.96 -13287713.79 0.0283 0.0215
 Saturn -41092-04-05 00:28 J -13287335.64 -13287335.48 -13287335.30 0.0284 0.0203

Jupiter -41088-09-19 13:40 J -13285707.15 -13285706.93 -13285706.70 0.0529 0.0162
 Jupiter -41082-03-16 15:06 J -13283703.10 -13283702.87 -13283702.63 0.0500 0.0040
 Saturn -41079-09-23 01:54 J -13282416.48 -13282416.42 -13282416.34 0.0275 0.0263
 Saturn -41078-10-05 18:57 J -13282038.92 -13282038.71 -13282038.48 0.0275 0.0117
 Pluto -41073-04-03 10:18 J -13280397.15 -13280397.07 -13280396.94 0.0066 0.0060
 Pluto -41072-04-05 00:28 J -13280030.72 -13280030.48 -13280030.22 0.0066 0.0018
 Jupiter -41070-03-21 00:42 J -13279315.58 -13279315.47 -13279315.35 0.0497 0.0432
 Uranus -41066-04-01 14:23 J -13277843.01 -13277842.90 -13277842.75 0.0147 0.0127
 Uranus -41065-04-05 18:28 J -13277472.98 -13277472.73 -13277472.48 0.0147 0.0017
 Saturn -41063-03-30 05:02 J -13276749.54 -13276749.29 -13276749.05 0.0284 0.0007
 Mars -41053-08-18 17:59 J -13272954.91 -13272954.75 -13272954.59 0.1629 0.0846
 Saturn -41049-09-29 11:45 J -13271452.25 -13271452.01 -13271451.76 0.0275 0.0057
 Saturn -41034-03-24 23:45 J -13266162.70 -13266162.51 -13266162.31 0.0284 0.0168
 Saturn -41033-04-06 11:30 J -13265784.12 -13265784.02 -13265783.90 0.0284 0.0251
 Neptune -41027-08-31 09:06 J -13263446.28 -13263446.12 -13263445.93 0.0088 0.0066
 Neptune -41026-09-02 21:21 J -13263078.85 -13263078.61 -13263078.36 0.0088 0.0030
 Neptune -41025-09-04 09:21 J -13262711.37 -13262711.11 -13262710.85 0.0088 0.0006
 Uranus -41025-10-03 22:18 J -13262681.71 -13262681.57 -13262681.42 0.0132 0.0109
 Neptune -41024-09-06 20:52 J -13262343.85 -13262343.63 -13262343.40 0.0088 0.0042
 Uranus -41024-10-08 03:06 J -13262312.62 -13262312.37 -13262312.11 0.0132 0.0006
 Neptune -41023-09-09 08:09 J -13261976.26 -13261976.16 -13261976.01 0.0088 0.0078
 Uranus -41023-10-12 07:40 J -13261943.34 -13261943.18 -13261943.00 0.0132 0.0097
 Saturn -41020-09-24 11:59 J -13260865.14 -13260865.00 -13260864.85 0.0275 0.0219
 Saturn -41019-10-07 04:18 J -13260487.50 -13260487.32 -13260487.11 0.0275 0.0162
 Jupiter -41017-09-13 12:57 J -13259780.00 -13259779.96 -13259779.92 0.0527 0.0517
 Mars -41012-02-14 14:23 J -13258164.96 -13258164.90 -13258164.85 0.1896 0.1813
 Jupiter -41005-09-18 16:33 J -13255392.04 -13255391.81 -13255391.58 0.0529 0.0072
 Saturn -41004-03-31 15:06 J -13255198.10 -13255197.87 -13255197.62 0.0284 0.0055

41ST MILLENNIUM BCE

This is a list of transits of Earth in the 41st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-40999-03-15 20:09 J	-13253387.89	-13253387.66	-13253387.43	0.0500	0.0115		
Saturn	-40990-10-01 20:23 J	-13249900.90	-13249900.65	-13249900.41	0.0275	0.0013		
Jupiter	-40987-03-20 02:52 J	-13249000.54	-13249000.38	-13249000.21	0.0498	0.0345		
Pluto	-40986-10-08 04:33 J	-13248433.53	-13248433.31	-13248433.06	0.0079	0.0032		
Uranus	-40982-04-02 00:42 J	-13247161.60	-13247161.47	-13247161.31	0.0147	0.0121		
Uranus	-40981-04-06 04:33 J	-13246791.55	-13246791.31	-13246791.05	0.0147	0.0023		
Saturn	-40975-03-26 07:40 J	-13244611.39	-13244611.18	-13244610.95	0.0284	0.0124		
Mars	-40974-08-21 22:18 J	-13244097.75	-13244097.57	-13244097.39	0.1628	0.0453		
Saturn	-40961-09-25 21:06 J	-13239313.80	-13239313.62	-13239313.42	0.0275	0.0175		
Saturn	-40960-10-08 13:26 J	-13238936.10	-13238935.94	-13238935.78	0.0275	0.0205		
Neptune	-40945-02-27 00:57 J	-13233681.56	-13233681.46	-13233681.32	0.0089	0.0078		
Saturn	-40945-04-01 23:30 J	-13233646.74	-13233646.52	-13233646.28	0.0284	0.0100		
Neptune	-40944-02-28 12:14 J	-13233314.20	-13233313.99	-13233313.75	0.0089	0.0042		
Neptune	-40943-03-02 23:59 J	-13232946.75	-13232946.50	-13232946.24	0.0089	0.0006		
Neptune	-40942-03-05 11:16 J	-13232579.27	-13232579.03	-13232578.79	0.0089	0.0030		
Neptune	-40941-03-06 22:47 J	-13232211.72	-13232211.55	-13232211.38	0.0089	0.0066		
Uranus	-40941-10-04 10:18 J	-13232000.21	-13232000.07	-13231999.89	0.0132	0.0102		
Uranus	-40940-10-08 15:35 J	-13231631.11	-13231630.85	-13231630.60	0.0132	0.0002		
Uranus	-40939-10-12 19:40 J	-13231261.81	-13231261.68	-13231261.51	0.0132	0.0105		
Mars	-40933-02-18 21:50 J	-13229306.74	-13229306.59	-13229306.44	0.1900	0.1197		

Saturn -40931-10-03 03:21 J -13228349.60 -13228349.36 -13228349.12 0.0275 0.0030
 Jupiter -40922-09-18 19:11 J -13225076.93 -13225076.70 -13225076.46 0.0528 0.0020
 Jupiter -40916-03-14 23:02 J -13223072.75 -13223072.54 -13223072.32 0.0501 0.0200
 Saturn -40916-03-27 13:40 J -13223060.17 -13223059.93 -13223059.70 0.0284 0.0082
 Jupiter -40904-03-19 11:16 J -13218685.22 -13218685.03 -13218684.84 0.0499 0.0285
 Saturn -40902-09-28 04:47 J -13217762.51 -13217762.30 -13217762.08 0.0275 0.0133
 Saturn -40901-10-09 20:23 J -13217384.74 -13217384.65 -13217384.53 0.0275 0.0248
 Uranus -40898-04-02 11:59 J -13216480.14 -13216480.00 -13216479.82 0.0147 0.0114
 Uranus -40897-04-06 16:04 J -13216110.08 -13216109.83 -13216109.58 0.0147 0.0030
 Saturn -40887-03-21 18:14 J -13212473.77 -13212473.74 -13212473.68 0.0284 0.0278
 Saturn -40886-04-04 05:16 J -13212095.48 -13212095.28 -13212095.06 0.0284 0.0142
 Saturn -40872-10-04 09:21 J -13206798.35 -13206798.11 -13206797.87 0.0275 0.0070
 Neptune -40863-08-30 15:06 J -13203545.91 -13203545.87 -13203545.79 0.0088 0.0085
 Neptune -40862-09-02 03:21 J -13203178.56 -13203178.36 -13203178.13 0.0088 0.0050
 Neptune -40861-09-03 15:35 J -13202811.11 -13202810.85 -13202810.60 0.0088 0.0014
 Neptune -40860-09-06 03:21 J -13202443.61 -13202443.36 -13202443.10 0.0088 0.0022
 Neptune -40859-09-08 14:38 J -13202076.06 -13202075.89 -13202075.67 0.0088 0.0059
 Saturn -40857-03-28 16:47 J -13201509.04 -13201508.80 -13201508.56 0.0284 0.0044
 Uranus -40857-10-04 22:47 J -13201318.71 -13201318.55 -13201318.36 0.0132 0.0094
 Uranus -40856-10-09 03:35 J -13200949.60 -13200949.35 -13200949.09 0.0132 0.0010
 Uranus -40855-10-13 08:23 J -13200580.28 -13200580.15 -13200580.02 0.0132 0.0112
 Saturn -40843-09-29 10:47 J -13196211.28 -13196211.05 -13196210.81 0.0275 0.0093
 Jupiter -40839-09-17 16:47 J -13194762.03 -13194761.80 -13194761.58 0.0528 0.0135
 Jupiter -40833-03-14 08:52 J -13192757.33 -13192757.13 -13192756.93 0.0501 0.0251
 Saturn -40828-03-22 21:50 J -13190922.70 -13190922.59 -13190922.45 0.0284 0.0241
 Saturn -40827-04-05 09:06 J -13190544.30 -13190544.12 -13190543.92 0.0284 0.0181
 Jupiter -40827-09-22 20:23 J -13190373.75 -13190373.65 -13190373.53 0.0530 0.0459
 Pluto -40826-04-06 11:30 J -13190178.24 -13190178.02 -13190177.77 0.0066 0.0028
 Pluto -40825-04-07 01:40 J -13189811.58 -13189811.43 -13189811.25 0.0066 0.0051
 Jupiter -40821-03-18 19:54 J -13188369.88 -13188369.67 -13188369.46 0.0499 0.0228

Uranus -40814-04-02 22:33 J -13185798.71 -13185798.56 -13185798.37 0.0147 0.0107
 Saturn -40814-09-23 20:38 J -13185624.64 -13185624.64 -13185624.60 0.0275 0.0274
 Uranus -40813-04-07 02:38 J -13185428.63 -13185428.39 -13185428.13 0.0147 0.0037
 Saturn -40813-10-05 14:09 J -13185247.14 -13185246.91 -13185246.69 0.0275 0.0109
 Saturn -40798-03-30 17:59 J -13179957.99 -13179957.75 -13179957.50 0.0284 0.0009
 Saturn -40784-09-30 15:21 J -13174660.10 -13174659.86 -13174659.62 0.0275 0.0055
 Neptune -40780-02-27 19:11 J -13173413.86 -13173413.70 -13173413.50 0.0089 0.0062
 Neptune -40779-03-02 06:28 J -13173046.46 -13173046.23 -13173045.97 0.0089 0.0026
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 Neptune -40777-03-06 05:02 J -13172311.49 -13172311.29 -13172311.06 0.0089 0.0047
 Neptune -40776-03-08 16:18 J -13171943.89 -13171943.82 -13171943.72 0.0089 0.0083
 Uranus -40773-10-05 11:59 J -13170637.19 -13170637.00 -13170636.80 0.0132 0.0085
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 Uranus -40771-10-13 21:06 J -13169898.70 -13169898.62 -13169898.50 0.0132 0.0121
 Saturn -40769-03-23 23:30 J -13169371.67 -13169371.52 -13169371.34 0.0284 0.0206
 Mars -40769-08-19 20:23 J -13169222.83 -13169222.65 -13169222.47 0.1633 0.0605
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 Jupiter -40756-09-17 00:42 J -13164446.68 -13164446.47 -13164446.25 0.0527 0.0199
 Saturn -40755-09-25 00:57 J -13164073.58 -13164073.46 -13164073.34 0.0275 0.0237
 Saturn -40754-10-07 17:30 J -13163695.97 -13163695.77 -13163695.55 0.0275 0.0147
 Jupiter -40750-03-14 15:35 J -13162442.02 -13162441.85 -13162441.66 0.0501 0.0320
 Jupiter -40744-09-22 03:35 J -13160058.51 -13160058.35 -13160058.19 0.0530 0.0388
 Saturn -40739-03-31 17:59 J -13158406.99 -13158406.75 -13158406.51 0.0284 0.0025
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 Saturn -40710-03-26 00:57 J -13147820.65 -13147820.46 -13147820.26 0.0283 0.0171
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 Jupiter -40661-09-21 02:52 J -13129743.57 -13129743.38 -13129743.18 0.0528 0.0285
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 Jupiter -40584-03-13 11:16 J -13101811.15 -13101811.03 -13101810.91 0.0503 0.0425
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 Uranus -40562-04-04 10:33 J -13093754.26 -13093754.06 -13093753.84 0.0147 0.0082
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 Uranus -40520-10-11 09:21 J -13078223.34 -13078223.11 -13078222.86 0.0132 0.0046
 Saturn -40519-09-30 12:28 J -13077869.21 -13077868.98 -13077868.75 0.0275 0.0098
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 Jupiter -40501-03-12 17:30 J -13071495.80 -13071495.77 -13071495.72 0.0503 0.0496
 Jupiter -40495-09-20 13:26 J -13069113.16 -13069112.94 -13069112.71 0.0527 0.0133
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 Pluto -40492-10-12 16:04 J -13067994.86 -13067994.83 -13067994.74 0.0078 0.0076
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 Mars -40406-08-24 02:38 J -13036633.55 -13036633.39 -13036633.24 0.1635 0.0949
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 Pluto -40332-04-10 02:38 J -13009740.63 -13009740.39 -13009740.12 0.0066 0.0012
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 Jupiter -40323-03-16 15:21 J -13006478.08 -13006477.86 -13006477.64 0.0503 0.0156
 Saturn -40313-09-29 01:40 J -13002628.62 -13002628.43 -13002628.22 0.0277 0.0156
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 Uranus -40101-10-10 06:14 J -12925184.50 -12925184.24 -12925183.99 0.0132 0.0007
 Uranus -40100-10-14 10:33 J -12924815.22 -12924815.06 -12924814.87 0.0132 0.0096
 Saturn -40091-04-04 09:06 J -12921721.36 -12921721.12 -12921720.88 0.0283 0.0064
 Pluto -40086-04-11 01:26 J -12919888.50 -12919888.44 -12919888.33 0.0066 0.0062
 Pluto -40085-04-11 15:50 J -12919522.08 -12919521.84 -12919521.58 0.0066 0.0017
 Jupiter -40080-09-16 18:28 J -12917537.90 -12917537.73 -12917537.56 0.0524 0.0356
 Saturn -40077-10-05 14:09 J -12916423.15 -12916422.91 -12916422.66 0.0276 0.0028
 Jupiter -40074-03-14 22:18 J -12915532.70 -12915532.57 -12915532.45 0.0505 0.0422
 Jupiter -40068-09-21 17:59 J -12913149.96 -12913149.75 -12913149.53 0.0526 0.0213
 Jupiter -40062-03-19 09:50 J -12911145.32 -12911145.09 -12911144.86 0.0503 0.0067
 Saturn -40062-03-30 02:52 J -12911134.60 -12911134.38 -12911134.15 0.0283 0.0117
 Uranus -40058-04-07 15:21 J -12909665.10 -12909664.86 -12909664.61 0.0147 0.0028

Uranus -40057-04-11 19:11 J -12909294.84 -12909294.70 -12909294.53 0.0147 0.0116
 Saturn -40048-09-30 14:23 J -12905836.10 -12905835.90 -12905835.68 0.0276 0.0143
 Saturn -40047-10-13 08:52 J -12905458.21 -12905458.13 -12905458.03 0.0276 0.0255
 Neptune -40040-09-01 22:18 J -12902942.61 -12902942.57 -12902942.45 0.0088 0.0085
 Neptune -40039-09-04 10:33 J -12902575.26 -12902575.06 -12902574.83 0.0088 0.0048
 Neptune -40038-09-06 22:33 J -12902207.81 -12902207.56 -12902207.29 0.0088 0.0011
 Neptune -40037-09-08 10:33 J -12901840.31 -12901840.06 -12901839.81 0.0088 0.0025
 Neptune -40036-09-10 21:50 J -12901472.75 -12901472.59 -12901472.39 0.0088 0.0062
 Saturn -40032-04-05 17:59 J -12900169.97 -12900169.75 -12900169.52 0.0283 0.0112
 Uranus -40018-10-07 15:06 J -12894872.01 -12894871.87 -12894871.68 0.0132 0.0101
 Saturn -40018-10-07 22:18 J -12894871.81 -12894871.57 -12894871.34 0.0276 0.0072 *
 Uranus -40017-10-10 20:38 J -12894502.89 -12894502.64 -12894502.38 0.0132 0.0004
 Uranus -40016-10-15 00:57 J -12894133.59 -12894133.46 -12894133.28 0.0132 0.0106
 Saturn -40003-03-31 09:21 J -12889583.34 -12889583.11 -12889582.87 0.0283 0.0073
 Mars -40002-02-20 06:28 J -12889257.42 -12889257.23 -12889257.04 0.1883 0.0528

40TH MILLENNIUM BCE

This is a list of transits of Earth in the 40th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								

Pluto -39999-10-15 00:42 J -12887924.71 -12887924.47 -12887924.21 0.0078 0.0017
 Jupiter -39997-09-15 14:23 J -12887222.99 -12887222.90 -12887222.80 0.0523 0.0477
 Mars -39996-08-20 17:59 J -12886883.86 -12886883.75 -12886883.64 0.1649 0.1331
 Jupiter -39991-03-14 05:02 J -12885217.34 -12885217.29 -12885217.24 0.0506 0.0492

Saturn -39989-10-01 23:16 J -12884284.76 -12884284.53 -12884284.30 0.0276 0.0097
 Jupiter -39985-09-20 14:38 J -12882835.12 -12882834.89 -12882834.66 0.0526 0.0092
 Jupiter -39979-03-18 18:14 J -12880829.98 -12880829.74 -12880829.51 0.0503 0.0011
 Saturn -39974-03-25 16:18 J -12878996.87 -12878996.82 -12878996.74 0.0282 0.0272
 Uranus -39974-04-08 03:06 J -12878983.62 -12878983.37 -12878983.12 0.0147 0.0020
 Saturn -39973-04-07 00:28 J -12878618.67 -12878618.48 -12878618.26 0.0283 0.0157
 Uranus -39973-04-12 06:42 J -12878613.35 -12878613.22 -12878613.07 0.0147 0.0123
 Jupiter -39967-03-23 05:30 J -12876442.30 -12876442.27 -12876442.22 0.0501 0.0493
 Saturn -39959-10-09 04:47 J -12873320.52 -12873320.30 -12873320.07 0.0276 0.0116
 Neptune -39957-03-02 07:11 J -12872810.37 -12872810.20 -12872809.98 0.0089 0.0058
 Neptune -39956-03-04 18:57 J -12872442.95 -12872442.71 -12872442.45 0.0089 0.0021
 Neptune -39955-03-07 06:42 J -12872075.47 -12872075.22 -12872074.97 0.0089 0.0016
 Neptune -39954-03-09 17:59 J -12871707.96 -12871707.75 -12871707.55 0.0089 0.0053
 Saturn -39944-04-01 13:40 J -12868032.17 -12868031.93 -12868031.68 0.0283 0.0032
 Uranus -39934-10-08 05:45 J -12864190.43 -12864190.26 -12864190.06 0.0132 0.0091
 Uranus -39933-10-11 11:16 J -12863821.28 -12863821.03 -12863820.78 0.0132 0.0012
 Uranus -39932-10-15 15:35 J -12863451.96 -12863451.85 -12863451.71 0.0132 0.0115
 Saturn -39930-10-04 05:45 J -12862733.50 -12862733.26 -12862733.02 0.0276 0.0055
 Mars -39917-08-23 00:14 J -12858026.69 -12858026.49 -12858026.30 0.1646 0.0068
 Saturn -39915-03-26 20:52 J -12857445.76 -12857445.63 -12857445.49 0.0282 0.0231
 Saturn -39914-04-09 05:02 J -12857067.46 -12857067.29 -12857067.11 0.0283 0.0198
 Jupiter -39902-09-20 21:35 J -12852519.84 -12852519.60 -12852519.37 0.0525 0.0024
 Saturn -39901-09-27 14:52 J -12852146.99 -12852146.88 -12852146.76 0.0276 0.0243
 Saturn -39900-10-10 10:33 J -12851769.26 -12851769.06 -12851768.86 0.0276 0.0157
 Jupiter -39896-03-17 23:16 J -12850514.76 -12850514.53 -12850514.30 0.0503 0.0070
 Uranus -39890-04-08 16:33 J -12848302.06 -12848301.81 -12848301.55 0.0147 0.0011
 Uranus -39889-04-12 20:09 J -12847931.75 -12847931.66 -12847931.54 0.0147 0.0133
 Saturn -39885-04-02 15:21 J -12846481.10 -12846480.86 -12846480.61 0.0283 0.0006
 Jupiter -39884-03-22 10:33 J -12846127.18 -12846127.06 -12846126.93 0.0501 0.0416
 Neptune -39875-09-03 14:09 J -12842675.05 -12842674.91 -12842674.73 0.0088 0.0069

Neptune -39874-09-06 02:23 J -12842307.63 -12842307.40 -12842307.15 0.0088 0.0033
 Neptune -39873-09-07 14:23 J -12841940.16 -12841939.90 -12841939.64 0.0088 0.0004
 Neptune -39872-09-10 02:09 J -12841572.64 -12841572.41 -12841572.18 0.0088 0.0041
 Neptune -39871-09-12 13:26 J -12841205.04 -12841204.94 -12841204.80 0.0088 0.0078
 Saturn -39871-10-05 10:47 J -12841182.29 -12841182.05 -12841181.80 0.0276 0.0015
 Saturn -39856-03-27 23:30 J -12835894.69 -12835894.52 -12835894.34 0.0282 0.0194
 Saturn -39855-04-10 07:54 J -12835516.29 -12835516.17 -12835516.03 0.0283 0.0237
 Uranus -39850-10-08 20:09 J -12833508.85 -12833508.66 -12833508.45 0.0132 0.0082
 Uranus -39849-10-12 01:26 J -12833139.69 -12833139.44 -12833139.19 0.0132 0.0022
 Uranus -39848-10-16 06:14 J -12832770.32 -12832770.24 -12832770.15 0.0132 0.0124
 Saturn -39842-09-29 18:57 J -12830595.86 -12830595.71 -12830595.53 0.0276 0.0206
 Saturn -39841-10-11 14:23 J -12830218.07 -12830217.90 -12830217.73 0.0276 0.0196
 Pluto -39838-04-13 22:04 J -12829303.83 -12829303.58 -12829303.32 0.0066 0.0004
 Mars -39838-08-26 05:30 J -12829169.36 -12829169.27 -12829169.18 0.1644 0.1433
 Saturn -39826-04-04 15:35 J -12824930.09 -12824929.85 -12824929.61 0.0283 0.0040
 Jupiter -39819-09-19 21:50 J -12822204.82 -12822204.59 -12822204.35 0.0524 0.0076
 Jupiter -39813-03-17 07:26 J -12820199.41 -12820199.19 -12820198.96 0.0505 0.0129
 Saturn -39812-10-06 14:38 J -12819631.14 -12819630.89 -12819630.65 0.0276 0.0023
 Uranus -39807-04-04 00:42 J -12817990.48 -12817990.47 -12817990.40 0.0146 0.0145
 Jupiter -39807-09-24 21:50 J -12817816.65 -12817816.59 -12817816.50 0.0526 0.0498
 Uranus -39806-04-09 04:33 J -12817620.56 -12817620.31 -12817620.06 0.0147 0.0003
 Uranus -39805-04-13 07:54 J -12817250.23 -12817250.17 -12817250.08 0.0147 0.0140
 Jupiter -39801-03-21 20:38 J -12815811.80 -12815811.64 -12815811.48 0.0502 0.0368
 Saturn -39797-03-29 00:42 J -12814343.66 -12814343.47 -12814343.26 0.0282 0.0159
 Saturn -39796-04-11 09:21 J -12813965.16 -12813965.11 -12813965.04 0.0283 0.0273
 Neptune -39793-03-01 11:59 J -12812910.09 -12812910.00 -12812909.86 0.0089 0.0080
 Neptune -39792-03-03 23:30 J -12812542.72 -12812542.52 -12812542.27 0.0089 0.0043
 Neptune -39791-03-06 11:16 J -12812175.29 -12812175.03 -12812174.77 0.0089 0.0005
 Neptune -39790-03-08 22:33 J -12811807.79 -12811807.56 -12811807.31 0.0089 0.0032
 Neptune -39789-03-10 09:50 J -12811440.24 -12811440.09 -12811439.92 0.0089 0.0070

Saturn -39783-09-30 22:33 J -12809044.75 -12809044.56 -12809044.36 0.0276 0.0168
 Saturn -39782-10-13 17:45 J -12808666.89 -12808666.76 -12808666.63 0.0276 0.0234
 Saturn -39767-04-05 15:06 J -12803379.10 -12803378.87 -12803378.63 0.0283 0.0073
 Uranus -39766-10-09 09:50 J -12802827.29 -12802827.09 -12802826.86 0.0132 0.0073
 Uranus -39765-10-12 15:06 J -12802458.11 -12802457.87 -12802457.61 0.0132 0.0031
 Saturn -39753-10-07 17:02 J -12798080.03 -12798079.79 -12798079.55 0.0276 0.0059
 Pluto -39752-10-16 06:42 J -12797706.44 -12797706.22 -12797705.96 0.0078 0.0033
 Saturn -39738-03-31 01:54 J -12792792.64 -12792792.42 -12792792.20 0.0282 0.0124
 Jupiter -39736-09-19 03:06 J -12791889.60 -12791889.37 -12791889.15 0.0524 0.0154
 Jupiter -39730-03-17 17:59 J -12789883.96 -12789883.75 -12789883.53 0.0505 0.0179
 Jupiter -39724-09-24 06:14 J -12787501.37 -12787501.24 -12787501.11 0.0526 0.0434
 Saturn -39724-10-02 01:11 J -12787493.66 -12787493.45 -12787493.22 0.0276 0.0132
 Uranus -39723-04-04 14:52 J -12787308.97 -12787308.88 -12787308.77 0.0146 0.0134
 Saturn -39723-10-14 20:38 J -12787115.68 -12787115.64 -12787115.59 0.0276 0.0271
 Uranus -39722-04-09 18:14 J -12786939.00 -12786938.74 -12786938.49 0.0147 0.0008
 Mars -39718-02-19 20:09 J -12785526.85 -12785526.66 -12785526.47 0.1875 0.0471
 Jupiter -39718-03-22 05:02 J -12785496.47 -12785496.29 -12785496.10 0.0502 0.0307
 Mars -39712-08-21 18:14 J -12783151.88 -12783151.74 -12783151.60 0.1654 0.1142
 Neptune -39710-09-05 06:28 J -12782407.41 -12782407.23 -12782407.00 0.0088 0.0054
 Neptune -39709-09-06 18:42 J -12782039.97 -12782039.72 -12782039.45 0.0088 0.0017
 Saturn -39708-04-06 14:38 J -12781828.11 -12781827.89 -12781827.66 0.0283 0.0107
 Neptune -39708-09-09 06:14 J -12781672.48 -12781672.24 -12781671.97 0.0088 0.0020
 Neptune -39707-09-11 18:14 J -12781304.93 -12781304.74 -12781304.53 0.0088 0.0057
 Saturn -39694-10-09 19:11 J -12776528.93 -12776528.70 -12776528.47 0.0277 0.0095
 Uranus -39682-10-09 23:45 J -12772145.72 -12772145.51 -12772145.27 0.0132 0.0064
 Uranus -39681-10-13 05:02 J -12771776.52 -12771776.29 -12771776.04 0.0132 0.0041
 Saturn -39679-04-01 03:06 J -12771241.60 -12771241.37 -12771241.13 0.0282 0.0089
 Saturn -39665-10-03 04:18 J -12765942.55 -12765942.32 -12765942.09 0.0276 0.0096
 Jupiter -39653-09-18 11:59 J -12761574.21 -12761574.00 -12761573.78 0.0523 0.0214
 Saturn -39649-04-07 15:21 J -12760277.07 -12760276.86 -12760276.65 0.0283 0.0141

Jupiter -39647-03-17 00:57 J -12759568.66 -12759568.46 -12759568.25 0.0505 0.0248
 Jupiter -39641-09-23 09:35 J -12757186.27 -12757186.10 -12757185.92 0.0525 0.0351
 Uranus -39639-04-05 02:52 J -12756627.51 -12756627.38 -12756627.25 0.0146 0.0126
 Uranus -39638-04-10 05:59 J -12756257.51 -12756257.25 -12756257.00 0.0147 0.0016
 Jupiter -39635-03-21 11:45 J -12755181.21 -12755181.01 -12755180.80 0.0504 0.0244
 Saturn -39635-10-10 20:52 J -12754977.83 -12754977.63 -12754977.40 0.0277 0.0131
 Mars -39633-08-24 00:42 J -12754294.66 -12754294.47 -12754294.28 0.1651 0.0275
 Neptune -39628-03-03 04:33 J -12752642.48 -12752642.31 -12752642.13 0.0089 0.0065
 Neptune -39627-03-05 15:50 J -12752275.07 -12752274.84 -12752274.59 0.0089 0.0027
 Neptune -39626-03-08 03:21 J -12751907.62 -12751907.36 -12751907.11 0.0089 0.0010
 Neptune -39625-03-09 14:23 J -12751540.10 -12751539.90 -12751539.67 0.0089 0.0048
 Neptune -39624-03-12 01:54 J -12751172.47 -12751172.42 -12751172.33 0.0089 0.0086
 Saturn -39620-04-02 05:59 J -12749690.49 -12749690.25 -12749690.01 0.0282 0.0052
 Saturn -39606-10-05 07:40 J -12744391.42 -12744391.18 -12744390.94 0.0276 0.0059
 Uranus -39598-10-10 12:57 J -12741464.19 -12741463.96 -12741463.72 0.0132 0.0055
 Uranus -39597-10-13 17:59 J -12741094.97 -12741094.75 -12741094.50 0.0132 0.0049
 Saturn -39591-03-27 10:18 J -12739104.17 -12739104.07 -12739103.97 0.0282 0.0255
 Pluto -39591-04-15 01:11 J -12739085.68 -12739085.45 -12739085.18 0.0066 0.0016
 Saturn -39590-04-09 17:16 J -12738725.96 -12738725.78 -12738725.58 0.0282 0.0177
 Pluto -39590-04-16 15:50 J -12738718.88 -12738718.84 -12738718.77 0.0066 0.0065
 Saturn -39577-09-29 01:40 J -12733804.53 -12733804.43 -12733804.30 0.0278 0.0244
 Saturn -39576-10-11 23:59 J -12733426.69 -12733426.50 -12733426.30 0.0277 0.0167
 Jupiter -39570-09-18 13:54 J -12731259.11 -12731258.92 -12731258.73 0.0522 0.0302
 Jupiter -39564-03-16 06:42 J -12729253.39 -12729253.22 -12729253.03 0.0507 0.0318
 Saturn -39561-04-03 10:33 J -12728139.31 -12728139.06 -12728138.82 0.0282 0.0012
 Jupiter -39558-09-23 11:59 J -12726871.20 -12726871.00 -12726870.79 0.0525 0.0258
 Uranus -39555-04-05 14:52 J -12725946.01 -12725945.88 -12725945.71 0.0146 0.0117
 Uranus -39554-04-10 18:28 J -12725575.98 -12725575.73 -12725575.48 0.0146 0.0024
 Jupiter -39552-03-20 21:21 J -12724865.83 -12724865.61 -12724865.40 0.0504 0.0188
 Saturn -39547-10-06 11:45 J -12722840.26 -12722840.01 -12722839.77 0.0277 0.0020

Neptune -39546-09-04 11:45 J -12722507.12 -12722507.01 -12722506.85 0.0088 0.0075
 Neptune -39545-09-05 23:45 J -12722139.72 -12722139.51 -12722139.25 0.0088 0.0038
 Neptune -39544-09-08 12:14 J -12721772.25 -12721771.99 -12721771.73 0.0088 0.0001
 Neptune -39543-09-10 23:45 J -12721404.73 -12721404.51 -12721404.26 0.0088 0.0036
 Neptune -39542-09-13 11:16 J -12721037.15 -12721037.03 -12721036.86 0.0088 0.0073
 Saturn -39532-03-28 15:06 J -12717553.02 -12717552.87 -12717552.71 0.0282 0.0216
 Saturn -39531-04-10 21:50 J -12717174.74 -12717174.59 -12717174.43 0.0282 0.0218
 Saturn -39518-10-01 05:16 J -12712253.44 -12712253.28 -12712253.11 0.0278 0.0206
 Saturn -39517-10-13 03:21 J -12711875.51 -12711875.36 -12711875.18 0.0277 0.0207
 Uranus -39514-10-11 01:54 J -12710782.65 -12710782.42 -12710782.17 0.0132 0.0047
 Uranus -39513-10-14 07:26 J -12710413.42 -12710413.19 -12710412.96 0.0132 0.0057
 Pluto -39505-10-17 05:45 J -12707488.35 -12707488.26 -12707488.10 0.0078 0.0069
 Pluto -39504-10-19 08:38 J -12707121.26 -12707121.14 -12707120.96 0.0078 0.0063
 Saturn -39502-04-05 16:47 J -12706588.04 -12706587.80 -12706587.55 0.0282 0.0032
 Saturn -39488-10-07 17:30 J -12701289.01 -12701288.77 -12701288.52 0.0277 0.0021
 Jupiter -39487-09-17 17:02 J -12700943.94 -12700943.79 -12700943.63 0.0522 0.0391
 Jupiter -39481-03-15 14:09 J -12698938.05 -12698937.91 -12698937.75 0.0507 0.0385
 Jupiter -39475-09-22 18:42 J -12696555.94 -12696555.72 -12696555.50 0.0524 0.0186
 Saturn -39473-03-29 22:04 J -12696001.76 -12696001.58 -12696001.38 0.0282 0.0173
 Saturn -39472-04-12 04:47 J -12695623.38 -12695623.30 -12695623.20 0.0282 0.0261
 Uranus -39471-04-06 02:23 J -12695264.56 -12695264.40 -12695264.22 0.0146 0.0110
 Uranus -39470-04-11 05:45 J -12694894.51 -12694894.26 -12694894.01 0.0146 0.0032
 Jupiter -39469-03-20 02:38 J -12694550.62 -12694550.39 -12694550.16 0.0504 0.0113
 Neptune -39464-03-02 09:50 J -12692742.12 -12692742.09 -12692741.99 0.0089 0.0087
 Neptune -39463-03-04 21:35 J -12692374.81 -12692374.60 -12692374.38 0.0089 0.0048
 Neptune -39462-03-07 08:52 J -12692007.37 -12692007.13 -12692006.87 0.0089 0.0011
 Neptune -39461-03-08 20:23 J -12691639.89 -12691639.65 -12691639.40 0.0089 0.0027
 Neptune -39460-03-11 07:26 J -12691272.36 -12691272.19 -12691272.00 0.0089 0.0064
 Saturn -39459-10-02 10:18 J -12690702.27 -12690702.07 -12690701.87 0.0278 0.0166
 Saturn -39458-10-15 08:23 J -12690324.25 -12690324.15 -12690324.03 0.0277 0.0247

Saturn -39443-04-07 01:40 J -12685036.66 -12685036.43 -12685036.19 0.0282 0.0078
 Mars -39434-02-19 11:45 J -12681796.14 -12681796.01 -12681795.88 0.1867 0.1372
 Uranus -39430-10-11 14:23 J -12680101.15 -12680100.90 -12680100.66 0.0132 0.0039
 Saturn -39429-10-09 00:42 J -12679737.71 -12679737.47 -12679737.23 0.0277 0.0064
 Uranus -39429-10-14 19:26 J -12679731.89 -12679731.69 -12679731.45 0.0132 0.0065
 Mars -39428-08-22 17:59 J -12679419.90 -12679419.75 -12679419.59 0.1659 0.0961
 Saturn -39414-04-01 07:26 J -12674450.40 -12674450.19 -12674449.97 0.0281 0.0125
 Jupiter -39404-09-16 21:35 J -12670628.69 -12670628.60 -12670628.49 0.0521 0.0468
 Saturn -39400-10-03 17:02 J -12669151.01 -12669150.79 -12669150.56 0.0278 0.0123
 Jupiter -39398-03-15 14:23 J -12668622.96 -12668622.90 -12668622.83 0.0508 0.0484
 Jupiter -39392-09-21 19:26 J -12666240.92 -12666240.69 -12666240.46 0.0523 0.0089
 Uranus -39387-04-06 14:23 J -12664583.07 -12664582.90 -12664582.71 0.0146 0.0102
 Jupiter -39386-03-20 03:35 J -12664235.58 -12664235.35 -12664235.12 0.0506 0.0019
 Uranus -39386-04-11 17:45 J -12664213.00 -12664212.76 -12664212.51 0.0146 0.0039
 Saturn -39384-04-08 11:59 J -12663485.22 -12663485.00 -12663484.78 0.0282 0.0128
 Neptune -39381-09-05 05:59 J -12662239.43 -12662239.25 -12662239.04 0.0088 0.0058
 Neptune -39380-09-07 17:59 J -12661871.99 -12661871.75 -12661871.49 0.0088 0.0021
 Neptune -39379-09-10 05:59 J -12661504.50 -12661504.25 -12661503.99 0.0088 0.0016
 Neptune -39378-09-12 17:30 J -12661136.96 -12661136.77 -12661136.54 0.0088 0.0054
 Saturn -39370-10-11 09:21 J -12658186.33 -12658186.11 -12658185.88 0.0277 0.0110
 Mars -39355-02-22 14:09 J -12652938.04 -12652937.91 -12652937.77 0.1872 0.1340
 Saturn -39355-04-02 18:42 J -12652898.95 -12652898.72 -12652898.48 0.0282 0.0075
 Mars -39349-08-25 00:42 J -12650562.65 -12650562.47 -12650562.28 0.1656 0.0478
 Uranus -39346-10-12 02:52 J -12649419.62 -12649419.38 -12649419.13 0.0132 0.0031
 Uranus -39345-10-15 08:23 J -12649050.35 -12649050.15 -12649049.93 0.0132 0.0073
 Pluto -39344-04-15 23:59 J -12648867.67 -12648867.50 -12648867.30 0.0066 0.0046
 Pluto -39343-04-17 14:38 J -12648501.11 -12648500.89 -12648500.66 0.0066 0.0033
 Saturn -39341-10-05 00:57 J -12647599.70 -12647599.46 -12647599.22 0.0278 0.0077
 Saturn -39326-03-28 17:59 J -12642311.85 -12642311.75 -12642311.64 0.0281 0.0252
 Saturn -39325-04-09 23:16 J -12641933.71 -12641933.53 -12641933.34 0.0282 0.0179

Saturn -39312-09-29 20:38 J -12637012.72 -12637012.64 -12637012.54 0.0278 0.0257
 Saturn -39311-10-12 19:26 J -12636634.88 -12636634.69 -12636634.48 0.0277 0.0159
 Jupiter -39309-09-20 17:16 J -12635926.02 -12635925.78 -12635925.55 0.0523 0.0028
 Jupiter -39303-03-19 09:21 J -12633920.34 -12633920.11 -12633919.88 0.0506 0.0054
 Uranus -39303-04-07 01:40 J -12633901.61 -12633901.43 -12633901.22 0.0146 0.0094
 Uranus -39302-04-12 05:02 J -12633531.53 -12633531.29 -12633531.05 0.0146 0.0047
 Neptune -39299-03-04 04:04 J -12632474.48 -12632474.33 -12632474.17 0.0089 0.0070
 Neptune -39298-03-06 15:06 J -12632107.09 -12632106.87 -12632106.61 0.0089 0.0032
 Neptune -39297-03-08 02:38 J -12631739.64 -12631739.39 -12631739.13 0.0089 0.0006
 Neptune -39296-03-10 13:54 J -12631372.13 -12631371.92 -12631371.69 0.0089 0.0044
 Saturn -39296-04-04 06:42 J -12631347.47 -12631347.22 -12631346.98 0.0282 0.0024
 Neptune -39295-03-13 01:11 J -12631004.54 -12631004.45 -12631004.33 0.0089 0.0081
 Jupiter -39291-03-23 21:06 J -12629532.72 -12629532.62 -12629532.50 0.0504 0.0440
 Saturn -39282-10-07 10:04 J -12626048.32 -12626048.08 -12626047.83 0.0278 0.0030
 Saturn -39267-03-30 05:16 J -12620760.45 -12620760.28 -12620760.11 0.0281 0.0201
 Saturn -39266-04-12 11:16 J -12620382.17 -12620382.03 -12620381.89 0.0282 0.0232
 Uranus -39263-10-08 07:40 J -12619107.22 -12619107.18 -12619107.10 0.0133 0.0129
 Uranus -39262-10-12 14:09 J -12618738.15 -12618737.91 -12618737.65 0.0132 0.0025
 Uranus -39261-10-15 19:40 J -12618368.87 -12618368.68 -12618368.46 0.0132 0.0080
 Pluto -39257-10-20 03:50 J -12616903.58 -12616903.34 -12616903.08 0.0078 0.0014
 Saturn -39253-10-01 07:54 J -12615461.33 -12615461.17 -12615461.01 0.0278 0.0207
 Saturn -39252-10-14 05:59 J -12615083.41 -12615083.25 -12615083.08 0.0277 0.0208
 Saturn -39237-04-05 18:28 J -12609795.97 -12609795.73 -12609795.48 0.0282 0.0030
 Jupiter -39226-09-20 21:06 J -12605610.85 -12605610.62 -12605610.39 0.0522 0.0110
 Saturn -39223-10-08 20:09 J -12604496.91 -12604496.66 -12604496.42 0.0277 0.0020
 Jupiter -39220-03-18 08:38 J -12603605.36 -12603605.14 -12603604.92 0.0507 0.0159
 Uranus -39219-04-07 13:40 J -12603220.13 -12603219.93 -12603219.72 0.0146 0.0086
 Uranus -39218-04-12 16:33 J -12602850.03 -12602849.81 -12602849.56 0.0146 0.0054
 Neptune -39217-09-04 13:11 J -12602339.05 -12602338.95 -12602338.81 0.0088 0.0078
 Neptune -39216-09-07 01:11 J -12601971.66 -12601971.45 -12601971.20 0.0088 0.0041

Neptune -39215-09-09 13:26 J -12601604.19 -12601603.94 -12601603.68 0.0088 0.0004
 Neptune -39214-09-12 00:57 J -12601236.68 -12601236.46 -12601236.20 0.0088 0.0034
 Jupiter -39214-09-25 19:26 J -12601222.80 -12601222.69 -12601222.57 0.0524 0.0454
 Neptune -39213-09-13 12:42 J -12600869.10 -12600868.97 -12600868.79 0.0088 0.0071
 Jupiter -39208-03-22 20:38 J -12599217.80 -12599217.64 -12599217.46 0.0505 0.0338
 Saturn -39208-03-31 15:35 J -12599209.05 -12599208.85 -12599208.64 0.0281 0.0152
 Saturn -39194-10-03 19:26 J -12593909.90 -12593909.69 -12593909.49 0.0277 0.0157
 Saturn -39193-10-15 16:47 J -12593531.88 -12593531.80 -12593531.70 0.0277 0.0258
 Uranus -39179-10-08 19:54 J -12588425.77 -12588425.67 -12588425.56 0.0133 0.0121
 Saturn -39178-04-08 05:30 J -12588244.50 -12588244.27 -12588244.03 0.0282 0.0081
 Uranus -39178-10-13 02:09 J -12588056.65 -12588056.41 -12588056.15 0.0132 0.0018
 Uranus -39177-10-16 07:54 J -12587687.35 -12587687.17 -12587686.97 0.0132 0.0087
 Saturn -39164-10-10 05:45 J -12582945.49 -12582945.26 -12582945.02 0.0277 0.0069
 Saturn -39149-04-02 00:42 J -12577657.69 -12577657.47 -12577657.24 0.0281 0.0103
 Mars -39144-08-23 16:18 J -12575687.99 -12575687.82 -12575687.66 0.1664 0.0813
 Jupiter -39143-09-19 16:18 J -12575296.02 -12575295.82 -12575295.61 0.0521 0.0236
 Jupiter -39137-03-17 13:54 J -12573290.13 -12573289.92 -12573289.72 0.0508 0.0237
 Uranus -39135-04-08 00:57 J -12572538.66 -12572538.46 -12572538.23 0.0146 0.0079
 Saturn -39135-10-05 05:59 J -12572358.48 -12572358.25 -12572358.03 0.0277 0.0108
 Neptune -39134-03-05 22:33 J -12572206.76 -12572206.56 -12572206.35 0.0089 0.0053
 Uranus -39134-04-13 04:04 J -12572168.56 -12572168.33 -12572168.10 0.0146 0.0062
 Neptune -39133-03-07 10:04 J -12571839.33 -12571839.08 -12571838.83 0.0089 0.0015
 Neptune -39132-03-09 21:06 J -12571471.86 -12571471.62 -12571471.37 0.0089 0.0023
 Neptune -39131-03-12 08:23 J -12571104.32 -12571104.15 -12571103.95 0.0089 0.0061
 Jupiter -39131-09-24 15:06 J -12570908.04 -12570907.87 -12570907.68 0.0523 0.0330
 Jupiter -39125-03-22 03:35 J -12568902.54 -12568902.35 -12568902.15 0.0505 0.0271
 Saturn -39119-04-09 14:38 J -12566693.09 -12566692.89 -12566692.66 0.0282 0.0131
 Saturn -39105-10-11 15:06 J -12561394.09 -12561393.87 -12561393.65 0.0277 0.0117
 Pluto -39096-04-18 11:16 J -12558283.28 -12558283.03 -12558282.76 0.0066 0.0003
 Uranus -39095-10-09 05:59 J -12557744.35 -12557744.25 -12557744.10 0.0133 0.0116

Uranus -39094-10-13 12:57 J -12557375.21 -12557374.96 -12557374.70 0.0132 0.0011
 Uranus -39093-10-16 18:28 J -12557005.90 -12557005.73 -12557005.54 0.0132 0.0092
 Saturn -39090-04-04 07:40 J -12556106.42 -12556106.18 -12556105.94 0.0281 0.0058
 Saturn -39076-10-06 15:35 J -12550807.09 -12550806.85 -12550806.61 0.0277 0.0060
 Mars -39071-02-22 06:14 J -12549207.43 -12549207.24 -12549207.05 0.1864 0.0424
 Mars -39065-08-25 23:59 J -12546830.68 -12546830.50 -12546830.33 0.1661 0.0656
 Saturn -39061-03-28 17:02 J -12545519.88 -12545519.79 -12545519.69 0.0281 0.0258
 Saturn -39060-04-10 22:04 J -12545141.76 -12545141.58 -12545141.38 0.0282 0.0177
 Jupiter -39060-09-18 19:11 J -12544980.88 -12544980.70 -12544980.51 0.0521 0.0324
 Jupiter -39054-03-17 20:23 J -12542974.83 -12542974.65 -12542974.47 0.0508 0.0307
 Neptune -39052-09-06 09:21 J -12542071.28 -12542071.11 -12542070.90 0.0088 0.0060
 Uranus -39051-04-08 11:45 J -12541857.22 -12541857.01 -12541856.78 0.0146 0.0072
 Neptune -39051-09-08 21:35 J -12541703.85 -12541703.60 -12541703.35 0.0088 0.0023
 Uranus -39050-04-13 14:23 J -12541487.11 -12541486.90 -12541486.66 0.0146 0.0068
 Neptune -39050-09-11 09:06 J -12541336.36 -12541336.12 -12541335.85 0.0088 0.0016
 Neptune -39049-09-12 20:52 J -12540968.82 -12540968.63 -12540968.40 0.0088 0.0053
 Jupiter -39048-09-23 20:52 J -12540592.83 -12540592.63 -12540592.42 0.0523 0.0254
 Saturn -39047-09-30 23:45 J -12540220.59 -12540220.51 -12540220.40 0.0277 0.0256
 Saturn -39046-10-13 23:02 J -12539842.74 -12539842.54 -12539842.35 0.0277 0.0163
 Jupiter -39042-03-22 06:42 J -12538587.43 -12538587.22 -12538587.00 0.0505 0.0183
 Saturn -39031-04-05 12:14 J -12534555.23 -12534554.99 -12534554.74 0.0282 0.0016
 Saturn -39017-10-07 23:16 J -12529255.77 -12529255.53 -12529255.28 0.0277 0.0016
 Uranus -39011-10-09 17:16 J -12527062.91 -12527062.78 -12527062.62 0.0133 0.0109
 Uranus -39010-10-13 23:59 J -12526693.75 -12526693.50 -12526693.24 0.0132 0.0005
 Pluto -39010-10-21 18:57 J -12526685.91 -12526685.71 -12526685.50 0.0078 0.0047
 Uranus -39009-10-17 05:30 J -12526324.43 -12526324.27 -12526324.09 0.0132 0.0099
 Saturn -39002-03-30 21:50 J -12523968.73 -12523968.59 -12523968.43 0.0281 0.0217
 Saturn -39001-04-12 03:06 J -12523590.51 -12523590.37 -12523590.21 0.0282 0.0220

39TH MILLENNIUM BCE

This is a list of transits of Earth in the 39th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-38988-10-02 06:57 J	-12518669.36	-12518669.21	-12518669.04	0.0277	0.0212		
Saturn	-38987-10-15 05:16 J	-12518291.43	-12518291.28	-12518291.11	0.0277	0.0208		
Jupiter	-38977-09-18 01:40 J	-12514665.58	-12514665.43	-12514665.28	0.0520	0.0397		
Saturn	-38972-04-06 14:38 J	-12513004.13	-12513003.89	-12513003.64	0.0282	0.0024		
Jupiter	-38971-03-16 23:45 J	-12512659.65	-12512659.51	-12512659.36	0.0508	0.0394		
Neptune	-38970-03-05 06:57 J	-12512306.35	-12512306.21	-12512306.06	0.0089	0.0073		
Neptune	-38969-03-06 18:14 J	-12511938.97	-12511938.74	-12511938.50	0.0089	0.0035		
Neptune	-38968-03-09 05:45 J	-12511571.51	-12511571.26	-12511571.00	0.0089	0.0004		
Neptune	-38967-03-11 16:33 J	-12511204.01	-12511203.81	-12511203.56	0.0089	0.0043		
Uranus	-38967-04-08 21:50 J	-12511175.80	-12511175.59	-12511175.35	0.0146	0.0066		
Neptune	-38966-03-14 03:50 J	-12510836.42	-12510836.34	-12510836.20	0.0089	0.0080		
Uranus	-38966-04-14 00:14 J	-12510805.69	-12510805.49	-12510805.25	0.0146	0.0075		
Jupiter	-38965-09-22 19:54 J	-12510277.89	-12510277.67	-12510277.44	0.0522	0.0148		
Jupiter	-38959-03-21 13:40 J	-12508272.15	-12508271.93	-12508271.70	0.0507	0.0118		
Saturn	-38958-10-10 05:16 J	-12507704.53	-12507704.28	-12507704.04	0.0277	0.0028		
Saturn	-38943-04-01 01:26 J	-12502417.63	-12502417.44	-12502417.25	0.0281	0.0177		
Saturn	-38942-04-14 06:28 J	-12502039.31	-12502039.23	-12502039.13	0.0282	0.0261		
Saturn	-38929-10-03 11:59 J	-12497118.18	-12497118.00	-12497117.79	0.0277	0.0171		
Saturn	-38928-10-16 10:04 J	-12496740.17	-12496740.08	-12496739.96	0.0277	0.0250		
Uranus	-38927-10-10 02:38 J	-12496381.52	-12496381.39	-12496381.21	0.0133	0.0105		

Uranus -38926-10-14 09:35 J -12496012.36 -12496012.10 -12496011.85 0.0132 0.0000
 Uranus -38925-10-17 14:38 J -12495643.02 -12495642.89 -12495642.71 0.0132 0.0104
 Saturn -38913-04-07 15:21 J -12491453.10 -12491452.86 -12491452.62 0.0282 0.0060
 Saturn -38899-10-11 09:35 J -12486153.34 -12486153.10 -12486152.86 0.0278 0.0069
 Jupiter -38894-09-18 01:54 J -12484350.48 -12484350.42 -12484350.34 0.0519 0.0493
 Jupiter -38888-03-16 08:23 J -12482344.25 -12482344.15 -12482344.04 0.0509 0.0452
 Neptune -38888-09-05 18:42 J -12482170.82 -12482170.72 -12482170.59 0.0088 0.0078
 Neptune -38887-09-08 06:28 J -12481803.44 -12481803.23 -12481802.98 0.0088 0.0041
 Neptune -38886-09-10 18:28 J -12481435.98 -12481435.73 -12481435.46 0.0088 0.0005
 Neptune -38885-09-12 05:59 J -12481068.47 -12481068.25 -12481067.99 0.0088 0.0034
 Saturn -38884-04-02 02:52 J -12480866.58 -12480866.38 -12480866.16 0.0281 0.0141
 Neptune -38884-09-14 17:45 J -12480700.89 -12480700.76 -12480700.59 0.0088 0.0071
 Uranus -38883-04-09 07:26 J -12480494.42 -12480494.19 -12480493.96 0.0146 0.0061
 Uranus -38882-04-14 09:50 J -12480124.30 -12480124.09 -12480123.87 0.0146 0.0078
 Jupiter -38882-09-23 00:42 J -12479962.70 -12479962.47 -12479962.24 0.0522 0.0069
 Jupiter -38876-03-20 23:30 J -12477956.75 -12477956.52 -12477956.28 0.0507 0.0065
 Saturn -38870-10-05 15:50 J -12475567.05 -12475566.84 -12475566.61 0.0277 0.0132
 Mars -38860-08-24 13:26 J -12471956.12 -12471955.94 -12471955.77 0.1669 0.0688
 Saturn -38854-04-09 15:21 J -12469902.09 -12469901.86 -12469901.63 0.0282 0.0095
 Pluto -38849-04-19 03:50 J -12468065.50 -12468065.34 -12468065.16 0.0066 0.0049
 Pluto -38848-04-20 18:28 J -12467698.96 -12467698.73 -12467698.50 0.0066 0.0030
 Uranus -38843-10-10 13:11 J -12465700.11 -12465699.95 -12465699.77 0.0133 0.0099
 Uranus -38842-10-14 19:40 J -12465330.93 -12465330.68 -12465330.42 0.0133 0.0005
 Uranus -38841-10-18 00:57 J -12464961.59 -12464961.46 -12464961.30 0.0132 0.0108
 Saturn -38840-10-12 11:45 J -12464602.23 -12464602.01 -12464601.77 0.0278 0.0107
 Saturn -38825-04-03 03:50 J -12459315.56 -12459315.34 -12459315.10 0.0281 0.0105
 Saturn -38811-10-06 19:26 J -12454015.93 -12454015.69 -12454015.46 0.0278 0.0093
 Neptune -38805-03-06 02:38 J -12452038.57 -12452038.39 -12452038.17 0.0089 0.0055
 Neptune -38804-03-08 14:23 J -12451671.14 -12451670.90 -12451670.64 0.0089 0.0016
 Neptune -38803-03-11 01:54 J -12451303.66 -12451303.42 -12451303.17 0.0089 0.0022

Neptune -38802-03-13 12:42 J -12450936.13 -12450935.97 -12450935.76 0.0089 0.0061
 Uranus -38799-04-09 17:02 J -12449813.02 -12449812.79 -12449812.55 0.0146 0.0056
 Jupiter -38799-09-22 09:50 J -12449647.32 -12449647.09 -12449646.85 0.0521 0.0011
 Uranus -38798-04-14 19:26 J -12449442.90 -12449442.69 -12449442.48 0.0146 0.0083
 Saturn -38795-04-10 14:38 J -12448351.10 -12448350.89 -12448350.66 0.0281 0.0130
 Jupiter -38793-03-20 06:14 J -12447641.47 -12447641.24 -12447641.01 0.0507 0.0007
 Mars -38787-02-21 23:16 J -12445476.72 -12445476.53 -12445476.34 0.1856 0.0422
 Jupiter -38781-03-24 17:59 J -12443253.79 -12443253.75 -12443253.70 0.0506 0.0495
 Mars -38781-08-26 21:06 J -12443098.79 -12443098.62 -12443098.45 0.1666 0.0795
 Saturn -38781-10-13 13:26 J -12443051.14 -12443050.94 -12443050.72 0.0278 0.0144
 Saturn -38766-04-05 05:16 J -12437764.51 -12437764.28 -12437764.04 0.0281 0.0068
 Pluto -38762-10-24 08:23 J -12436101.40 -12436101.15 -12436100.89 0.0078 0.0013
 Uranus -38759-10-10 22:04 J -12435018.75 -12435018.58 -12435018.40 0.0133 0.0095
 Uranus -38758-10-15 04:33 J -12434649.56 -12434649.31 -12434649.05 0.0133 0.0009
 Uranus -38757-10-18 10:04 J -12434280.21 -12434280.08 -12434279.94 0.0132 0.0112
 Saturn -38752-10-07 21:35 J -12432464.84 -12432464.60 -12432464.36 0.0278 0.0056
 Saturn -38737-03-29 11:02 J -12427178.08 -12427178.04 -12427177.98 0.0281 0.0275
 Saturn -38736-04-11 14:52 J -12426800.07 -12426799.88 -12426799.67 0.0281 0.0164
 Neptune -38723-09-07 16:33 J -12421902.98 -12421902.81 -12421902.60 0.0088 0.0059
 Saturn -38723-10-02 14:52 J -12421877.99 -12421877.88 -12421877.77 0.0279 0.0248
 Neptune -38722-09-10 04:47 J -12421535.55 -12421535.30 -12421535.05 0.0088 0.0022
 Saturn -38722-10-15 15:35 J -12421500.03 -12421499.85 -12421499.66 0.0278 0.0180
 Neptune -38721-09-11 16:18 J -12421168.06 -12421167.82 -12421167.55 0.0088 0.0016
 Neptune -38720-09-14 04:18 J -12420800.52 -12420800.32 -12420800.11 0.0088 0.0054
 Jupiter -38716-09-21 12:42 J -12419332.20 -12419331.97 -12419331.74 0.0520 0.0076
 Uranus -38715-04-10 02:09 J -12419131.64 -12419131.41 -12419131.17 0.0146 0.0051
 Uranus -38714-04-15 04:33 J -12418761.51 -12418761.31 -12418761.11 0.0146 0.0088
 Jupiter -38710-03-20 13:11 J -12417326.18 -12417325.95 -12417325.72 0.0509 0.0072
 Saturn -38707-04-06 07:26 J -12416213.44 -12416213.19 -12416212.95 0.0280 0.0030
 Jupiter -38704-09-26 10:18 J -12414944.15 -12414944.07 -12414943.98 0.0522 0.0483

Jupiter -38698-03-25 04:33 J -12412938.42 -12412938.31 -12412938.20 0.0506 0.0442
 Saturn -38693-10-09 00:14 J -12410913.73 -12410913.49 -12410913.24 0.0278 0.0018
 Saturn -38678-03-31 12:42 J -12405627.09 -12405626.97 -12405626.83 0.0280 0.0238
 Saturn -38677-04-12 16:33 J -12405248.97 -12405248.81 -12405248.63 0.0281 0.0201
 Uranus -38675-10-11 07:26 J -12404337.36 -12404337.19 -12404336.99 0.0133 0.0091
 Uranus -38674-10-15 13:54 J -12403968.17 -12403967.92 -12403967.66 0.0133 0.0013
 Uranus -38673-10-18 19:11 J -12403598.80 -12403598.70 -12403598.56 0.0132 0.0117
 Saturn -38664-10-03 16:18 J -12400326.97 -12400326.82 -12400326.65 0.0279 0.0212
 Saturn -38663-10-16 17:16 J -12399948.92 -12399948.78 -12399948.62 0.0278 0.0218
 Saturn -38648-04-07 11:02 J -12394662.29 -12394662.04 -12394661.80 0.0280 0.0011
 Neptune -38641-03-05 12:28 J -12392138.10 -12392137.98 -12392137.81 0.0089 0.0073
 Neptune -38640-03-08 00:28 J -12391770.71 -12391770.48 -12391770.24 0.0089 0.0035
 Neptune -38639-03-10 11:45 J -12391403.26 -12391403.01 -12391402.75 0.0089 0.0004
 Neptune -38638-03-12 23:02 J -12391035.75 -12391035.54 -12391035.30 0.0089 0.0042
 Neptune -38637-03-14 10:47 J -12390668.15 -12390668.05 -12390667.94 0.0089 0.0081
 Saturn -38634-10-11 03:50 J -12389362.58 -12389362.34 -12389362.09 0.0278 0.0023
 Jupiter -38633-09-20 17:59 J -12389016.97 -12389016.75 -12389016.52 0.0520 0.0154
 Uranus -38631-04-10 11:59 J -12388450.24 -12388450.00 -12388449.75 0.0146 0.0046
 Uranus -38630-04-15 14:09 J -12388080.10 -12388079.91 -12388079.71 0.0146 0.0093
 Jupiter -38627-03-19 21:35 J -12387010.83 -12387010.60 -12387010.38 0.0509 0.0134
 Jupiter -38621-09-25 18:14 J -12384628.87 -12384628.74 -12384628.59 0.0522 0.0420
 Saturn -38619-04-01 16:33 J -12384075.98 -12384075.81 -12384075.64 0.0280 0.0198
 Saturn -38618-04-14 19:40 J -12383697.79 -12383697.68 -12383697.54 0.0281 0.0242
 Jupiter -38615-03-24 10:47 J -12382623.20 -12382623.05 -12382622.89 0.0506 0.0372
 Saturn -38605-10-04 19:11 J -12378775.88 -12378775.70 -12378775.50 0.0279 0.0174
 Saturn -38604-10-17 20:23 J -12378397.73 -12378397.65 -12378397.55 0.0278 0.0257
 Pluto -38601-04-21 08:09 J -12377481.39 -12377481.16 -12377480.90 0.0066 0.0022
 Pluto -38600-04-22 23:02 J -12377114.67 -12377114.54 -12377114.42 0.0067 0.0058
 Uranus -38591-10-11 16:04 J -12373656.02 -12373655.83 -12373655.64 0.0133 0.0087
 Uranus -38590-10-15 22:18 J -12373286.82 -12373286.57 -12373286.32 0.0133 0.0017

Saturn -38589-04-08 16:18 J -12373111.06 -12373110.82 -12373110.58 0.0280 0.0053
 Uranus -38589-10-19 03:50 J -12372917.43 -12372917.34 -12372917.22 0.0133 0.0120
 Mars -38576-08-25 09:35 J -12368224.28 -12368224.10 -12368223.92 0.1675 0.0587
 Saturn -38575-10-12 08:52 J -12367811.36 -12367811.13 -12367810.88 0.0278 0.0064
 Saturn -38560-04-02 22:33 J -12362524.76 -12362524.56 -12362524.35 0.0280 0.0155
 Neptune -38559-09-07 02:38 J -12362002.48 -12362002.39 -12362002.23 0.0088 0.0078
 Neptune -38558-09-09 14:52 J -12361635.10 -12361634.88 -12361634.63 0.0088 0.0039
 Neptune -38557-09-11 03:06 J -12361267.63 -12361267.37 -12361267.11 0.0088 0.0002
 Neptune -38556-09-13 14:38 J -12360900.12 -12360899.89 -12360899.64 0.0088 0.0036
 Neptune -38555-09-16 01:54 J -12360532.53 -12360532.42 -12360532.25 0.0088 0.0074
 Jupiter -38550-09-20 23:59 J -12358701.71 -12358701.50 -12358701.29 0.0518 0.0224
 Uranus -38547-04-10 21:06 J -12357768.86 -12357768.62 -12357768.38 0.0146 0.0041
 Uranus -38546-04-15 23:02 J -12357398.71 -12357398.54 -12357398.34 0.0146 0.0098
 Saturn -38546-10-06 23:30 J -12357224.73 -12357224.52 -12357224.30 0.0279 0.0132
 Jupiter -38544-03-18 23:02 J -12356695.75 -12356695.54 -12356695.33 0.0510 0.0228
 Jupiter -38538-09-25 20:52 J -12354313.81 -12354313.63 -12354313.45 0.0521 0.0329
 Jupiter -38532-03-23 13:11 J -12352308.14 -12352307.95 -12352307.75 0.0508 0.0285
 Saturn -38530-04-10 23:30 J -12351559.75 -12351559.52 -12351559.29 0.0280 0.0099
 Saturn -38516-10-13 15:35 J -12346260.06 -12346259.85 -12346259.61 0.0278 0.0109
 Pluto -38515-10-24 14:23 J -12345883.98 -12345883.90 -12345883.79 0.0078 0.0073
 Pluto -38514-10-26 16:33 J -12345516.95 -12345516.81 -12345516.61 0.0078 0.0058
 Uranus -38507-10-12 00:42 J -12342974.66 -12342974.47 -12342974.26 0.0133 0.0083
 Uranus -38506-10-16 07:11 J -12342605.45 -12342605.20 -12342604.94 0.0133 0.0021
 Uranus -38505-10-19 12:42 J -12342236.03 -12342235.97 -12342235.86 0.0132 0.0125
 Mars -38503-02-21 18:14 J -12341745.89 -12341745.74 -12341745.59 0.1848 0.1182
 Saturn -38501-04-04 06:42 J -12340973.44 -12340973.22 -12340972.99 0.0280 0.0109
 Mars -38497-08-27 17:30 J -12339366.92 -12339366.77 -12339366.60 0.1672 0.0921
 Saturn -38487-10-08 05:45 J -12335673.49 -12335673.26 -12335673.03 0.0279 0.0088
 Neptune -38476-03-07 10:33 J -12331870.25 -12331870.06 -12331869.84 0.0089 0.0054
 Neptune -38475-03-09 21:50 J -12331502.83 -12331502.59 -12331502.32 0.0089 0.0015

Neptune -38474-03-12 09:21 J -12331135.34 -12331135.11 -12331134.85 0.0089 0.0024
 Neptune -38473-03-13 21:06 J -12330767.79 -12330767.62 -12330767.43 0.0089 0.0062
 Saturn -38471-04-12 08:38 J -12330008.34 -12330008.14 -12330007.92 0.0280 0.0149
 Jupiter -38467-09-19 22:33 J -12328386.74 -12328386.56 -12328386.38 0.0518 0.0335
 Uranus -38463-04-11 05:45 J -12327087.49 -12327087.26 -12327087.00 0.0146 0.0037
 Uranus -38462-04-16 07:54 J -12326717.33 -12326717.17 -12326716.97 0.0146 0.0103
 Jupiter -38461-03-18 05:02 J -12326380.47 -12326380.29 -12326380.10 0.0511 0.0303
 Saturn -38458-10-02 21:50 J -12325086.60 -12325086.59 -12325086.58 0.0279 0.0278
 Saturn -38457-10-14 23:45 J -12324708.70 -12324708.51 -12324708.30 0.0278 0.0157
 Jupiter -38455-09-24 20:52 J -12323998.84 -12323998.63 -12323998.42 0.0520 0.0224
 Jupiter -38449-03-22 19:54 J -12321992.88 -12321992.67 -12321992.46 0.0508 0.0214
 Saturn -38442-04-06 17:02 J -12319422.03 -12319421.79 -12319421.55 0.0280 0.0058
 Saturn -38428-10-09 13:26 J -12314122.18 -12314121.94 -12314121.69 0.0279 0.0040
 Mars -38424-02-24 17:02 J -12312887.92 -12312887.79 -12312887.65 0.1852 0.1324
 Uranus -38423-10-12 08:52 J -12312293.33 -12312293.13 -12312292.93 0.0133 0.0080
 Uranus -38422-10-16 15:21 J -12311924.11 -12311923.86 -12311923.61 0.0133 0.0024
 Uranus -38421-10-19 21:21 J -12311554.68 -12311554.61 -12311554.54 0.0132 0.0127
 Saturn -38413-03-31 17:16 J -12308834.90 -12308834.78 -12308834.65 0.0279 0.0238
 Saturn -38412-04-13 19:11 J -12308456.86 -12308456.70 -12308456.52 0.0280 0.0201
 Saturn -38399-10-04 08:09 J -12303535.30 -12303535.16 -12303535.02 0.0279 0.0228
 Saturn -38398-10-17 09:50 J -12303157.25 -12303157.09 -12303156.92 0.0278 0.0206
 Neptune -38394-09-09 02:23 J -12301734.60 -12301734.40 -12301734.20 0.0088 0.0057
 Neptune -38393-09-10 14:23 J -12301367.16 -12301366.90 -12301366.65 0.0088 0.0019
 Neptune -38392-09-13 02:09 J -12300999.66 -12300999.41 -12300999.15 0.0088 0.0019
 Neptune -38391-09-15 13:26 J -12300632.11 -12300631.94 -12300631.72 0.0088 0.0058
 Jupiter -38384-09-19 01:54 J -12298071.55 -12298071.42 -12298071.28 0.0517 0.0421
 Saturn -38383-04-08 04:18 J -12297870.56 -12297870.32 -12297870.07 0.0280 0.0006
 Uranus -38379-04-11 14:09 J -12296406.16 -12296405.91 -12296405.66 0.0146 0.0033
 Jupiter -38378-03-18 08:38 J -12296065.28 -12296065.14 -12296064.98 0.0511 0.0389
 Uranus -38378-04-16 16:04 J -12296035.99 -12296035.83 -12296035.64 0.0146 0.0106

Jupiter -38372-09-24 01:11 J -12293683.67 -12293683.45 -12293683.22 0.0520 0.0143
 Saturn -38369-10-10 22:33 J -12292570.81 -12292570.56 -12292570.31 0.0279 0.0010
 Jupiter -38366-03-22 18:42 J -12291677.95 -12291677.72 -12291677.49 0.0509 0.0106
 Saturn -38354-04-03 04:18 J -12287283.49 -12287283.32 -12287283.13 0.0280 0.0186
 Saturn -38353-04-15 06:42 J -12286905.31 -12286905.22 -12286905.11 0.0280 0.0254
 Pluto -38353-04-23 08:09 J -12286897.42 -12286897.16 -12286896.90 0.0066 0.0006
 Saturn -38340-10-05 18:57 J -12281983.89 -12281983.71 -12281983.51 0.0279 0.0177
 Uranus -38339-10-12 17:02 J -12281611.98 -12281611.79 -12281611.56 0.0133 0.0077
 Saturn -38339-10-18 20:38 J -12281605.73 -12281605.64 -12281605.55 0.0278 0.0258
 Uranus -38338-10-16 23:45 J -12281242.75 -12281242.51 -12281242.25 0.0133 0.0028
 Uranus -38337-10-20 05:45 J -12280873.28 -12280873.26 -12280873.21 0.0132 0.0131
 Saturn -38324-04-09 16:04 J -12276319.07 -12276318.83 -12276318.59 0.0280 0.0049
 Neptune -38312-03-06 21:35 J -12271969.73 -12271969.60 -12271969.43 0.0089 0.0072
 Neptune -38311-03-09 08:52 J -12271602.35 -12271602.13 -12271601.87 0.0089 0.0034
 Neptune -38310-03-11 20:38 J -12271234.89 -12271234.64 -12271234.38 0.0089 0.0006
 Saturn -38310-10-13 08:52 J -12271019.37 -12271019.13 -12271018.89 0.0279 0.0061
 Neptune -38309-03-13 07:54 J -12270867.39 -12270867.17 -12270866.95 0.0089 0.0044
 Neptune -38308-03-15 18:42 J -12270499.78 -12270499.72 -12270499.60 0.0089 0.0084
 Jupiter -38301-09-18 04:33 J -12267756.34 -12267756.31 -12267756.29 0.0516 0.0512
 Jupiter -38295-03-17 06:42 J -12265750.26 -12265750.22 -12265750.19 0.0512 0.0504
 Saturn -38295-04-04 14:52 J -12265732.09 -12265731.88 -12265731.66 0.0280 0.0134
 Uranus -38295-04-11 22:18 J -12265724.82 -12265724.57 -12265724.32 0.0146 0.0029
 Uranus -38294-04-17 00:28 J -12265354.64 -12265354.48 -12265354.30 0.0146 0.0109
 Mars -38292-08-26 05:16 J -12264492.47 -12264492.28 -12264492.10 0.1681 0.0501
 Jupiter -38289-09-22 20:52 J -12263368.87 -12263368.63 -12263368.40 0.0519 0.0018
 Jupiter -38283-03-21 23:02 J -12261362.77 -12261362.54 -12261362.31 0.0510 0.0024
 Saturn -38281-10-07 06:42 J -12260432.44 -12260432.22 -12260432.00 0.0279 0.0124
 Pluto -38267-10-26 19:26 J -12255299.91 -12255299.69 -12255299.47 0.0078 0.0039
 Saturn -38265-04-11 03:35 J -12254767.57 -12254767.35 -12254767.12 0.0280 0.0103
 Uranus -38255-10-13 00:57 J -12250930.66 -12250930.46 -12250930.24 0.0133 0.0074

Uranus -38254-10-17 07:40 J -12250561.42 -12250561.18 -12250560.92 0.0133 0.0031
 Saturn -38251-10-14 18:57 J -12249467.93 -12249467.71 -12249467.48 0.0279 0.0113
 Saturn -38236-04-06 00:14 J -12244180.72 -12244180.49 -12244180.25 0.0280 0.0084
 Neptune -38230-09-08 12:42 J -12241834.09 -12241833.97 -12241833.81 0.0088 0.0075
 Neptune -38229-09-10 00:57 J -12241466.68 -12241466.46 -12241466.21 0.0088 0.0037
 Neptune -38228-09-12 13:11 J -12241099.21 -12241098.95 -12241098.68 0.0088 0.0003
 Neptune -38227-09-15 00:42 J -12240731.68 -12240731.47 -12240731.22 0.0088 0.0041
 Neptune -38226-09-17 12:28 J -12240364.07 -12240363.98 -12240363.84 0.0088 0.0078
 Saturn -38222-10-09 18:14 J -12238880.97 -12238880.74 -12238880.50 0.0279 0.0072
 Mars -38213-08-28 14:09 J -12235635.06 -12235634.91 -12235634.76 0.1678 0.1042
 Uranus -38211-04-12 06:28 J -12235043.48 -12235043.23 -12235042.98 0.0146 0.0026
 Uranus -38210-04-17 08:23 J -12234673.30 -12234673.15 -12234672.97 0.0146 0.0112
 Saturn -38206-04-13 13:40 J -12233216.13 -12233215.93 -12233215.72 0.0280 0.0155
 Jupiter -38206-09-22 22:47 J -12233053.78 -12233053.55 -12233053.32 0.0518 0.0076
 Jupiter -38200-03-21 03:50 J -12231047.57 -12231047.34 -12231047.11 0.0510 0.0055
 Jupiter -38194-09-27 23:16 J -12228665.60 -12228665.53 -12228665.46 0.0521 0.0496
 Saturn -38193-10-03 02:09 J -12228294.45 -12228294.41 -12228294.37 0.0279 0.0274
 Saturn -38192-10-16 04:47 J -12227916.50 -12227916.30 -12227916.10 0.0278 0.0164
 Jupiter -38188-03-25 14:09 J -12226660.01 -12226659.91 -12226659.79 0.0508 0.0441
 Saturn -38177-04-07 07:54 J -12222629.41 -12222629.17 -12222628.93 0.0280 0.0036
 Uranus -38171-10-13 09:50 J -12220249.30 -12220249.09 -12220248.87 0.0133 0.0070
 Uranus -38170-10-17 16:18 J -12219880.05 -12219879.82 -12219879.56 0.0133 0.0034
 Saturn -38163-10-11 04:33 J -12217329.56 -12217329.31 -12217329.06 0.0279 0.0021
 Neptune -38148-03-06 09:35 J -12212069.10 -12212069.10 -12212069.08 0.0089 0.0089
 Saturn -38148-04-01 20:09 J -12212042.79 -12212042.66 -12212042.54 0.0280 0.0238
 Neptune -38147-03-08 21:06 J -12211701.83 -12211701.62 -12211701.41 0.0089 0.0051
 Saturn -38147-04-14 21:35 J -12211664.76 -12211664.60 -12211664.43 0.0280 0.0203
 Neptune -38146-03-11 08:09 J -12211334.40 -12211334.16 -12211333.90 0.0089 0.0012
 Neptune -38145-03-12 19:11 J -12210966.93 -12210966.70 -12210966.44 0.0089 0.0027
 Neptune -38144-03-15 06:57 J -12210599.38 -12210599.21 -12210599.04 0.0089 0.0066

Mars -38140-02-24 13:11 J -12209157.13 -12209156.95 -12209156.76 0.1844 0.0587
 Saturn -38134-10-05 11:45 J -12206743.15 -12206743.01 -12206742.86 0.0279 0.0225
 Saturn -38133-10-17 13:40 J -12206365.07 -12206364.93 -12206364.76 0.0278 0.0214
 Uranus -38127-04-12 15:06 J -12204362.12 -12204361.87 -12204361.62 0.0146 0.0022
 Uranus -38126-04-17 16:47 J -12203991.93 -12203991.80 -12203991.63 0.0146 0.0116
 Jupiter -38123-09-22 03:35 J -12202738.57 -12202738.35 -12202738.12 0.0518 0.0157
 Saturn -38118-04-09 13:11 J -12201078.20 -12201077.95 -12201077.71 0.0280 0.0009
 Jupiter -38117-03-20 04:47 J -12200732.52 -12200732.30 -12200732.08 0.0511 0.0155
 Jupiter -38111-09-26 20:52 J -12198350.79 -12198350.63 -12198350.48 0.0520 0.0383
 Jupiter -38105-03-24 19:40 J -12196344.84 -12196344.68 -12196344.52 0.0509 0.0367
 Pluto -38105-04-25 05:16 J -12196313.54 -12196313.28 -12196313.02 0.0066 0.0004
 Saturn -38104-10-12 13:26 J -12195778.19 -12195777.94 -12195777.70 0.0279 0.0028
 Saturn -38089-04-03 01:26 J -12190491.60 -12190491.44 -12190491.25 0.0280 0.0195
 Saturn -38088-04-16 03:35 J -12190113.46 -12190113.35 -12190113.24 0.0281 0.0249
 Uranus -38087-10-13 17:30 J -12189567.97 -12189567.77 -12189567.54 0.0133 0.0068
 Uranus -38086-10-18 00:14 J -12189198.72 -12189198.49 -12189198.23 0.0133 0.0037
 Saturn -38075-10-06 19:40 J -12185191.86 -12185191.68 -12185191.48 0.0279 0.0178
 Saturn -38074-10-19 21:06 J -12184813.69 -12184813.62 -12184813.52 0.0278 0.0260
 Neptune -38065-09-09 12:28 J -12181566.18 -12181565.98 -12181565.77 0.0088 0.0054
 Neptune -38064-09-12 00:28 J -12181198.73 -12181198.48 -12181198.22 0.0088 0.0015
 Neptune -38063-09-14 12:14 J -12180831.22 -12180830.99 -12180830.72 0.0088 0.0024
 Neptune -38062-09-16 23:59 J -12180463.66 -12180463.50 -12180463.29 0.0088 0.0062
 Saturn -38059-04-10 16:18 J -12179527.06 -12179526.82 -12179526.58 0.0280 0.0049
 Saturn -38045-10-13 20:09 J -12174226.89 -12174226.66 -12174226.42 0.0279 0.0073
 Uranus -38043-04-12 23:45 J -12173680.75 -12173680.51 -12173680.25 0.0146 0.0019
 Uranus -38042-04-18 01:11 J -12173310.57 -12173310.45 -12173310.28 0.0146 0.0120
 Jupiter -38040-09-21 02:52 J -12172423.58 -12172423.38 -12172423.18 0.0517 0.0259
 Jupiter -38034-03-20 12:14 J -12170417.19 -12170416.99 -12170416.77 0.0512 0.0219
 Saturn -38030-04-05 05:16 J -12168940.48 -12168940.28 -12168940.07 0.0280 0.0154
 Jupiter -38028-09-26 00:28 J -12168035.67 -12168035.48 -12168035.29 0.0519 0.0298

Jupiter	-38022-03-25 04:18 J	-12166029.50	-12166029.32	-12166029.13	0.0509	0.0306
Pluto	-38019-10-28 17:45 J	-12164715.99	-12164715.76	-12164715.49	0.0078	0.0024
Saturn	-38016-10-08 02:09 J	-12163640.62	-12163640.41	-12163640.19	0.0279	0.0134
Mars	-38008-08-27 00:28 J	-12160760.66	-12160760.48	-12160760.29	0.1687	0.0422
Uranus	-38003-10-14 02:23 J	-12158886.61	-12158886.40	-12158886.17	0.0133	0.0064
Uranus	-38002-10-18 09:06 J	-12158517.36	-12158517.12	-12158516.87	0.0133	0.0040

38TH MILLENNIUM BCE

This is a list of transits of Earth in the 38th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-38000-04-11 17:30 J	-12157976.00	-12157975.77	-12157975.53	0.0280	0.0087		
Saturn	-37986-10-16 01:11 J	-12152675.67	-12152675.45	-12152675.22	0.0279	0.0116		
Neptune	-37983-03-08 08:23 J	-12151801.30	-12151801.15	-12151800.97	0.0089	0.0069		
Neptune	-37982-03-10 19:54 J	-12151433.91	-12151433.67	-12151433.43	0.0089	0.0030		
Neptune	-37981-03-12 06:57 J	-12151066.46	-12151066.21	-12151065.95	0.0089	0.0009		
Neptune	-37980-03-14 17:45 J	-12150698.95	-12150698.76	-12150698.52	0.0089	0.0049		
Neptune	-37979-03-17 05:02 J	-12150331.32	-12150331.29	-12150331.21	0.0089	0.0087		
Saturn	-37971-04-06 07:11 J	-12147389.41	-12147389.20	-12147388.97	0.0279	0.0116		
Uranus	-37959-04-13 08:09 J	-12142999.40	-12142999.16	-12142998.90	0.0146	0.0015		
Uranus	-37958-04-18 10:04 J	-12142629.21	-12142629.08	-12142628.94	0.0146	0.0123		
Jupiter	-37957-09-20 10:04 J	-12142108.26	-12142108.08	-12142107.89	0.0516	0.0327		
Saturn	-37957-10-09 06:57 J	-12142089.44	-12142089.21	-12142088.98	0.0279	0.0092		
Jupiter	-37951-03-19 19:26 J	-12140101.88	-12140101.69	-12140101.50	0.0512	0.0288		

Jupiter -37945-09-25 08:52 J -12137720.33 -12137720.13 -12137719.92 0.0519 0.0235
 Saturn -37941-04-12 17:30 J -12136424.99 -12136424.77 -12136424.55 0.0280 0.0123
 Jupiter -37939-03-24 09:50 J -12135714.30 -12135714.09 -12135713.88 0.0510 0.0229
 Mars -37929-08-29 09:50 J -12131903.23 -12131903.09 -12131902.95 0.1684 0.1153
 Saturn -37927-10-17 04:47 J -12131124.50 -12131124.30 -12131124.10 0.0279 0.0156
 Uranus -37919-10-14 10:33 J -12128205.28 -12128205.06 -12128204.83 0.0133 0.0061
 Uranus -37918-10-18 17:02 J -12127836.02 -12127835.79 -12127835.54 0.0133 0.0043
 Saturn -37912-04-07 08:23 J -12125838.38 -12125838.15 -12125837.91 0.0279 0.0079
 Neptune -37901-09-08 23:16 J -12121665.66 -12121665.53 -12121665.36 0.0088 0.0071
 Neptune -37900-09-11 11:16 J -12121298.25 -12121298.03 -12121297.77 0.0088 0.0033
 Neptune -37899-09-13 23:45 J -12120930.77 -12120930.51 -12120930.25 0.0088 0.0006
 Neptune -37898-09-16 11:30 J -12120563.23 -12120563.02 -12120562.78 0.0088 0.0044
 Saturn -37898-10-11 10:33 J -12120538.30 -12120538.06 -12120537.82 0.0279 0.0051
 Neptune -37897-09-17 23:16 J -12120195.60 -12120195.53 -12120195.42 0.0088 0.0082
 Saturn -37882-04-14 16:47 J -12114873.99 -12114873.80 -12114873.59 0.0280 0.0158
 Uranus -37875-04-13 16:18 J -12112318.07 -12112317.82 -12112317.56 0.0146 0.0012
 Uranus -37874-04-18 17:59 J -12111947.87 -12111947.75 -12111947.62 0.0146 0.0126
 Jupiter -37874-09-20 15:35 J -12111792.99 -12111792.85 -12111792.70 0.0515 0.0397
 Saturn -37869-10-05 02:38 J -12109951.49 -12109951.39 -12109951.28 0.0280 0.0252
 Jupiter -37868-03-19 00:28 J -12109786.64 -12109786.48 -12109786.31 0.0513 0.0365
 Saturn -37868-10-18 06:28 J -12109573.39 -12109573.23 -12109573.04 0.0279 0.0196
 Jupiter -37862-09-25 11:45 J -12107405.23 -12107405.01 -12107404.78 0.0517 0.0150
 Pluto -37857-04-26 22:33 J -12105729.82 -12105729.56 -12105729.30 0.0066 0.0003
 Mars -37856-02-24 12:14 J -12105426.19 -12105425.99 -12105425.80 0.1836 0.0065
 Jupiter -37856-03-23 17:16 J -12105399.00 -12105398.78 -12105398.56 0.0511 0.0166
 Saturn -37853-04-08 09:35 J -12104287.34 -12104287.10 -12104286.85 0.0279 0.0041
 Saturn -37839-10-12 13:11 J -12098987.19 -12098986.95 -12098986.70 0.0279 0.0013
 Uranus -37835-10-14 19:11 J -12097523.93 -12097523.70 -12097523.47 0.0133 0.0057
 Uranus -37834-10-19 01:40 J -12097154.67 -12097154.43 -12097154.19 0.0133 0.0046
 Saturn -37824-04-02 16:33 J -12093700.91 -12093700.81 -12093700.70 0.0279 0.0251

Saturn -37823-04-15 16:47 J -12093322.97 -12093322.80 -12093322.62 0.0280 0.0193
 Neptune -37819-03-07 20:09 J -12091900.71 -12091900.66 -12091900.59 0.0089 0.0087
 Neptune -37818-03-10 07:40 J -12091533.40 -12091533.18 -12091532.97 0.0089 0.0048
 Neptune -37817-03-11 18:57 J -12091165.97 -12091165.71 -12091165.46 0.0089 0.0009
 Neptune -37816-03-14 05:59 J -12090798.48 -12090798.25 -12090798.00 0.0089 0.0031
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 Saturn -37810-10-07 04:18 J -12088400.47 -12088400.32 -12088400.16 0.0280 0.0215
 Saturn -37809-10-19 08:23 J -12088022.28 -12088022.15 -12088022.01 0.0279 0.0234
 Saturn -37794-04-10 11:16 J -12082736.28 -12082736.03 -12082735.79 0.0279 0.0003
 Uranus -37792-04-08 22:04 J -12082006.58 -12082006.58 -12082006.56 0.0145 0.0145
 Uranus -37791-04-13 23:30 J -12081636.77 -12081636.52 -12081636.26 0.0146 0.0010
 Jupiter -37791-09-19 20:09 J -12081477.74 -12081477.66 -12081477.57 0.0515 0.0478
 Uranus -37790-04-19 01:26 J -12081266.55 -12081266.44 -12081266.32 0.0146 0.0128
 Jupiter -37785-03-18 10:33 J -12079471.19 -12079471.06 -12079470.93 0.0514 0.0421
 Saturn -37780-10-13 15:21 J -12077436.10 -12077435.86 -12077435.61 0.0279 0.0028
 Jupiter -37779-09-24 18:42 J -12077089.95 -12077089.72 -12077089.49 0.0517 0.0079
 Jupiter -37773-03-23 02:09 J -12075083.63 -12075083.41 -12075083.18 0.0511 0.0107
 Pluto -37771-10-30 13:54 J -12074132.16 -12074131.92 -12074131.66 0.0078 0.0017
 Saturn -37765-04-03 18:14 J -12072149.89 -12072149.74 -12072149.58 0.0279 0.0214
 Saturn -37764-04-16 18:14 J -12071771.87 -12071771.74 -12071771.60 0.0280 0.0231
 Saturn -37751-10-08 05:16 J -12066849.46 -12066849.28 -12066849.08 0.0280 0.0178
 Uranus -37751-10-15 03:06 J -12066842.59 -12066842.37 -12066842.13 0.0133 0.0055
 Uranus -37750-10-19 09:35 J -12066473.33 -12066473.10 -12066472.86 0.0133 0.0049
 Saturn -37750-10-21 09:50 J -12066471.14 -12066471.09 -12066471.04 0.0280 0.0272
 Neptune -37736-09-10 22:33 J -12061397.76 -12061397.56 -12061397.34 0.0088 0.0051
 Saturn -37735-04-11 13:54 J -12061185.16 -12061184.92 -12061184.68 0.0279 0.0037
 Neptune -37735-09-13 10:47 J -12061030.30 -12061030.05 -12061029.79 0.0088 0.0012
 Neptune -37734-09-15 22:33 J -12060662.80 -12060662.56 -12060662.31 0.0088 0.0027
 Neptune -37733-09-17 10:04 J -12060295.23 -12060295.08 -12060294.88 0.0088 0.0066
 Mars -37724-08-27 18:57 J -12057028.90 -12057028.71 -12057028.52 0.1693 0.0366

Saturn -37721-10-14 18:57 J -12055884.95 -12055884.71 -12055884.47 0.0279 0.0068
 Uranus -37708-04-09 05:30 J -12051325.30 -12051325.27 -12051325.20 0.0145 0.0143
 Uranus -37707-04-14 07:26 J -12050955.45 -12050955.19 -12050954.94 0.0146 0.0007
 Saturn -37706-04-05 21:06 J -12050598.80 -12050598.62 -12050598.42 0.0279 0.0174
 Uranus -37706-04-19 08:52 J -12050585.23 -12050585.13 -12050585.01 0.0146 0.0131
 Saturn -37705-04-17 21:06 J -12050220.67 -12050220.62 -12050220.56 0.0280 0.0271
 Jupiter -37702-03-18 16:47 J -12049155.85 -12049155.80 -12049155.73 0.0514 0.0495
 Jupiter -37696-09-24 01:54 J -12046774.66 -12046774.42 -12046774.19 0.0516 0.0015
 Saturn -37692-10-09 07:26 J -12045298.41 -12045298.19 -12045297.98 0.0281 0.0138
 Jupiter -37690-03-23 04:47 J -12044768.53 -12044768.30 -12044768.07 0.0512 0.0019
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 Uranus -37666-10-19 18:28 J -12035791.97 -12035791.73 -12035791.50 0.0133 0.0052
 Saturn -37662-10-16 22:47 J -12034333.77 -12034333.55 -12034333.32 0.0280 0.0111
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 Neptune -37653-03-11 05:45 J -12031265.49 -12031265.26 -12031265.00 0.0089 0.0027
 Neptune -37652-03-13 17:16 J -12030898.03 -12030897.78 -12030897.52 0.0089 0.0012
 Neptune -37651-03-16 04:18 J -12030530.52 -12030530.32 -12030530.10 0.0089 0.0051
 Saturn -37647-04-07 02:23 J -12029047.61 -12029047.40 -12029047.18 0.0279 0.0130
 Mars -37645-08-30 05:16 J -12028171.40 -12028171.28 -12028171.15 0.1690 0.1259
 Saturn -37633-10-10 10:47 J -12023747.27 -12023747.05 -12023746.81 0.0281 0.0096
 Uranus -37624-04-09 13:40 J -12020643.99 -12020643.93 -12020643.85 0.0146 0.0140
 Uranus -37623-04-14 15:06 J -12020274.12 -12020273.87 -12020273.61 0.0146 0.0004
 Uranus -37622-04-19 16:33 J -12019903.88 -12019903.81 -12019903.69 0.0146 0.0134
 Saturn -37617-04-14 00:57 J -12018082.67 -12018082.46 -12018082.23 0.0279 0.0128
 Jupiter -37613-09-23 02:52 J -12016459.61 -12016459.38 -12016459.15 0.0516 0.0086
 Pluto -37609-04-28 13:40 J -12015146.19 -12015145.93 -12015145.67 0.0066 0.0002
 Jupiter -37607-03-22 12:14 J -12014453.22 -12014452.99 -12014452.76 0.0513 0.0052
 Saturn -37603-10-18 04:47 J -12012782.50 -12012782.30 -12012782.09 0.0280 0.0156
 Jupiter -37601-09-28 00:14 J -12012071.57 -12012071.49 -12012071.38 0.0518 0.0472

Jupiter -37595-03-27 03:50 J -12010065.42 -12010065.34 -12010065.25 0.0510 0.0474
 Saturn -37588-04-08 09:50 J -12007496.32 -12007496.09 -12007495.85 0.0279 0.0083
 Uranus -37583-10-15 20:23 J -12005479.88 -12005479.65 -12005479.41 0.0133 0.0048
 Uranus -37582-10-20 02:23 J -12005110.61 -12005110.40 -12005110.15 0.0133 0.0056
 Saturn -37574-10-12 16:04 J -12002196.07 -12002195.83 -12002195.58 0.0281 0.0051
 Mars -37572-02-24 12:42 J -12001695.15 -12001694.97 -12001694.79 0.1827 0.0610
 Neptune -37572-09-10 09:35 J -12001497.24 -12001497.10 -12001496.92 0.0088 0.0069
 Neptune -37571-09-12 21:35 J -12001129.83 -12001129.60 -12001129.34 0.0088 0.0030
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 Neptune -37569-09-16 21:35 J -12000394.81 -12000394.60 -12000394.37 0.0088 0.0047
 Neptune -37568-09-19 08:52 J -12000027.15 -12000027.13 -12000027.04 0.0088 0.0087
 Saturn -37559-04-03 11:16 J -11996909.09 -11996909.03 -11996908.95 0.0278 0.0264
 Saturn -37558-04-16 09:35 J -11996531.29 -11996531.10 -11996530.91 0.0279 0.0177
 Saturn -37545-10-06 06:42 J -11991609.32 -11991609.22 -11991609.10 0.0281 0.0251
 Saturn -37544-10-19 12:28 J -11991231.14 -11991230.98 -11991230.81 0.0280 0.0205
 Uranus -37540-04-09 22:18 J -11989962.65 -11989962.57 -11989962.47 0.0146 0.0136
 Uranus -37539-04-14 23:59 J -11989592.75 -11989592.50 -11989592.25 0.0146 0.0000
 Uranus -37538-04-20 01:26 J -11989222.50 -11989222.44 -11989222.34 0.0146 0.0138
 Jupiter -37530-09-23 07:54 J -11986144.39 -11986144.17 -11986143.94 0.0515 0.0164
 Saturn -37529-04-09 19:11 J -11985944.95 -11985944.70 -11985944.46 0.0279 0.0032
 Jupiter -37524-03-21 16:47 J -11984138.02 -11984137.80 -11984137.58 0.0513 0.0134
 Pluto -37523-11-01 03:50 J -11983548.57 -11983548.34 -11983548.09 0.0078 0.0027
 Jupiter -37518-09-28 06:14 J -11981756.39 -11981756.24 -11981756.09 0.0517 0.0396
 Saturn -37515-10-13 23:45 J -11980644.76 -11980644.51 -11980644.27 0.0280 0.0004
 Jupiter -37512-03-26 03:21 J -11979750.52 -11979750.36 -11979750.20 0.0511 0.0368
 Saturn -37500-04-04 20:38 J -11975357.78 -11975357.64 -11975357.47 0.0278 0.0214
 Saturn -37499-04-17 18:57 J -11974979.83 -11974979.71 -11974979.56 0.0279 0.0230
 Uranus -37499-10-16 05:16 J -11974798.51 -11974798.28 -11974798.02 0.0133 0.0044
 Uranus -37498-10-20 11:45 J -11974429.23 -11974429.01 -11974428.77 0.0133 0.0060
 Mars -37493-02-28 09:35 J -11972837.15 -11972837.10 -11972837.04 0.1832 0.1752

Neptune -37490-03-09 04:47 J -11971732.34 -11971732.30 -11971732.19 0.0089 0.0086
 Neptune -37489-03-10 16:18 J -11971365.02 -11971364.82 -11971364.58 0.0089 0.0046
 Neptune -37488-03-13 04:04 J -11970997.58 -11970997.33 -11970997.07 0.0089 0.0007
 Neptune -37487-03-15 15:06 J -11970630.09 -11970629.87 -11970629.62 0.0089 0.0033
 Neptune -37486-03-18 02:23 J -11970262.53 -11970262.40 -11970262.24 0.0089 0.0072
 Saturn -37486-10-08 16:33 J -11970057.98 -11970057.81 -11970057.63 0.0281 0.0199
 Saturn -37485-10-20 21:50 J -11969679.67 -11969679.59 -11969679.48 0.0280 0.0256
 Saturn -37470-04-12 05:45 J -11964393.50 -11964393.26 -11964393.01 0.0279 0.0022
 Uranus -37456-04-10 07:40 J -11959281.29 -11959281.18 -11959281.07 0.0146 0.0131
 Saturn -37456-10-15 08:38 J -11959093.38 -11959093.14 -11959092.90 0.0280 0.0050
 Uranus -37455-04-15 09:06 J -11958911.37 -11958911.12 -11958910.87 0.0146 0.0005
 Uranus -37454-04-20 10:33 J -11958541.08 -11958541.06 -11958540.98 0.0146 0.0143
 Jupiter -37447-09-22 11:16 J -11955829.23 -11955829.03 -11955828.82 0.0514 0.0251
 Jupiter -37441-03-20 14:23 J -11953823.10 -11953822.90 -11953822.70 0.0514 0.0252
 Saturn -37441-04-06 06:57 J -11953806.40 -11953806.21 -11953806.01 0.0278 0.0162
 Mars -37440-08-28 12:14 J -11953297.18 -11953296.99 -11953296.80 0.1700 0.0339
 Jupiter -37435-09-27 02:52 J -11951441.57 -11951441.38 -11951441.18 0.0516 0.0276
 Jupiter -37429-03-25 07:40 J -11949435.37 -11949435.18 -11949434.99 0.0512 0.0285
 Saturn -37427-10-10 04:04 J -11948506.54 -11948506.33 -11948506.12 0.0281 0.0145
 Uranus -37415-10-16 14:23 J -11944117.13 -11944116.90 -11944116.64 0.0133 0.0040
 Uranus -37414-10-20 20:52 J -11943747.85 -11943747.63 -11943747.40 0.0133 0.0064
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 Neptune -37407-09-12 07:40 J -11941229.38 -11941229.18 -11941228.94 0.0088 0.0049
 Neptune -37406-09-14 19:54 J -11940861.92 -11940861.67 -11940861.41 0.0088 0.0009
 Neptune -37405-09-16 07:40 J -11940494.41 -11940494.18 -11940493.92 0.0088 0.0029
 Neptune -37404-09-18 19:26 J -11940126.83 -11940126.69 -11940126.50 0.0088 0.0068
 Saturn -37397-10-16 18:57 J -11937541.93 -11937541.71 -11937541.48 0.0280 0.0104
 Saturn -37382-04-08 17:02 J -11932255.01 -11932254.79 -11932254.56 0.0278 0.0109
 Uranus -37372-04-10 16:33 J -11928599.93 -11928599.81 -11928599.68 0.0146 0.0126

Uranus -37371-04-15 18:28 J -11928229.98 -11928229.73 -11928229.48 0.0146 0.0010
 Saturn -37368-10-11 16:04 J -11926955.06 -11926954.83 -11926954.59 0.0280 0.0090
 Jupiter -37364-09-21 08:09 J -11925514.32 -11925514.16 -11925513.99 0.0513 0.0367
 Pluto -37361-04-30 01:40 J -11924562.68 -11924562.43 -11924562.17 0.0066 0.0015
 Mars -37361-08-30 23:45 J -11924439.62 -11924439.51 -11924439.39 0.1696 0.1340
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 Saturn -37352-04-15 04:18 J -11921290.53 -11921290.32 -11921290.10 0.0279 0.0131
 Jupiter -37352-09-26 05:02 J -11921126.51 -11921126.29 -11921126.07 0.0516 0.0183
 Jupiter -37346-03-25 11:30 J -11919120.22 -11919120.02 -11919119.80 0.0512 0.0201
 Saturn -37338-10-19 06:14 J -11915990.45 -11915990.24 -11915990.04 0.0280 0.0158
 Uranus -37331-10-17 00:28 J -11913435.73 -11913435.48 -11913435.23 0.0133 0.0034
 Uranus -37330-10-21 06:28 J -11913066.43 -11913066.23 -11913065.99 0.0133 0.0069
 Neptune -37325-03-10 02:38 J -11911464.54 -11911464.39 -11911464.20 0.0089 0.0065
 Neptune -37324-03-12 14:23 J -11911097.15 -11911096.90 -11911096.66 0.0089 0.0026
 Neptune -37323-03-15 01:26 J -11910729.68 -11910729.44 -11910729.18 0.0089 0.0014
 Saturn -37323-04-10 02:23 J -11910703.64 -11910703.40 -11910703.16 0.0279 0.0058
 Neptune -37322-03-17 12:57 J -11910362.15 -11910361.96 -11910361.74 0.0089 0.0053
 Saturn -37309-10-13 04:18 J -11905403.56 -11905403.32 -11905403.07 0.0280 0.0035
 Saturn -37294-04-04 16:47 J -11900116.87 -11900116.80 -11900116.71 0.0278 0.0260
 Saturn -37293-04-16 14:38 J -11899739.08 -11899738.89 -11899738.71 0.0279 0.0184
 Mars -37288-02-24 14:38 J -11897964.04 -11897963.89 -11897963.74 0.1819 0.1107
 Uranus -37288-04-11 01:26 J -11897918.57 -11897918.44 -11897918.30 0.0146 0.0122
 Uranus -37287-04-16 03:06 J -11897548.61 -11897548.37 -11897548.11 0.0146 0.0015
 Jupiter -37281-09-20 12:28 J -11895199.08 -11895198.98 -11895198.86 0.0513 0.0449
 Saturn -37280-10-07 10:18 J -11894817.17 -11894817.07 -11894816.94 0.0281 0.0247
 Saturn -37279-10-20 16:47 J -11894438.96 -11894438.80 -11894438.64 0.0280 0.0212
 Jupiter -37275-03-19 19:26 J -11893192.80 -11893192.69 -11893192.56 0.0515 0.0436
 Pluto -37275-11-02 16:33 J -11892965.01 -11892964.81 -11892964.57 0.0078 0.0041
 Jupiter -37269-09-25 08:52 J -11890811.36 -11890811.13 -11890810.90 0.0515 0.0097
 Saturn -37264-04-11 10:18 J -11889152.32 -11889152.07 -11889151.83 0.0279 0.0009

Jupiter -37263-03-24 10:33 J -11888805.29 -11888805.06 -11888804.83 0.0513 0.0090
 Saturn -37250-10-15 15:35 J -11883852.10 -11883851.85 -11883851.60 0.0280 0.0020
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 Uranus -37247-10-17 09:50 J -11882754.33 -11882754.09 -11882753.83 0.0133 0.0030
 Uranus -37246-10-21 16:04 J -11882385.02 -11882384.83 -11882384.60 0.0132 0.0074
 Neptune -37243-09-11 17:30 J -11881328.91 -11881328.77 -11881328.58 0.0088 0.0067
 Neptune -37242-09-14 05:45 J -11880961.49 -11880961.26 -11880961.00 0.0088 0.0028
 Neptune -37241-09-15 17:59 J -11880594.00 -11880593.75 -11880593.48 0.0088 0.0011
 Neptune -37240-09-18 05:45 J -11880226.47 -11880226.26 -11880226.04 0.0088 0.0050
 Neptune -37239-09-20 17:45 J -11879858.76 -11879858.76 -11879858.75 0.0088 0.0088
 Saturn -37235-04-06 00:42 J -11878565.61 -11878565.47 -11878565.30 0.0278 0.0212
 Saturn -37234-04-18 22:47 J -11878187.67 -11878187.55 -11878187.41 0.0279 0.0235
 Saturn -37221-10-08 21:21 J -11873265.78 -11873265.61 -11873265.43 0.0280 0.0194
 Saturn -37220-10-22 02:52 J -11872887.45 -11872887.38 -11872887.29 0.0280 0.0265
 Mars -37209-02-28 10:18 J -11869106.22 -11869106.07 -11869105.93 0.1824 0.1176
 Saturn -37205-04-12 16:04 J -11867601.07 -11867600.83 -11867600.58 0.0279 0.0038
 Uranus -37204-04-11 09:50 J -11867237.23 -11867237.09 -11867236.94 0.0146 0.0118
 Uranus -37203-04-16 11:45 J -11866867.26 -11866867.01 -11866866.75 0.0146 0.0019
 Saturn -37191-10-17 00:57 J -11862300.69 -11862300.46 -11862300.22 0.0280 0.0071
 Jupiter -37186-09-25 06:42 J -11860496.46 -11860496.22 -11860495.99 0.0514 0.0014
 Jupiter -37180-03-23 16:33 J -11858490.04 -11858489.81 -11858489.57 0.0514 0.0021
 Saturn -37176-04-07 07:26 J -11857014.38 -11857014.19 -11857013.99 0.0278 0.0165
 Uranus -37164-10-13 13:11 J -11852442.01 -11852441.95 -11852441.86 0.0133 0.0127
 Uranus -37163-10-17 20:23 J -11852072.90 -11852072.65 -11852072.39 0.0133 0.0024
 Saturn -37162-10-11 06:14 J -11851714.45 -11851714.24 -11851714.02 0.0280 0.0144
 Uranus -37162-10-22 02:52 J -11851703.58 -11851703.38 -11851703.17 0.0132 0.0079
 Neptune -37161-03-09 12:57 J -11851564.04 -11851563.96 -11851563.88 0.0089 0.0085
 Neptune -37160-03-11 23:45 J -11851196.72 -11851196.51 -11851196.28 0.0089 0.0046
 Neptune -37159-03-14 11:16 J -11850829.28 -11850829.03 -11850828.77 0.0089 0.0006
 Neptune -37158-03-16 22:18 J -11850461.80 -11850461.57 -11850461.33 0.0089 0.0034

Neptune -37157-03-18 09:21 J -11850094.23 -11850094.11 -11850093.95 0.0089 0.0073
 Mars -37156-08-29 04:04 J -11849565.52 -11849565.33 -11849565.14 0.1707 0.0354
 Saturn -37146-04-14 19:54 J -11846049.90 -11846049.67 -11846049.43 0.0279 0.0081
 Saturn -37132-10-18 08:52 J -11840749.34 -11840749.13 -11840748.90 0.0280 0.0121
 Uranus -37120-04-11 18:42 J -11836555.86 -11836555.72 -11836555.55 0.0146 0.0114
 Uranus -37119-04-16 20:52 J -11836185.87 -11836185.63 -11836185.37 0.0146 0.0023
 Saturn -37117-04-08 11:30 J -11835463.23 -11835463.02 -11835462.79 0.0278 0.0123
 Pluto -37113-05-01 11:59 J -11833979.22 -11833979.00 -11833978.77 0.0066 0.0032
 Pluto -37112-05-03 02:23 J -11833612.55 -11833612.40 -11833612.20 0.0067 0.0050
 Jupiter -37103-09-24 12:57 J -11830181.19 -11830180.96 -11830180.73 0.0514 0.0087
 Saturn -37103-10-12 13:26 J -11830163.17 -11830162.94 -11830162.71 0.0280 0.0096
 Jupiter -37097-03-22 21:35 J -11828174.82 -11828174.60 -11828174.36 0.0514 0.0062
 Jupiter -37091-09-29 10:18 J -11825793.16 -11825793.07 -11825792.97 0.0517 0.0469
 Saturn -37087-04-15 22:04 J -11824498.80 -11824498.58 -11824498.36 0.0279 0.0121
 Jupiter -37085-03-27 12:28 J -11823787.07 -11823786.98 -11823786.88 0.0512 0.0463
 Uranus -37080-10-13 23:16 J -11821760.60 -11821760.53 -11821760.40 0.0133 0.0122
 Neptune -37079-09-11 02:38 J -11821428.43 -11821428.39 -11821428.34 0.0088 0.0087
 Uranus -37079-10-18 06:57 J -11821391.46 -11821391.21 -11821390.95 0.0133 0.0019
 Neptune -37078-09-13 14:23 J -11821061.10 -11821060.90 -11821060.66 0.0088 0.0048
 Uranus -37078-10-22 13:40 J -11821022.13 -11821021.93 -11821021.73 0.0132 0.0084
 Mars -37077-08-31 16:18 J -11820707.93 -11820707.82 -11820707.70 0.1702 0.1367
 Neptune -37077-09-15 02:52 J -11820693.64 -11820693.38 -11820693.12 0.0088 0.0009
 Neptune -37076-09-17 14:52 J -11820326.12 -11820325.88 -11820325.63 0.0088 0.0030
 Neptune -37075-09-20 02:23 J -11819958.54 -11819958.40 -11819958.22 0.0088 0.0070
 Saturn -37073-10-19 14:23 J -11819198.09 -11819197.90 -11819197.69 0.0280 0.0165
 Saturn -37058-04-10 14:23 J -11813912.13 -11813911.90 -11813911.67 0.0278 0.0082
 Saturn -37044-10-13 18:57 J -11808611.95 -11808611.71 -11808611.47 0.0280 0.0051
 Uranus -37036-04-12 04:18 J -11805874.47 -11805874.32 -11805874.14 0.0146 0.0109
 Uranus -37035-04-17 06:14 J -11805504.48 -11805504.24 -11805503.98 0.0146 0.0028
 Saturn -37028-04-16 22:18 J -11802947.77 -11802947.57 -11802947.37 0.0279 0.0158

Pluto	-37027-11-04 00:28 J	-11802381.58	-11802381.48	-11802381.35	0.0078	0.0069
Pluto	-37026-11-06 02:09 J	-11802014.54	-11802014.41	-11802014.22	0.0077	0.0061
Jupiter	-37020-09-23 17:16 J	-11799866.00	-11799865.78	-11799865.56	0.0513	0.0163
Saturn	-37015-10-08 10:47 J	-11798025.14	-11798025.05	-11798024.95	0.0282	0.0259
Jupiter	-37014-03-23 01:54 J	-11797859.64	-11797859.42	-11797859.19	0.0515	0.0142
Saturn	-37014-10-21 18:14 J	-11797646.90	-11797646.74	-11797646.57	0.0280	0.0208
Jupiter	-37008-09-28 12:28 J	-11795478.13	-11795477.98	-11795477.82	0.0515	0.0380
Mars	-37004-02-24 17:02 J	-11794232.88	-11794232.79	-11794232.69	0.1810	0.1569
Jupiter	-37002-03-27 19:40 J	-11793471.82	-11793471.68	-11793471.53	0.0513	0.0398

37TH MILLENNIUM BCE

This is a list of transits of Earth in the 37th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-36999-04-11 15:50 J	-11792361.08	-11792360.84	-11792360.60	0.0278	0.0044		
Neptune	-36996-03-11 09:21 J	-11791296.27	-11791296.11	-11791295.92	0.0089	0.0066		
Uranus	-36996-10-14 11:02 J	-11791079.16	-11791079.04	-11791078.91	0.0133	0.0115		
Neptune	-36995-03-13 20:23 J	-11790928.88	-11790928.65	-11790928.39	0.0089	0.0026		
Uranus	-36995-10-18 18:14 J	-11790709.99	-11790709.74	-11790709.48	0.0133	0.0012		
Neptune	-36994-03-16 07:54 J	-11790561.42	-11790561.17	-11790560.92	0.0089	0.0014		
Uranus	-36994-10-23 00:42 J	-11790340.65	-11790340.47	-11790340.28	0.0132	0.0090		
Neptune	-36993-03-17 18:42 J	-11790193.91	-11790193.72	-11790193.50	0.0089	0.0053		
Saturn	-36985-10-14 22:33 J	-11787060.81	-11787060.56	-11787060.31	0.0280	0.0009		
Saturn	-36970-04-06 00:42 J	-11781774.55	-11781774.47	-11781774.36	0.0278	0.0256		

Saturn -36969-04-17 21:50 J -11781396.76 -11781396.59 -11781396.41 0.0279 0.0194
 Saturn -36956-10-09 12:42 J -11776474.11 -11776473.97 -11776473.81 0.0282 0.0220
 Saturn -36955-10-22 20:23 J -11776095.75 -11776095.65 -11776095.53 0.0281 0.0249
 Uranus -36952-04-12 15:21 J -11775193.04 -11775192.86 -11775192.68 0.0146 0.0102
 Uranus -36951-04-17 16:47 J -11774823.04 -11774822.80 -11774822.54 0.0146 0.0034
 Saturn -36940-04-12 16:33 J -11770810.06 -11770809.81 -11770809.57 0.0278 0.0006
 Jupiter -36937-09-22 22:18 J -11769550.77 -11769550.57 -11769550.36 0.0512 0.0241
 Jupiter -36931-03-22 12:14 J -11767544.20 -11767543.99 -11767543.78 0.0516 0.0198
 Saturn -36926-10-17 01:26 J -11765509.68 -11765509.44 -11765509.19 0.0281 0.0032
 Mars -36925-02-28 12:14 J -11765375.17 -11765374.99 -11765374.81 0.1816 0.0657
 Jupiter -36925-09-27 19:54 J -11765162.85 -11765162.67 -11765162.48 0.0515 0.0311
 Jupiter -36919-03-27 04:33 J -11763156.48 -11763156.31 -11763156.13 0.0513 0.0338
 Neptune -36914-09-12 22:04 J -11761160.72 -11761160.58 -11761160.40 0.0088 0.0068
 Neptune -36913-09-14 10:33 J -11760793.29 -11760793.06 -11760792.80 0.0088 0.0029
 Neptune -36912-09-16 22:33 J -11760425.81 -11760425.56 -11760425.29 0.0088 0.0011
 Uranus -36912-10-14 22:18 J -11760397.70 -11760397.57 -11760397.41 0.0133 0.0108
 Saturn -36911-04-07 00:57 J -11760223.60 -11760223.46 -11760223.31 0.0278 0.0220
 Neptune -36911-09-19 10:33 J -11760058.26 -11760058.06 -11760057.83 0.0088 0.0050
 Uranus -36911-10-19 05:30 J -11760028.52 -11760028.27 -11760028.01 0.0133 0.0006
 Saturn -36910-04-19 21:21 J -11759845.73 -11759845.61 -11759845.46 0.0279 0.0231
 Uranus -36910-10-23 11:45 J -11759659.17 -11759659.01 -11759658.82 0.0132 0.0097
 Saturn -36897-10-10 13:54 J -11754923.10 -11754922.92 -11754922.73 0.0282 0.0181
 Saturn -36881-04-13 17:16 J -11749259.02 -11749258.78 -11749258.53 0.0277 0.0033
 Mars -36872-08-29 17:30 J -11745833.95 -11745833.77 -11745833.58 0.1714 0.0430
 Uranus -36868-04-13 01:40 J -11744511.61 -11744511.43 -11744511.23 0.0146 0.0096
 Uranus -36867-04-18 03:21 J -11744141.60 -11744141.36 -11744141.11 0.0146 0.0040
 Saturn -36867-10-18 03:50 J -11743958.58 -11743958.34 -11743958.10 0.0281 0.0072
 Pluto -36865-05-02 20:38 J -11743395.77 -11743395.64 -11743395.46 0.0066 0.0053
 Pluto -36864-05-04 11:45 J -11743029.24 -11743029.01 -11743028.78 0.0067 0.0029
 Jupiter -36854-09-23 08:09 J -11739235.35 -11739235.16 -11739234.97 0.0512 0.0296

Saturn -36852-04-08 01:40 J -11738672.60 -11738672.43 -11738672.24 0.0277 0.0182
 Saturn -36851-04-20 21:50 J -11738294.65 -11738294.59 -11738294.52 0.0278 0.0268
 Jupiter -36848-03-21 19:11 J -11737228.89 -11737228.70 -11737228.50 0.0516 0.0269
 Jupiter -36842-09-28 03:35 J -11734847.55 -11734847.35 -11734847.14 0.0514 0.0248
 Saturn -36838-10-12 15:06 J -11733372.08 -11733371.87 -11733371.66 0.0282 0.0141
 Jupiter -36836-03-26 08:09 J -11732841.36 -11732841.16 -11732840.96 0.0514 0.0253
 Neptune -36832-03-10 17:30 J -11731395.81 -11731395.77 -11731395.68 0.0089 0.0087
 Neptune -36831-03-13 05:16 J -11731028.50 -11731028.28 -11731028.06 0.0089 0.0047
 Neptune -36830-03-15 16:04 J -11730661.08 -11730660.83 -11730660.57 0.0089 0.0007
 Neptune -36829-03-17 03:21 J -11730293.60 -11730293.36 -11730293.12 0.0089 0.0032
 Neptune -36828-03-19 14:09 J -11729926.04 -11729925.91 -11729925.74 0.0089 0.0072
 Uranus -36828-10-15 10:18 J -11729716.22 -11729716.07 -11729715.89 0.0133 0.0101
 Uranus -36827-10-19 17:45 J -11729347.02 -11729346.76 -11729346.51 0.0133 0.0002
 Uranus -36826-10-23 23:30 J -11728977.66 -11728977.52 -11728977.34 0.0132 0.0104
 Saturn -36822-04-15 19:11 J -11727707.93 -11727707.70 -11727707.46 0.0277 0.0073
 Saturn -36808-10-19 06:28 J -11722407.45 -11722407.23 -11722407.00 0.0281 0.0114
 Saturn -36793-04-09 04:04 J -11717121.54 -11717121.33 -11717121.12 0.0277 0.0142
 Mars -36793-09-01 07:11 J -11716976.32 -11716976.20 -11716976.09 0.1709 0.1342
 Uranus -36784-04-13 12:42 J -11713830.16 -11713829.97 -11713829.76 0.0146 0.0089
 Uranus -36783-04-18 14:23 J -11713460.13 -11713459.90 -11713459.65 0.0146 0.0047
 Saturn -36779-10-13 16:33 J -11711821.04 -11711820.81 -11711820.58 0.0282 0.0101
 Pluto -36778-11-07 10:47 J -11711431.28 -11711431.05 -11711430.81 0.0077 0.0034
 Jupiter -36771-09-22 14:23 J -11708920.06 -11708919.90 -11708919.73 0.0511 0.0366
 Jupiter -36765-03-20 21:21 J -11706913.77 -11706913.61 -11706913.44 0.0517 0.0364
 Saturn -36763-04-16 22:33 J -11706156.77 -11706156.56 -11706156.33 0.0277 0.0117
 Jupiter -36759-09-27 06:57 J -11704532.43 -11704532.21 -11704531.98 0.0513 0.0160
 Jupiter -36753-03-25 16:47 J -11702526.01 -11702525.80 -11702525.58 0.0515 0.0190
 Neptune -36749-09-13 17:02 J -11700892.98 -11700892.79 -11700892.55 0.0088 0.0051
 Saturn -36749-10-20 10:04 J -11700856.28 -11700856.08 -11700855.87 0.0281 0.0158
 Neptune -36748-09-16 05:30 J -11700525.52 -11700525.27 -11700525.00 0.0088 0.0011

Neptune -36747-09-18 17:45 J -11700158.00 -11700157.76 -11700157.50 0.0088 0.0029
 Neptune -36746-09-21 05:59 J -11699790.42 -11699790.25 -11699790.09 0.0088 0.0068
 Uranus -36744-10-15 22:18 J -11699034.73 -11699034.57 -11699034.37 0.0133 0.0094
 Uranus -36743-10-20 05:30 J -11698665.53 -11698665.27 -11698665.02 0.0133 0.0009
 Uranus -36742-10-24 11:16 J -11698296.15 -11698296.03 -11698295.87 0.0132 0.0111
 Saturn -36734-04-11 07:54 J -11695570.39 -11695570.17 -11695569.94 0.0277 0.0098
 Saturn -36720-10-14 19:40 J -11690269.92 -11690269.68 -11690269.44 0.0282 0.0058
 Saturn -36704-04-18 04:18 J -11684605.52 -11684605.32 -11684605.12 0.0277 0.0163
 Uranus -36700-04-13 22:04 J -11683148.78 -11683148.58 -11683148.36 0.0146 0.0084
 Uranus -36699-04-18 23:45 J -11682778.74 -11682778.51 -11682778.27 0.0146 0.0052
 Saturn -36691-10-09 05:30 J -11679683.33 -11679683.27 -11679683.20 0.0282 0.0271
 Saturn -36690-10-22 15:06 J -11679305.03 -11679304.87 -11679304.69 0.0281 0.0205
 Jupiter -36688-09-21 17:45 J -11678604.86 -11678604.76 -11678604.65 0.0510 0.0453
 Jupiter -36682-03-21 05:30 J -11676598.40 -11676598.27 -11676598.14 0.0518 0.0430
 Jupiter -36676-09-26 13:54 J -11674217.15 -11674216.92 -11674216.69 0.0513 0.0091
 Saturn -36675-04-12 14:38 J -11674019.13 -11674018.89 -11674018.65 0.0277 0.0050
 Jupiter -36670-03-25 22:18 J -11672210.79 -11672210.57 -11672210.34 0.0515 0.0112
 Neptune -36667-03-12 12:42 J -11671128.11 -11671127.97 -11671127.78 0.0089 0.0068
 Neptune -36666-03-14 23:59 J -11670760.73 -11670760.50 -11670760.24 0.0089 0.0029
 Neptune -36665-03-16 11:30 J -11670393.27 -11670393.02 -11670392.77 0.0089 0.0012
 Neptune -36664-03-18 22:18 J -11670025.77 -11670025.57 -11670025.35 0.0089 0.0051
 Saturn -36661-10-16 00:14 J -11668718.74 -11668718.49 -11668718.25 0.0282 0.0012
 Uranus -36660-10-16 10:47 J -11668353.23 -11668353.05 -11668352.84 0.0133 0.0086
 Uranus -36659-10-20 17:45 J -11667984.01 -11667983.76 -11667983.50 0.0133 0.0017
 Uranus -36658-10-24 23:30 J -11667614.61 -11667614.52 -11667614.38 0.0132 0.0118
 Saturn -36646-04-07 17:30 J -11663431.90 -11663431.77 -11663431.64 0.0276 0.0234
 Saturn -36645-04-19 11:45 J -11663054.17 -11663054.01 -11663053.86 0.0277 0.0213
 Mars -36641-02-28 15:35 J -11661644.04 -11661643.85 -11661643.66 0.1807 0.0201
 Saturn -36632-10-10 13:11 J -11658132.09 -11658131.95 -11658131.79 0.0282 0.0221
 Saturn -36631-10-23 22:47 J -11657753.65 -11657753.55 -11657753.44 0.0281 0.0254

Saturn -36616-04-13 23:16 J -11652467.77 -11652467.53 -11652467.28 0.0277 0.0002
 Uranus -36616-04-14 08:23 J -11652467.35 -11652467.15 -11652466.92 0.0146 0.0078 *
 Pluto -36616-05-05 18:28 J -11652445.99 -11652445.73 -11652445.47 0.0067 0.0004
 Uranus -36615-04-19 10:18 J -11652097.30 -11652097.07 -11652096.83 0.0146 0.0058
 Saturn -36602-10-18 06:42 J -11647167.46 -11647167.22 -11647166.98 0.0282 0.0038
 Jupiter -36593-09-25 18:42 J -11643901.95 -11643901.72 -11643901.48 0.0512 0.0010
 Mars -36588-08-30 06:28 J -11642102.41 -11642102.23 -11642102.04 0.1721 0.0528
 Jupiter -36587-03-24 20:38 J -11641895.87 -11641895.64 -11641895.41 0.0516 0.0004
 Saturn -36587-04-09 02:09 J -11641880.58 -11641880.41 -11641880.22 0.0276 0.0182
 Saturn -36586-04-21 20:38 J -11641502.69 -11641502.64 -11641502.56 0.0277 0.0267
 Neptune -36585-09-12 22:47 J -11640992.67 -11640992.55 -11640992.38 0.0088 0.0073
 Neptune -36584-09-15 11:02 J -11640625.26 -11640625.04 -11640624.78 0.0088 0.0033
 Neptune -36583-09-17 23:30 J -11640257.78 -11640257.52 -11640257.26 0.0088 0.0007
 Neptune -36582-09-20 11:16 J -11639890.23 -11639890.03 -11639889.79 0.0088 0.0046
 Neptune -36581-09-21 23:02 J -11639522.58 -11639522.54 -11639522.45 0.0088 0.0086
 Uranus -36576-10-16 23:45 J -11637671.71 -11637671.51 -11637671.30 0.0133 0.0078
 Uranus -36575-10-21 06:28 J -11637302.48 -11637302.23 -11637301.98 0.0133 0.0024
 Uranus -36574-10-25 12:28 J -11636933.06 -11636932.98 -11636932.89 0.0132 0.0125
 Saturn -36573-10-11 22:33 J -11636580.76 -11636580.56 -11636580.36 0.0282 0.0169
 Saturn -36557-04-15 09:21 J -11630916.35 -11630916.11 -11630915.87 0.0277 0.0056
 Saturn -36543-10-19 15:50 J -11625616.07 -11625615.84 -11625615.61 0.0282 0.0092
 Uranus -36532-04-14 17:59 J -11621785.95 -11621785.75 -11621785.51 0.0146 0.0073
 Uranus -36531-04-19 19:54 J -11621415.89 -11621415.67 -11621415.43 0.0146 0.0063
 Pluto -36530-11-08 14:38 J -11620848.14 -11620847.89 -11620847.63 0.0077 0.0007
 Saturn -36528-04-10 11:45 J -11620329.22 -11620329.01 -11620328.79 0.0277 0.0129
 Saturn -36514-10-14 09:21 J -11615029.33 -11615029.11 -11615028.87 0.0282 0.0113
 Jupiter -36510-09-25 17:02 J -11613587.02 -11613586.79 -11613586.56 0.0511 0.0101
 Mars -36509-09-01 20:23 J -11613244.77 -11613244.65 -11613244.52 0.1716 0.1285
 Jupiter -36504-03-24 02:09 J -11611580.64 -11611580.41 -11611580.19 0.0517 0.0082
 Neptune -36502-03-14 07:11 J -11610860.39 -11610860.20 -11610859.97 0.0089 0.0050

Neptune -36501-03-15 18:28 J -11610492.98 -11610492.73 -11610492.47 0.0089 0.0010
 Neptune -36500-03-18 05:16 J -11610125.50 -11610125.28 -11610125.02 0.0089 0.0030
 Neptune -36499-03-20 16:47 J -11609757.96 -11609757.80 -11609757.64 0.0089 0.0070
 Saturn -36498-04-17 20:52 J -11609364.86 -11609364.63 -11609364.41 0.0277 0.0113
 Jupiter -36498-09-30 12:28 J -11609199.09 -11609198.98 -11609198.86 0.0514 0.0445
 Jupiter -36492-03-28 18:42 J -11607192.82 -11607192.72 -11607192.61 0.0514 0.0456
 Uranus -36492-10-17 12:28 J -11606990.18 -11606989.98 -11606989.74 0.0133 0.0070
 Uranus -36491-10-21 19:26 J -11606620.93 -11606620.69 -11606620.44 0.0133 0.0032
 Saturn -36484-10-21 01:54 J -11604064.62 -11604064.42 -11604064.21 0.0282 0.0148
 Saturn -36469-04-11 21:50 J -11598777.82 -11598777.59 -11598777.35 0.0277 0.0076
 Saturn -36455-10-15 21:50 J -11593477.82 -11593477.59 -11593477.34 0.0282 0.0055
 Uranus -36448-04-15 05:59 J -11591104.46 -11591104.25 -11591104.01 0.0146 0.0065
 Uranus -36447-04-20 07:54 J -11590734.38 -11590734.17 -11590733.94 0.0146 0.0071
 Saturn -36439-04-19 07:40 J -11587813.37 -11587813.18 -11587812.98 0.0277 0.0169
 Jupiter -36427-09-24 21:21 J -11583271.83 -11583271.61 -11583271.39 0.0511 0.0182
 Saturn -36426-10-10 02:38 J -11582891.42 -11582891.39 -11582891.33 0.0282 0.0276
 Saturn -36425-10-22 13:26 J -11582513.10 -11582512.94 -11582512.76 0.0281 0.0205
 Jupiter -36421-03-23 00:28 J -11581265.69 -11581265.48 -11581265.26 0.0517 0.0197
 Neptune -36420-09-14 16:18 J -11580725.00 -11580724.82 -11580724.60 0.0088 0.0055
 Neptune -36419-09-17 04:33 J -11580357.55 -11580357.31 -11580357.04 0.0088 0.0016
 Neptune -36418-09-19 16:18 J -11579990.05 -11579989.82 -11579989.55 0.0088 0.0024
 Neptune -36417-09-21 04:18 J -11579622.48 -11579622.32 -11579622.12 0.0088 0.0064
 Jupiter -36415-09-29 16:04 J -11578883.99 -11578883.83 -11578883.66 0.0513 0.0357
 Saturn -36410-04-14 07:26 J -11577226.43 -11577226.19 -11577225.94 0.0277 0.0023
 Jupiter -36409-03-27 16:04 J -11576878.00 -11576877.83 -11576877.65 0.0515 0.0337
 Uranus -36408-10-18 02:09 J -11576308.64 -11576308.41 -11576308.18 0.0133 0.0061
 Uranus -36407-10-22 08:23 J -11575939.38 -11575939.15 -11575938.89 0.0133 0.0041
 Saturn -36396-10-17 10:33 J -11571926.31 -11571926.06 -11571925.81 0.0282 0.0003
 Saturn -36381-04-07 23:59 J -11566639.63 -11566639.50 -11566639.35 0.0277 0.0227
 Saturn -36380-04-20 17:45 J -11566261.89 -11566261.76 -11566261.60 0.0277 0.0224

Pluto -36368-05-07 00:28 J -11561862.71 -11561862.48 -11561862.22 0.0067 0.0024
 Pluto -36367-05-08 14:52 J -11561495.95 -11561495.88 -11561495.72 0.0067 0.0060
 Saturn -36367-10-11 15:21 J -11561340.01 -11561339.86 -11561339.70 0.0282 0.0218
 Saturn -36366-10-25 01:11 J -11560961.53 -11560961.45 -11560961.35 0.0281 0.0261
 Uranus -36364-04-15 17:45 J -11560422.99 -11560422.76 -11560422.52 0.0146 0.0057
 Uranus -36363-04-20 19:26 J -11560052.89 -11560052.69 -11560052.46 0.0146 0.0079
 Mars -36357-02-28 20:38 J -11557912.83 -11557912.64 -11557912.45 0.1799 0.0192
 Saturn -36351-04-15 15:21 J -11555675.10 -11555674.86 -11555674.61 0.0277 0.0028
 Jupiter -36344-09-23 19:26 J -11552956.87 -11552956.69 -11552956.49 0.0510 0.0289
 Neptune -36338-03-13 13:11 J -11550960.07 -11550959.95 -11550959.78 0.0089 0.0073
 Jupiter -36338-03-23 02:23 J -11550950.59 -11550950.40 -11550950.21 0.0518 0.0292
 Neptune -36337-03-15 00:42 J -11550592.69 -11550592.47 -11550592.22 0.0089 0.0033
 Saturn -36337-10-18 22:47 J -11550374.79 -11550374.55 -11550374.30 0.0282 0.0061
 Neptune -36336-03-17 11:59 J -11550225.26 -11550225.00 -11550224.75 0.0089 0.0007
 Neptune -36335-03-19 23:02 J -11549857.75 -11549857.54 -11549857.32 0.0089 0.0047
 Neptune -36334-03-22 09:50 J -11549490.12 -11549490.09 -11549490.02 0.0089 0.0088
 Jupiter -36332-09-28 13:11 J -11548569.15 -11548568.95 -11548568.74 0.0512 0.0243
 Jupiter -36326-03-27 21:06 J -11546562.81 -11546562.62 -11546562.42 0.0516 0.0260
 Uranus -36324-10-18 15:50 J -11545627.06 -11545626.84 -11545626.59 0.0133 0.0052
 Uranus -36323-10-22 22:33 J -11545257.79 -11545257.56 -11545257.31 0.0133 0.0050
 Saturn -36322-04-10 08:23 J -11545088.32 -11545088.15 -11545087.95 0.0277 0.0177
 Saturn -36321-04-22 02:52 J -11544710.39 -11544710.38 -11544710.34 0.0278 0.0276
 Saturn -36308-10-13 03:06 J -11539788.57 -11539788.37 -11539788.16 0.0282 0.0162
 Mars -36304-08-30 19:11 J -11538370.88 -11538370.70 -11538370.52 0.1728 0.0639
 Saturn -36292-04-16 21:35 J -11534123.84 -11534123.60 -11534123.36 0.0277 0.0076
 Pluto -36282-11-09 18:57 J -11530264.91 -11530264.71 -11530264.48 0.0077 0.0043
 Uranus -36280-04-16 07:26 J -11529741.42 -11529741.19 -11529740.94 0.0146 0.0047
 Uranus -36279-04-21 09:21 J -11529371.30 -11529371.11 -11529370.90 0.0146 0.0089
 Saturn -36278-10-21 09:35 J -11528823.32 -11528823.10 -11528822.87 0.0282 0.0116
 Saturn -36263-04-11 15:21 J -11523537.07 -11523536.86 -11523536.64 0.0277 0.0129

Jupiter -36261-09-22 21:50 J -11522641.74 -11522641.59 -11522641.43 0.0509 0.0379
 Neptune -36256-09-13 20:23 J -11520824.75 -11520824.65 -11520824.51 0.0088 0.0079
 Jupiter -36255-03-22 08:23 J -11520635.31 -11520635.15 -11520634.98 0.0519 0.0368
 Neptune -36255-09-16 08:23 J -11520457.37 -11520457.15 -11520456.90 0.0088 0.0039
 Neptune -36254-09-18 20:52 J -11520089.89 -11520089.63 -11520089.37 0.0088 0.0001
 Neptune -36253-09-20 08:38 J -11519722.36 -11519722.14 -11519721.90 0.0088 0.0040
 Neptune -36252-09-22 20:38 J -11519354.74 -11519354.64 -11519354.52 0.0088 0.0080
 Jupiter -36249-09-27 18:28 J -11518253.96 -11518253.73 -11518253.51 0.0512 0.0164
 Saturn -36249-10-14 13:26 J -11518237.16 -11518236.94 -11518236.71 0.0282 0.0108
 Jupiter -36243-03-26 23:59 J -11516247.72 -11516247.50 -11516247.28 0.0516 0.0167
 Uranus -36240-10-19 05:45 J -11514945.49 -11514945.26 -11514945.00 0.0133 0.0043
 Uranus -36239-10-23 12:28 J -11514576.20 -11514575.98 -11514575.74 0.0133 0.0060
 Saturn -36233-04-18 01:40 J -11512572.65 -11512572.43 -11512572.21 0.0277 0.0120
 Mars -36225-09-02 09:21 J -11509513.24 -11509513.11 -11509512.97 0.1723 0.1210
 Saturn -36219-10-22 18:28 J -11507271.92 -11507271.73 -11507271.52 0.0282 0.0168
 Saturn -36204-04-12 20:09 J -11501985.89 -11501985.66 -11501985.42 0.0276 0.0084
 Uranus -36196-04-16 19:11 J -11499059.94 -11499059.70 -11499059.46 0.0146 0.0039
 Uranus -36195-04-21 21:06 J -11498689.80 -11498689.62 -11498689.42 0.0146 0.0096
 Saturn -36190-10-16 21:35 J -11496685.83 -11496685.60 -11496685.35 0.0282 0.0058
 Jupiter -36178-09-23 04:47 J -11492326.40 -11492326.30 -11492326.18 0.0509 0.0447
 Saturn -36174-04-20 04:18 J -11491021.52 -11491021.32 -11491021.12 0.0277 0.0162
 Neptune -36173-03-14 05:59 J -11490692.42 -11490692.25 -11490692.03 0.0089 0.0056
 Neptune -36172-03-16 17:30 J -11490325.01 -11490324.77 -11490324.50 0.0089 0.0016
 Jupiter -36172-03-21 10:47 J -11490320.15 -11490320.05 -11490319.94 0.0519 0.0463
 Neptune -36171-03-19 05:02 J -11489957.53 -11489957.29 -11489957.04 0.0089 0.0024
 Neptune -36170-03-21 15:35 J -11489590.00 -11489589.85 -11489589.65 0.0089 0.0065
 Jupiter -36166-09-27 20:52 J -11487938.86 -11487938.63 -11487938.39 0.0511 0.0079
 Saturn -36161-10-10 13:54 J -11486098.98 -11486098.92 -11486098.84 0.0283 0.0270
 Jupiter -36160-03-26 02:52 J -11485932.61 -11485932.38 -11485932.15 0.0518 0.0081
 Saturn -36160-10-24 01:11 J -11485720.60 -11485720.45 -11485720.29 0.0282 0.0216

Uranus -36156-10-19 20:23 J -11484263.89 -11484263.65 -11484263.40 0.0133 0.0033
 Uranus -36155-10-24 03:06 J -11483894.58 -11483894.37 -11483894.14 0.0133 0.0069
 Saturn -36145-04-13 23:02 J -11480434.78 -11480434.54 -11480434.30 0.0276 0.0042
 Saturn -36131-10-18 04:18 J -11475134.56 -11475134.32 -11475134.07 0.0282 0.0010
 Pluto -36120-05-08 04:47 J -11471279.44 -11471279.30 -11471279.16 0.0066 0.0056
 Pluto -36119-05-09 18:57 J -11470912.92 -11470912.71 -11470912.45 0.0067 0.0027
 Saturn -36116-04-08 11:59 J -11469848.10 -11469848.00 -11469847.91 0.0276 0.0253
 Saturn -36115-04-21 05:16 J -11469470.44 -11469470.28 -11469470.11 0.0277 0.0201
 Uranus -36112-04-17 08:09 J -11468378.40 -11468378.16 -11468377.91 0.0146 0.0031
 Uranus -36111-04-22 10:04 J -11468008.24 -11468008.08 -11468007.90 0.0146 0.0105
 Saturn -36102-10-12 17:59 J -11464547.89 -11464547.75 -11464547.59 0.0283 0.0226
 Saturn -36101-10-25 05:30 J -11464169.36 -11464169.27 -11464169.18 0.0282 0.0261
 Neptune -36091-09-15 12:28 J -11460557.15 -11460556.98 -11460556.78 0.0088 0.0062
 Neptune -36090-09-18 00:28 J -11460189.72 -11460189.48 -11460189.21 0.0088 0.0023
 Neptune -36089-09-19 12:28 J -11459822.22 -11459821.98 -11459821.71 0.0088 0.0017
 Neptune -36088-09-22 00:28 J -11459454.67 -11459454.48 -11459454.27 0.0088 0.0057
 Saturn -36086-04-16 00:57 J -11458883.70 -11458883.46 -11458883.21 0.0276 0.0001
 Jupiter -36083-09-27 01:40 J -11457623.66 -11457623.43 -11457623.19 0.0510 0.0006
 Jupiter -36077-03-25 12:14 J -11455617.22 -11455616.99 -11455616.76 0.0518 0.0020
 Mars -36073-02-29 04:04 J -11454181.52 -11454181.33 -11454181.15 0.1791 0.0504
 Uranus -36073-10-16 03:06 J -11453951.44 -11453951.37 -11453951.27 0.0133 0.0126
 Saturn -36072-10-19 08:38 J -11453583.38 -11453583.14 -11453582.90 0.0282 0.0035
 Uranus -36072-10-20 11:02 J -11453582.29 -11453582.04 -11453581.79 0.0133 0.0023
 Uranus -36071-10-24 17:30 J -11453212.96 -11453212.77 -11453212.55 0.0133 0.0079
 Saturn -36057-04-09 11:59 J -11448297.15 -11448297.00 -11448296.85 0.0276 0.0216
 Saturn -36056-04-22 05:02 J -11447919.40 -11447919.29 -11447919.16 0.0277 0.0238
 Saturn -36043-10-13 20:38 J -11442996.82 -11442996.64 -11442996.45 0.0283 0.0184
 Pluto -36033-11-11 21:06 J -11439314.84 -11439314.62 -11439314.38 0.0077 0.0035
 Uranus -36028-04-17 19:11 J -11437696.95 -11437696.70 -11437696.45 0.0146 0.0024
 Saturn -36027-04-17 01:54 J -11437332.66 -11437332.42 -11437332.18 0.0276 0.0038

Uranus -36027-04-22 20:38 J -11437326.78 -11437326.64 -11437326.46 0.0146 0.0112
 Mars -36020-08-31 06:28 J -11434639.40 -11434639.23 -11434639.05 0.1735 0.0783
 Saturn -36013-10-20 11:16 J -11432032.26 -11432032.03 -11432031.79 0.0282 0.0078
 Neptune -36009-03-13 11:16 J -11430792.13 -11430792.03 -11430791.91 0.0089 0.0080
 Neptune -36008-03-15 22:18 J -11430424.78 -11430424.57 -11430424.33 0.0089 0.0040
 Neptune -36007-03-18 09:50 J -11430057.35 -11430057.09 -11430056.84 0.0089 0.0001
 Neptune -36006-03-20 20:52 J -11429689.85 -11429689.63 -11429689.40 0.0089 0.0041
 Neptune -36005-03-22 07:54 J -11429322.26 -11429322.17 -11429322.06 0.0089 0.0081

36TH MILLENNIUM BCE

This is a list of transits of Earth in the 36th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-36000-09-26 11:30 J	-11427308.25	-11427308.02	-11427307.79	0.0510	0.0056		
Saturn	-35998-04-11 11:59 J	-11426746.17	-11426746.00	-11426745.80	0.0276	0.0178		
Saturn	-35997-04-23 04:47 J	-11426368.30	-11426368.30	-11426368.27	0.0277	0.0276		
Mars	-35994-03-03 20:23 J	-11425323.74	-11425323.65	-11425323.56	0.1796	0.1571		
Jupiter	-35994-03-25 18:42 J	-11425301.95	-11425301.72	-11425301.49	0.0518	0.0055		
Uranus	-35989-10-16 17:45 J	-11423269.86	-11423269.76	-11423269.61	0.0133	0.0116		
Jupiter	-35988-10-01 05:45 J	-11422920.34	-11422920.26	-11422920.18	0.0512	0.0481		
Uranus	-35988-10-21 01:40 J	-11422900.68	-11422900.43	-11422900.17	0.0133	0.0013		
Uranus	-35987-10-25 08:09 J	-11422531.33	-11422531.16	-11422530.95	0.0133	0.0089		
Saturn	-35984-10-14 21:21 J	-11421445.81	-11421445.61	-11421445.39	0.0283	0.0144		
Jupiter	-35982-03-30 08:52 J	-11420914.21	-11420914.13	-11420914.04	0.0516	0.0477		

Saturn -35968-04-18 02:38 J -11415781.62 -11415781.39 -11415781.15 0.0276 0.0078
 Saturn -35954-10-22 13:40 J -11410481.15 -11410480.93 -11410480.70 0.0282 0.0121
 Uranus -35944-04-18 08:38 J -11407015.39 -11407015.14 -11407014.89 0.0146 0.0015
 Uranus -35943-04-23 10:04 J -11406645.21 -11406645.08 -11406644.93 0.0146 0.0120
 Mars -35941-09-02 21:50 J -11405781.74 -11405781.59 -11405781.44 0.1730 0.1115
 Saturn -35939-04-12 12:42 J -11405195.18 -11405194.97 -11405194.76 0.0276 0.0139
 Neptune -35927-09-14 15:35 J -11400656.88 -11400656.85 -11400656.78 0.0088 0.0086
 Neptune -35926-09-17 04:04 J -11400289.54 -11400289.33 -11400289.10 0.0088 0.0046
 Neptune -35925-09-18 16:04 J -11399922.08 -11399921.83 -11399921.56 0.0088 0.0008
 Saturn -35925-10-15 22:04 J -11399894.81 -11399894.58 -11399894.35 0.0284 0.0104
 Neptune -35924-09-21 03:50 J -11399554.57 -11399554.34 -11399554.09 0.0088 0.0033
 Neptune -35923-09-23 16:04 J -11399186.97 -11399186.83 -11399186.68 0.0088 0.0073
 Jupiter -35917-09-25 18:42 J -11396992.95 -11396992.72 -11396992.49 0.0509 0.0123
 Jupiter -35911-03-24 22:04 J -11394986.80 -11394986.58 -11394986.35 0.0520 0.0145
 Saturn -35909-04-19 04:18 J -11394230.54 -11394230.32 -11394230.10 0.0276 0.0119
 Jupiter -35905-09-30 10:47 J -11392605.19 -11392605.05 -11392604.91 0.0511 0.0400
 Uranus -35905-10-17 08:52 J -11392588.28 -11392588.13 -11392587.98 0.0133 0.0106
 Uranus -35904-10-21 16:33 J -11392219.06 -11392218.81 -11392218.55 0.0133 0.0004
 Uranus -35903-10-25 23:16 J -11391849.69 -11391849.53 -11391849.35 0.0133 0.0098
 Jupiter -35899-03-29 18:42 J -11390598.85 -11390598.72 -11390598.58 0.0517 0.0417
 Saturn -35895-10-23 15:35 J -11388930.04 -11388929.85 -11388929.64 0.0283 0.0164
 Saturn -35880-04-13 14:23 J -11383644.13 -11383643.90 -11383643.67 0.0276 0.0098
 Pluto -35871-05-10 22:47 J -11380329.80 -11380329.55 -11380329.28 0.0067 0.0008
 Saturn -35866-10-17 23:16 J -11378343.77 -11378343.53 -11378343.29 0.0284 0.0062
 Uranus -35861-04-13 19:11 J -11376703.74 -11376703.70 -11376703.61 0.0145 0.0141
 Uranus -35860-04-18 20:38 J -11376333.89 -11376333.64 -11376333.38 0.0146 0.0007
 Uranus -35859-04-23 21:50 J -11375963.69 -11375963.59 -11375963.45 0.0146 0.0128
 Saturn -35850-04-21 06:28 J -11372679.41 -11372679.23 -11372679.02 0.0276 0.0163
 Neptune -35844-03-15 03:21 J -11370524.52 -11370524.36 -11370524.17 0.0089 0.0063
 Neptune -35843-03-17 14:23 J -11370157.13 -11370156.90 -11370156.64 0.0089 0.0024

Neptune -35842-03-20 01:40 J -11369789.68 -11369789.43 -11369789.18 0.0089 0.0018
 Neptune -35841-03-21 12:28 J -11369422.15 -11369421.98 -11369421.76 0.0089 0.0059
 Saturn -35836-10-24 18:28 J -11367378.88 -11367378.73 -11367378.55 0.0283 0.0209
 Jupiter -35834-09-25 23:59 J -11366677.71 -11366677.50 -11366677.28 0.0508 0.0201
 Jupiter -35828-03-24 07:40 J -11364671.40 -11364671.18 -11364670.97 0.0520 0.0205
 Jupiter -35822-09-30 19:26 J -11362289.86 -11362289.69 -11362289.52 0.0511 0.0339
 Saturn -35821-04-14 17:45 J -11362093.00 -11362092.76 -11362092.52 0.0276 0.0054
 Uranus -35821-10-17 23:16 J -11361906.69 -11361906.53 -11361906.33 0.0133 0.0096
 Uranus -35820-10-22 07:26 J -11361537.45 -11361537.19 -11361536.94 0.0133 0.0007
 Uranus -35819-10-26 13:54 J -11361168.05 -11361167.92 -11361167.76 0.0133 0.0108
 Jupiter -35816-03-29 01:26 J -11360283.60 -11360283.44 -11360283.26 0.0517 0.0345
 Saturn -35807-10-19 01:11 J -11356792.70 -11356792.45 -11356792.21 0.0284 0.0019
 Saturn -35792-04-09 20:52 J -11351505.74 -11351505.63 -11351505.51 0.0275 0.0241
 Saturn -35791-04-22 10:47 J -11351128.20 -11351128.05 -11351127.88 0.0276 0.0209
 Mars -35789-02-29 12:57 J -11350450.13 -11350449.96 -11350449.79 0.1783 0.0758
 Pluto -35785-11-12 22:18 J -11348731.83 -11348731.57 -11348731.31 0.0077 0.0011
 Saturn -35778-10-13 09:35 J -11346206.22 -11346206.10 -11346205.97 0.0284 0.0242
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 Jupiter -35739-09-30 01:54 J -11331974.61 -11331974.42 -11331974.21 0.0510 0.0267

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Pluto -35039-11-19 05:16 J -11076249.49 -11076249.28 -11076249.04 0.0077 0.0039

Saturn -35026-04-17 01:11 J -11071717.67 -11071717.45 -11071717.21 0.0274 0.0089

Neptune -35021-03-17 14:23 J -11069921.06 -11069920.90 -11069920.69 0.0089 0.0062

Uranus -35021-04-19 04:19 J -11069888.55 -11069888.32 -11069888.08 0.0145 0.0051

Neptune -35020-03-20 01:55 J -11069553.66 -11069553.42 -11069553.16 0.0089 0.0020

Uranus -35020-04-24 04:33 J -11069518.51 -11069518.31 -11069518.08 0.0145 0.0081

Neptune -35019-03-22 13:11 J -11069186.19 -11069185.95 -11069185.69 0.0089 0.0021

Neptune -35018-03-24 23:45 J -11068818.66 -11068818.51 -11068818.30 0.0089 0.0063

Saturn -35012-10-20 02:09 J -11066417.65 -11066417.41 -11066417.17 0.0285 0.0064

35TH MILLENNIUM BCE

This is a list of transits of Earth in the 35th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-34996-04-23 14:38 J	-11060753.07	-11060752.89	-11060752.69	0.0274	0.0173		
Jupiter	-34992-09-24 12:57 J	-11059138.04	-11059137.96	-11059137.88	0.0504	0.0472		
Uranus	-34982-10-20 01:55 J	-11055460.52	-11055460.42	-11055460.27	0.0134	0.0116		
Saturn	-34982-10-27 22:19 J	-11055452.72	-11055452.57	-11055452.41	0.0284	0.0216		
Uranus	-34981-10-23 11:02 J	-11055091.29	-11055091.04	-11055090.78	0.0134	0.0013		
Jupiter	-34980-09-29 05:59 J	-11054750.48	-11054750.25	-11054750.01	0.0506	0.0048		
Uranus	-34980-10-27 18:57 J	-11054721.88	-11054721.71	-11054721.51	0.0133	0.0090		
Jupiter	-34974-03-28 06:43 J	-11052744.45	-11052744.22	-11052743.98	0.0522	0.0012		
Saturn	-34967-04-18 02:38 J	-11050166.63	-11050166.39	-11050166.15	0.0274	0.0046		

Saturn -34953-10-21 02:52 J -11044866.62 -11044866.38 -11044866.13 0.0285 0.0021
 Neptune -34939-09-18 22:04 J -11039785.74 -11039785.58 -11039785.38 0.0088 0.0064
 Saturn -34938-04-13 05:59 J -11039579.36 -11039579.25 -11039579.12 0.0273 0.0236
 Neptune -34938-09-21 10:19 J -11039418.31 -11039418.07 -11039417.80 0.0088 0.0024
 Mars -34937-03-01 21:50 J -11039255.71 -11039255.59 -11039255.46 0.1759 0.1311
 Uranus -34937-04-19 14:52 J -11039207.11 -11039206.88 -11039206.63 0.0145 0.0045
 Saturn -34937-04-24 16:47 J -11039201.94 -11039201.80 -11039201.64 0.0274 0.0216
 Neptune -34937-09-22 22:19 J -11039050.82 -11039050.57 -11039050.30 0.0088 0.0017
 Uranus -34936-04-24 14:52 J -11038837.06 -11038836.88 -11038836.66 0.0145 0.0087
 Neptune -34936-09-25 09:50 J -11038683.26 -11038683.09 -11038682.87 0.0088 0.0057
 Saturn -34924-10-15 06:43 J -11034280.31 -11034280.22 -11034280.11 0.0285 0.0258
 Saturn -34923-10-29 00:28 J -11033901.56 -11033901.48 -11033901.37 0.0284 0.0261
 Saturn -34908-04-19 05:45 J -11028615.51 -11028615.26 -11028615.02 0.0274 0.0002
 Uranus -34898-10-20 13:40 J -11024779.06 -11024778.93 -11024778.77 0.0134 0.0109
 Jupiter -34897-09-28 15:50 J -11024435.07 -11024434.84 -11024434.60 0.0506 0.0012
 Uranus -34897-10-23 22:47 J -11024409.80 -11024409.55 -11024409.29 0.0134 0.0006
 Uranus -34896-10-28 06:57 J -11024040.38 -11024040.21 -11024040.03 0.0133 0.0096
 Saturn -34894-10-23 04:04 J -11023315.57 -11023315.33 -11023315.08 0.0285 0.0025
 Jupiter -34891-03-27 07:26 J -11022429.42 -11022429.19 -11022428.96 0.0523 0.0099
 Jupiter -34879-04-01 02:23 J -11018041.50 -11018041.40 -11018041.29 0.0521 0.0461
 Saturn -34879-04-14 09:35 J -11018028.27 -11018028.10 -11018027.92 0.0273 0.0191
 Saturn -34878-04-26 20:23 J -11017650.71 -11017650.65 -11017650.58 0.0274 0.0263
 Pluto -34877-05-16 17:45 J -11017264.96 -11017264.76 -11017264.53 0.0067 0.0036
 Pluto -34876-05-18 09:07 J -11016898.29 -11016898.12 -11016897.94 0.0067 0.0049
 Saturn -34865-10-16 10:47 J -11012729.20 -11012729.05 -11012728.87 0.0285 0.0211
 Mars -34858-03-05 10:19 J -11010398.25 -11010398.07 -11010397.89 0.1764 0.0540
 Neptune -34857-03-16 21:07 J -11010020.68 -11010020.62 -11010020.51 0.0089 0.0084
 Neptune -34856-03-19 08:38 J -11009653.34 -11009653.14 -11009652.90 0.0089 0.0043
 Neptune -34855-03-21 20:09 J -11009285.91 -11009285.66 -11009285.40 0.0089 0.0002
 Neptune -34854-03-24 07:11 J -11008918.41 -11008918.20 -11008917.96 0.0089 0.0040

Neptune -34853-03-25 18:28 J -11008550.82 -11008550.73 -11008550.61 0.0089 0.0081
 Uranus -34853-04-20 01:26 J -11008525.68 -11008525.44 -11008525.19 0.0145 0.0039
 Uranus -34852-04-25 01:26 J -11008155.63 -11008155.44 -11008155.24 0.0145 0.0092
 Saturn -34849-04-20 10:04 J -11007064.31 -11007064.08 -11007063.83 0.0274 0.0047
 Saturn -34835-10-24 07:11 J -11001764.43 -11001764.20 -11001763.95 0.0285 0.0072
 Saturn -34820-04-15 15:07 J -10996477.07 -10996476.87 -10996476.66 0.0273 0.0142
 Jupiter -34814-09-28 19:11 J -10994119.93 -10994119.70 -10994119.47 0.0505 0.0093
 Uranus -34814-10-20 23:16 J -10994097.66 -10994097.53 -10994097.34 0.0134 0.0104
 Uranus -34813-10-24 08:52 J -10993728.39 -10993728.13 -10993727.88 0.0134 0.0002
 Uranus -34812-10-28 16:33 J -10993358.95 -10993358.81 -10993358.62 0.0133 0.0102
 Jupiter -34808-03-26 12:57 J -10992114.17 -10992113.96 -10992113.74 0.0524 0.0181
 Saturn -34806-10-18 16:47 J -10991178.00 -10991177.80 -10991177.60 0.0285 0.0159
 Mars -34805-09-04 06:28 J -10990856.42 -10990856.23 -10990856.03 0.1761 0.0210
 Jupiter -34802-10-03 11:16 J -10989732.15 -10989732.03 -10989731.90 0.0507 0.0427
 Jupiter -34796-03-31 10:19 J -10987726.21 -10987726.07 -10987725.91 0.0521 0.0393
 Pluto -34791-11-19 18:28 J -10985666.92 -10985666.73 -10985666.49 0.0077 0.0041
 Saturn -34790-04-22 16:47 J -10985513.03 -10985512.80 -10985512.57 0.0274 0.0098
 Saturn -34776-10-25 13:11 J -10980213.17 -10980212.95 -10980212.73 0.0285 0.0124
 Neptune -34775-09-18 06:43 J -10979885.27 -10979885.22 -10979885.13 0.0088 0.0084
 Neptune -34774-09-20 18:43 J -10979517.93 -10979517.72 -10979517.48 0.0088 0.0044
 Neptune -34773-09-22 06:57 J -10979150.47 -10979150.21 -10979149.95 0.0088 0.0004
 Neptune -34772-09-24 18:57 J -10978782.95 -10978782.71 -10978782.47 0.0088 0.0036
 Neptune -34771-09-27 06:14 J -10978415.33 -10978415.24 -10978415.08 0.0088 0.0077
 Uranus -34769-04-20 11:45 J -10977844.25 -10977844.01 -10977843.76 0.0145 0.0033
 Uranus -34768-04-25 11:16 J -10977474.20 -10977474.03 -10977473.83 0.0145 0.0097
 Saturn -34761-04-16 21:50 J -10974925.82 -10974925.59 -10974925.35 0.0274 0.0091
 Saturn -34747-10-20 01:11 J -10969626.68 -10969626.45 -10969626.22 0.0285 0.0103
 Saturn -34731-04-24 01:11 J -10963961.65 -10963961.45 -10963961.24 0.0274 0.0153
 Jupiter -34731-09-27 23:59 J -10963804.72 -10963804.50 -10963804.28 0.0505 0.0172
 Uranus -34730-10-21 10:19 J -10963416.23 -10963416.07 -10963415.88 0.0134 0.0098

Uranus -34729-10-24 19:40 J -10963046.93 -10963046.68 -10963046.42 0.0134 0.0005
 Uranus -34728-10-29 03:35 J -10962677.48 -10962677.35 -10962677.18 0.0133 0.0107
 Jupiter -34725-03-25 18:14 J -10961798.94 -10961798.74 -10961798.54 0.0524 0.0264
 Jupiter -34719-10-02 18:28 J -10959416.90 -10959416.73 -10959416.56 0.0507 0.0357
 Saturn -34717-10-26 20:52 J -10958661.81 -10958661.63 -10958661.43 0.0285 0.0180
 Jupiter -34713-03-30 08:52 J -10957411.32 -10957411.13 -10957410.93 0.0521 0.0276
 Saturn -34702-04-19 05:45 J -10953374.50 -10953374.26 -10953374.01 0.0274 0.0038
 Neptune -34692-03-18 17:16 J -10949752.95 -10949752.78 -10949752.60 0.0089 0.0065
 Neptune -34691-03-21 04:19 J -10949385.56 -10949385.32 -10949385.07 0.0089 0.0024
 Neptune -34690-03-23 15:21 J -10949018.09 -10949017.86 -10949017.59 0.0089 0.0019
 Neptune -34689-03-25 02:23 J -10948650.56 -10948650.40 -10948650.18 0.0089 0.0060
 Saturn -34688-10-21 11:59 J -10948075.25 -10948075.00 -10948074.76 0.0285 0.0044
 Uranus -34685-04-20 23:02 J -10947162.78 -10947162.54 -10947162.28 0.0145 0.0026
 Uranus -34684-04-25 22:33 J -10946792.72 -10946792.56 -10946792.37 0.0145 0.0104
 Saturn -34673-04-13 01:11 J -10942787.55 -10942787.45 -10942787.34 0.0273 0.0245
 Saturn -34672-04-25 10:47 J -10942410.19 -10942410.05 -10942409.88 0.0274 0.0210
 Saturn -34658-10-29 07:26 J -10937110.32 -10937110.19 -10937110.05 0.0285 0.0239
 Mars -34653-03-02 11:16 J -10935524.14 -10935524.03 -10935523.92 0.1752 0.1415
 Jupiter -34648-09-27 05:31 J -10933489.48 -10933489.27 -10933489.07 0.0504 0.0248
 Uranus -34646-10-21 19:40 J -10932734.85 -10932734.68 -10932734.48 0.0134 0.0093
 Uranus -34645-10-25 05:02 J -10932365.55 -10932365.29 -10932365.03 0.0134 0.0010
 Uranus -34644-10-29 12:43 J -10931996.09 -10931995.97 -10931995.81 0.0133 0.0112
 Saturn -34643-04-20 14:23 J -10931823.14 -10931822.90 -10931822.65 0.0274 0.0017
 Jupiter -34642-03-25 13:55 J -10931484.07 -10931483.92 -10931483.77 0.0524 0.0396
 Jupiter -34636-10-01 17:45 J -10929101.97 -10929101.76 -10929101.56 0.0506 0.0254
 Jupiter -34630-03-30 10:04 J -10927096.29 -10927096.08 -10927095.86 0.0523 0.0177
 Saturn -34629-10-23 00:28 J -10926523.73 -10926523.48 -10926523.24 0.0285 0.0019
 Pluto -34628-05-18 23:59 J -10926315.74 -10926315.50 -10926315.24 0.0067 0.0016
 Saturn -34614-04-15 11:02 J -10921236.20 -10921236.04 -10921235.85 0.0274 0.0190
 Saturn -34613-04-26 21:21 J -10920858.66 -10920858.61 -10920858.55 0.0274 0.0267

Neptune -34610-09-20 03:35 J -10919617.51 -10919617.35 -10919617.16 0.0088 0.0064
 Neptune -34609-09-21 15:35 J -10919250.09 -10919249.85 -10919249.58 0.0088 0.0024
 Neptune -34608-09-24 03:50 J -10918882.59 -10918882.34 -10918882.08 0.0088 0.0017
 Neptune -34607-09-26 15:21 J -10918515.03 -10918514.86 -10918514.64 0.0088 0.0057
 Uranus -34601-04-21 10:19 J -10916481.32 -10916481.07 -10916480.82 0.0145 0.0019
 Uranus -34600-04-26 09:21 J -10916111.26 -10916111.11 -10916110.93 0.0145 0.0111
 Saturn -34600-10-17 01:26 J -10915937.59 -10915937.44 -10915937.29 0.0285 0.0224
 Saturn -34584-04-21 23:16 J -10910271.76 -10910271.53 -10910271.29 0.0274 0.0071
 Mars -34574-03-05 22:47 J -10906666.73 -10906666.55 -10906666.36 0.1756 0.0391
 Saturn -34570-10-25 13:55 J -10904972.15 -10904971.92 -10904971.68 0.0285 0.0082
 Jupiter -34565-09-26 03:50 J -10903174.50 -10903174.34 -10903174.17 0.0503 0.0352
 Uranus -34562-10-22 05:45 J -10902053.43 -10902053.26 -10902053.05 0.0134 0.0088
 Uranus -34561-10-25 15:21 J -10901684.12 -10901683.86 -10901683.61 0.0134 0.0015
 Uranus -34560-10-29 23:02 J -10901314.64 -10901314.54 -10901314.40 0.0133 0.0116
 Jupiter -34559-03-24 16:33 J -10901168.88 -10901168.81 -10901168.72 0.0525 0.0489
 Saturn -34555-04-16 20:52 J -10899684.84 -10899684.63 -10899684.41 0.0274 0.0135
 Jupiter -34553-09-30 19:11 J -10898786.93 -10898786.70 -10898786.48 0.0506 0.0159
 Jupiter -34547-03-29 14:09 J -10896781.14 -10896780.91 -10896780.69 0.0523 0.0088
 Pluto -34542-11-22 03:50 J -10894717.59 -10894717.34 -10894717.08 0.0077 0.0010
 Saturn -34541-10-18 15:07 J -10894386.06 -10894385.87 -10894385.65 0.0285 0.0160
 Neptune -34528-03-18 01:55 J -10889852.45 -10889852.42 -10889852.32 0.0089 0.0087
 Neptune -34527-03-20 13:11 J -10889485.15 -10889484.95 -10889484.71 0.0089 0.0046
 Neptune -34526-03-23 00:57 J -10889117.71 -10889117.46 -10889117.20 0.0089 0.0004
 Neptune -34525-03-24 11:45 J -10888750.22 -10888750.01 -10888749.76 0.0089 0.0038
 Saturn -34525-04-23 07:40 J -10888720.39 -10888720.18 -10888719.96 0.0274 0.0124
 Neptune -34524-03-26 22:47 J -10888382.64 -10888382.55 -10888382.41 0.0089 0.0080
 Mars -34521-09-04 10:47 J -10887125.25 -10887125.05 -10887124.85 0.1769 0.0159
 Uranus -34518-04-17 21:35 J -10886169.64 -10886169.60 -10886169.52 0.0144 0.0140
 Uranus -34517-04-21 20:52 J -10885799.88 -10885799.63 -10885799.38 0.0145 0.0013
 Uranus -34516-04-26 20:09 J -10885429.80 -10885429.66 -10885429.50 0.0145 0.0116

Saturn -34511-10-27 03:21 J -10883420.57 -10883420.36 -10883420.14 0.0285 0.0145
 Saturn -34496-04-18 05:59 J -10878133.48 -10878133.25 -10878133.01 0.0274 0.0081
 Jupiter -34482-09-26 07:40 J -10872859.30 -10872859.18 -10872859.06 0.0503 0.0435
 Saturn -34482-10-21 05:02 J -10872834.53 -10872834.29 -10872834.06 0.0285 0.0096
 Uranus -34478-10-22 14:38 J -10871372.07 -10871371.89 -10871371.67 0.0134 0.0084
 Uranus -34477-10-25 23:59 J -10871002.75 -10871002.50 -10871002.24 0.0134 0.0019
 Uranus -34476-10-30 07:55 J -10870633.27 -10870633.17 -10870633.05 0.0133 0.0120
 Jupiter -34470-09-30 23:45 J -10868471.74 -10868471.51 -10868471.27 0.0505 0.0080
 Saturn -34466-04-25 14:52 J -10867169.06 -10867168.88 -10867168.69 0.0274 0.0175
 Jupiter -34464-03-28 11:45 J -10866466.24 -10866466.01 -10866465.78 0.0523 0.0032
 Saturn -34452-10-28 16:04 J -10861868.98 -10861868.83 -10861868.65 0.0285 0.0209
 Neptune -34446-09-19 13:11 J -10859717.00 -10859716.95 -10859716.85 0.0088 0.0084
 Neptune -34445-09-21 01:26 J -10859349.64 -10859349.44 -10859349.19 0.0088 0.0044
 Neptune -34444-09-23 14:09 J -10858982.17 -10858981.91 -10858981.65 0.0088 0.0003
 Neptune -34443-09-26 01:40 J -10858614.65 -10858614.43 -10858614.18 0.0088 0.0038
 Neptune -34442-09-28 13:26 J -10858247.03 -10858246.94 -10858246.80 0.0088 0.0079
 Saturn -34437-04-19 13:55 J -10856582.17 -10856581.92 -10856581.68 0.0274 0.0029
 Uranus -34434-04-18 06:57 J -10855488.29 -10855488.21 -10855488.13 0.0144 0.0136
 Uranus -34433-04-22 05:45 J -10855118.51 -10855118.26 -10855118.01 0.0145 0.0009
 Uranus -34432-04-27 05:02 J -10854748.42 -10854748.29 -10854748.14 0.0145 0.0120
 Saturn -34423-10-22 17:02 J -10851283.03 -10851282.79 -10851282.54 0.0285 0.0036
 Saturn -34408-04-14 09:50 J -10845995.20 -10845995.09 -10845994.96 0.0274 0.0237
 Saturn -34407-04-26 20:38 J -10845617.78 -10845617.64 -10845617.50 0.0274 0.0224
 Saturn -34394-10-17 07:55 J -10840696.26 -10840696.17 -10840696.07 0.0286 0.0263
 Uranus -34394-10-23 00:14 J -10840690.69 -10840690.49 -10840690.28 0.0134 0.0079
 Uranus -34393-10-26 09:21 J -10840321.36 -10840321.11 -10840320.86 0.0134 0.0023
 Saturn -34393-10-30 02:52 J -10840317.45 -10840317.38 -10840317.28 0.0285 0.0268
 Uranus -34392-10-30 17:16 J -10839951.86 -10839951.78 -10839951.67 0.0133 0.0124
 Jupiter -34387-09-30 00:28 J -10838156.71 -10838156.48 -10838156.24 0.0504 0.0017
 Jupiter -34381-03-27 14:09 J -10836151.13 -10836150.91 -10836150.68 0.0525 0.0125

Pluto -34379-05-21 07:55 J -10835366.42 -10835366.17 -10835365.91 0.0067 0.0009
 Saturn -34378-04-21 19:40 J -10835030.92 -10835030.68 -10835030.43 0.0274 0.0021
 Jupiter -34375-10-04 15:21 J -10833768.88 -10833768.86 -10833768.81 0.0506 0.0500
 Mars -34369-03-03 02:38 J -10831792.48 -10831792.39 -10831792.28 0.1745 0.1462
 Jupiter -34369-04-01 12:14 J -10831763.11 -10831762.99 -10831762.88 0.0522 0.0451
 Saturn -34364-10-24 04:04 J -10829731.58 -10829731.33 -10829731.09 0.0285 0.0024
 Neptune -34363-03-19 23:31 J -10829584.67 -10829584.52 -10829584.33 0.0089 0.0065
 Neptune -34362-03-22 10:47 J -10829217.28 -10829217.05 -10829216.79 0.0089 0.0024
 Neptune -34361-03-23 22:04 J -10828849.83 -10828849.58 -10828849.33 0.0089 0.0017
 Neptune -34360-03-26 09:07 J -10828482.31 -10828482.12 -10828481.92 0.0089 0.0059
 Uranus -34350-04-18 15:07 J -10824806.96 -10824806.87 -10824806.76 0.0144 0.0132
 Saturn -34349-04-15 13:40 J -10824444.10 -10824443.93 -10824443.75 0.0274 0.0192
 Uranus -34349-04-22 13:55 J -10824437.17 -10824436.92 -10824436.66 0.0145 0.0006
 Uranus -34348-04-27 13:11 J -10824067.06 -10824066.95 -10824066.80 0.0145 0.0124
 Saturn -34348-04-27 23:59 J -10824066.53 -10824066.50 -10824066.45 0.0274 0.0269
 Saturn -34335-10-18 16:04 J -10819144.99 -10819144.83 -10819144.65 0.0286 0.0209
 Saturn -34319-04-23 00:14 J -10813479.73 -10813479.49 -10813479.25 0.0273 0.0067
 Uranus -34310-10-23 08:23 J -10810009.36 -10810009.15 -10810008.94 0.0134 0.0076
 Uranus -34309-10-26 17:16 J -10809640.02 -10809639.78 -10809639.52 0.0134 0.0026
 Uranus -34308-10-31 01:26 J -10809270.51 -10809270.44 -10809270.35 0.0133 0.0127
 Saturn -34305-10-25 11:45 J -10808180.24 -10808180.01 -10808179.77 0.0285 0.0078
 Jupiter -34304-09-29 06:14 J -10807841.48 -10807841.24 -10807841.01 0.0504 0.0090
 Jupiter -34298-03-27 20:09 J -10805835.87 -10805835.66 -10805835.45 0.0525 0.0203
 Pluto -34293-11-23 15:21 J -10803768.08 -10803767.86 -10803767.60 0.0077 0.0029
 Jupiter -34292-10-03 22:47 J -10803453.66 -10803453.55 -10803453.42 0.0506 0.0434
 Mars -34290-03-06 13:26 J -10802935.12 -10802934.94 -10802934.75 0.1749 0.0304
 Saturn -34290-04-17 16:04 J -10802893.03 -10802892.83 -10802892.62 0.0274 0.0149
 Jupiter -34286-04-01 15:21 J -10801448.03 -10801447.86 -10801447.69 0.0522 0.0361
 Neptune -34281-09-20 11:16 J -10799449.19 -10799449.03 -10799448.83 0.0088 0.0063
 Neptune -34280-09-22 23:59 J -10799081.75 -10799081.50 -10799081.25 0.0088 0.0022

Neptune -34279-09-25 12:14 J -10798714.25 -10798713.99 -10798713.74 0.0088 0.0018
 Neptune -34278-09-27 23:45 J -10798346.68 -10798346.51 -10798346.30 0.0088 0.0059
 Saturn -34276-10-19 22:04 J -10797593.77 -10797593.58 -10797593.36 0.0286 0.0158
 Uranus -34266-04-18 22:47 J -10794125.64 -10794125.55 -10794125.42 0.0144 0.0129
 Uranus -34265-04-22 22:04 J -10793755.84 -10793755.58 -10793755.33 0.0145 0.0003
 Uranus -34264-04-27 21:07 J -10793385.72 -10793385.62 -10793385.48 0.0145 0.0127
 Saturn -34260-04-24 02:23 J -10791928.62 -10791928.40 -10791928.17 0.0273 0.0111
 Saturn -34246-10-27 17:31 J -10786628.99 -10786628.77 -10786628.55 0.0285 0.0129
 Mars -34237-09-04 14:09 J -10783394.09 -10783393.91 -10783393.72 0.1777 0.0567
 Saturn -34231-04-18 17:16 J -10781342.01 -10781341.78 -10781341.56 0.0273 0.0108
 Uranus -34226-10-23 16:47 J -10779328.00 -10779327.80 -10779327.57 0.0134 0.0074
 Uranus -34225-10-27 02:09 J -10778958.65 -10778958.41 -10778958.16 0.0134 0.0029
 Uranus -34224-10-31 10:04 J -10778589.11 -10778589.08 -10778589.00 0.0134 0.0131
 Jupiter -34221-09-28 13:26 J -10777526.16 -10777525.94 -10777525.71 0.0503 0.0153
 Saturn -34217-10-21 01:26 J -10776042.67 -10776042.44 -10776042.21 0.0286 0.0111
 Jupiter -34215-03-26 20:52 J -10775520.81 -10775520.63 -10775520.44 0.0526 0.0308
 Jupiter -34209-10-03 05:16 J -10773138.44 -10773138.28 -10773138.11 0.0505 0.0362
 Jupiter -34203-03-31 18:28 J -10771132.92 -10771132.73 -10771132.53 0.0524 0.0270
 Saturn -34201-04-25 03:07 J -10770377.56 -10770377.37 -10770377.15 0.0273 0.0154
 Neptune -34199-03-19 10:33 J -10769684.10 -10769684.06 -10769683.95 0.0089 0.0086
 Neptune -34198-03-21 22:04 J -10769316.79 -10769316.58 -10769316.35 0.0089 0.0044
 Neptune -34197-03-23 09:21 J -10768949.37 -10768949.11 -10768948.86 0.0089 0.0002
 Neptune -34196-03-25 19:55 J -10768581.88 -10768581.67 -10768581.42 0.0089 0.0040
 Neptune -34195-03-28 07:11 J -10768214.29 -10768214.20 -10768214.07 0.0089 0.0081
 Saturn -34187-10-28 21:35 J -10765077.79 -10765077.60 -10765077.41 0.0285 0.0177
 Uranus -34182-04-19 07:40 J -10763444.28 -10763444.18 -10763444.03 0.0144 0.0125
 Uranus -34181-04-23 06:57 J -10763074.47 -10763074.21 -10763073.96 0.0145 0.0003
 Uranus -34180-04-28 05:59 J -10762704.34 -10762704.25 -10762704.12 0.0145 0.0131
 Saturn -34172-04-19 17:16 J -10759791.01 -10759790.78 -10759790.54 0.0273 0.0067
 Mars -34158-09-08 10:47 J -10754536.12 -10754536.05 -10754535.99 0.1772 0.1661

Saturn -34158-10-23 02:52 J -10754491.62 -10754491.38 -10754491.14 0.0286 0.0066
 Saturn -34143-04-14 20:09 J -10749203.71 -10749203.66 -10749203.58 0.0272 0.0262
 Saturn -34142-04-27 03:50 J -10748826.51 -10748826.34 -10748826.16 0.0273 0.0194
 Uranus -34142-10-24 00:28 J -10748646.68 -10748646.48 -10748646.25 0.0134 0.0071
 Uranus -34141-10-27 09:50 J -10748277.33 -10748277.09 -10748276.83 0.0134 0.0032
 Uranus -34140-10-31 17:59 J -10747907.75 -10747907.75 -10747907.72 0.0134 0.0133
 Jupiter -34138-09-28 20:09 J -10747210.88 -10747210.66 -10747210.45 0.0502 0.0224
 Jupiter -34132-03-26 05:45 J -10745205.41 -10745205.26 -10745205.09 0.0527 0.0375
 Pluto -34131-05-21 22:47 J -10744783.68 -10744783.55 -10744783.38 0.0067 0.0055
 Pluto -34130-05-23 13:40 J -10744417.14 -10744416.93 -10744416.67 0.0067 0.0030
 Saturn -34128-10-29 23:31 J -10743526.67 -10743526.52 -10743526.36 0.0286 0.0223
 Jupiter -34126-10-03 12:14 J -10742823.18 -10742822.99 -10742822.80 0.0505 0.0294
 Jupiter -34120-03-31 04:19 J -10740817.53 -10740817.32 -10740817.11 0.0524 0.0211
 Neptune -34117-09-19 22:04 J -10739548.65 -10739548.58 -10739548.47 0.0088 0.0082
 Neptune -34116-09-22 10:33 J -10739181.29 -10739181.06 -10739180.83 0.0088 0.0041
 Neptune -34115-09-24 22:47 J -10738813.81 -10738813.55 -10738813.29 0.0088 0.0001
 Neptune -34114-09-27 10:47 J -10738446.27 -10738446.05 -10738445.81 0.0088 0.0040
 Saturn -34113-04-20 17:16 J -10738240.03 -10738239.78 -10738239.54 0.0273 0.0027
 Neptune -34113-09-28 22:19 J -10738078.64 -10738078.57 -10738078.44 0.0088 0.0082
 Saturn -34099-10-24 02:52 J -10732940.62 -10732940.38 -10732940.13 0.0287 0.0022
 Uranus -34098-04-19 17:16 J -10732762.90 -10732762.78 -10732762.62 0.0144 0.0120
 Uranus -34097-04-23 16:33 J -10732393.06 -10732392.81 -10732392.56 0.0145 0.0007
 Uranus -34096-04-28 15:35 J -10732022.92 -10732022.85 -10732022.74 0.0145 0.0136
 Mars -34085-03-03 19:11 J -10728060.80 -10728060.70 -10728060.60 0.1738 0.1471
 Saturn -34084-04-15 20:38 J -10727652.77 -10727652.64 -10727652.48 0.0272 0.0221
 Saturn -34083-04-28 04:04 J -10727275.44 -10727275.33 -10727275.19 0.0273 0.0236
 Saturn -34070-10-18 03:35 J -10722354.41 -10722354.35 -10722354.26 0.0287 0.0272
 Saturn -34069-10-31 01:11 J -10721975.52 -10721975.45 -10721975.36 0.0286 0.0269
 Uranus -34058-10-24 09:21 J -10717965.33 -10717965.11 -10717964.88 0.0134 0.0066
 Uranus -34057-10-27 18:28 J -10717595.97 -10717595.73 -10717595.48 0.0134 0.0036

Jupiter -34055-09-28 05:45 J -10716895.45 -10716895.26 -10716895.06 0.0502 0.0278
 Saturn -34054-04-22 17:31 J -10716689.01 -10716688.77 -10716688.52 0.0273 0.0016
 Jupiter -34049-03-25 13:26 J -10714890.05 -10714889.94 -10714889.81 0.0527 0.0446
 Pluto -34045-11-23 22:33 J -10713185.65 -10713185.56 -10713185.43 0.0077 0.0070
 Pluto -34044-11-25 23:59 J -10712818.64 -10712818.50 -10712818.32 0.0077 0.0060
 Jupiter -34043-10-02 22:47 J -10712507.75 -10712507.55 -10712507.34 0.0504 0.0242
 Saturn -34040-10-25 03:07 J -10711389.62 -10711389.37 -10711389.13 0.0287 0.0022
 Jupiter -34037-03-30 05:31 J -10710502.49 -10710502.27 -10710502.04 0.0525 0.0107
 Neptune -34034-03-21 09:07 J -10709416.28 -10709416.12 -10709415.93 0.0089 0.0063
 Neptune -34033-03-22 20:09 J -10709048.89 -10709048.66 -10709048.40 0.0089 0.0022
 Neptune -34032-03-25 07:40 J -10708681.43 -10708681.18 -10708680.93 0.0089 0.0020
 Neptune -34031-03-27 18:14 J -10708313.91 -10708313.74 -10708313.54 0.0089 0.0061
 Saturn -34025-04-16 22:04 J -10706101.76 -10706101.58 -10706101.39 0.0272 0.0177
 Uranus -34014-04-20 03:07 J -10702081.50 -10702081.37 -10702081.19 0.0144 0.0114
 Uranus -34013-04-24 02:23 J -10701711.65 -10701711.40 -10701711.14 0.0144 0.0013
 Uranus -34012-04-29 01:40 J -10701341.47 -10701341.43 -10701341.35 0.0145 0.0141
 Saturn -34011-10-19 05:31 J -10700803.42 -10700803.27 -10700803.12 0.0287 0.0226
 Mars -34006-03-07 05:45 J -10699203.44 -10699203.26 -10699203.07 0.1742 0.0267

34TH MILLENNIUM BCE

This is a list of transits of Earth in the 34th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-33995-04-23	19:26	J	-10695137.93	-10695137.69	-10695137.45	0.0273	0.0060

Saturn -33981-10-26 04:04 J -10689838.57 -10689838.33 -10689838.09 0.0287 0.0067
 Uranus -33974-10-24 17:16 J -10687284.00 -10687283.78 -10687283.55 0.0134 0.0063
 Uranus -33973-10-28 02:38 J -10686914.63 -10686914.39 -10686914.14 0.0134 0.0039
 Jupiter -33972-09-27 15:50 J -10686580.01 -10686579.84 -10686579.66 0.0501 0.0332
 Saturn -33966-04-19 00:28 J -10684550.69 -10684550.48 -10684550.27 0.0272 0.0132
 Jupiter -33960-10-02 04:19 J -10682192.54 -10682192.32 -10682192.10 0.0503 0.0165
 Jupiter -33954-03-30 12:43 J -10680187.20 -10680186.97 -10680186.74 0.0526 0.0033
 Mars -33953-09-04 15:35 J -10679663.01 -10679662.85 -10679662.69 0.1785 0.1045
 Neptune -33952-09-21 21:21 J -10679280.79 -10679280.61 -10679280.41 0.0088 0.0060
 Saturn -33952-10-20 08:38 J -10679252.32 -10679252.14 -10679251.93 0.0287 0.0178
 Neptune -33951-09-24 09:35 J -10678913.34 -10678913.10 -10678912.83 0.0088 0.0020
 Neptune -33950-09-26 21:50 J -10678545.84 -10678545.59 -10678545.33 0.0088 0.0022
 Neptune -33949-09-28 09:50 J -10678178.26 -10678178.09 -10678177.89 0.0088 0.0062
 Saturn -33936-04-24 22:47 J -10673586.76 -10673586.55 -10673586.31 0.0273 0.0108
 Uranus -33930-04-20 12:28 J -10671400.14 -10671399.98 -10671399.81 0.0144 0.0109
 Uranus -33929-04-24 11:31 J -10671030.27 -10671030.02 -10671029.77 0.0144 0.0017
 Uranus -33928-04-29 11:02 J -10670660.04 -10670660.04 -10670660.03 0.0145 0.0145
 Saturn -33922-10-28 05:59 J -10668287.46 -10668287.25 -10668287.01 0.0287 0.0116
 Saturn -33907-04-20 04:33 J -10662999.54 -10662999.31 -10662999.08 0.0272 0.0084
 Saturn -33893-10-21 14:09 J -10657701.13 -10657700.91 -10657700.69 0.0287 0.0126
 Uranus -33890-10-25 01:55 J -10656602.64 -10656602.42 -10656602.18 0.0134 0.0060
 Jupiter -33889-09-26 19:55 J -10656264.80 -10656264.67 -10656264.53 0.0501 0.0413
 Uranus -33889-10-28 11:02 J -10656233.27 -10656233.04 -10656232.78 0.0134 0.0043
 Pluto -33882-05-24 08:38 J -10653834.37 -10653834.14 -10653833.89 0.0067 0.0025
 Pluto -33881-05-24 23:45 J -10653467.60 -10653467.51 -10653467.38 0.0067 0.0061
 Saturn -33877-04-26 04:33 J -10652035.51 -10652035.31 -10652035.11 0.0273 0.0158
 Jupiter -33877-10-01 11:16 J -10651877.27 -10651877.03 -10651876.80 0.0503 0.0096
 Mars -33874-09-08 14:23 J -10650805.03 -10650804.90 -10650804.76 0.1780 0.1293
 Jupiter -33871-03-29 19:11 J -10649871.93 -10649871.70 -10649871.47 0.0526 0.0045
 Neptune -33870-03-20 21:21 J -10649515.70 -10649515.61 -10649515.52 0.0089 0.0083

Neptune -33869-03-22 08:09 J -10649148.37 -10649148.16 -10649147.92 0.0089 0.0042
 Neptune -33868-03-24 19:40 J -10648780.94 -10648780.68 -10648780.43 0.0089 0.0001
 Neptune -33867-03-27 06:14 J -10648413.45 -10648413.24 -10648413.00 0.0089 0.0043
 Neptune -33866-03-29 17:31 J -10648045.85 -10648045.77 -10648045.68 0.0089 0.0084
 Saturn -33863-10-29 11:31 J -10646736.22 -10646736.02 -10646735.82 0.0287 0.0168
 Jupiter -33859-04-03 10:19 J -10645484.12 -10645484.07 -10645483.99 0.0523 0.0500
 Saturn -33848-04-21 10:19 J -10641448.31 -10641448.07 -10641447.82 0.0272 0.0033
 Uranus -33846-04-20 19:55 J -10640718.82 -10640718.67 -10640718.48 0.0144 0.0107
 Uranus -33845-04-24 19:11 J -10640348.95 -10640348.70 -10640348.45 0.0144 0.0020
 Saturn -33834-10-23 21:35 J -10636149.84 -10636149.60 -10636149.36 0.0287 0.0070
 Saturn -33819-04-16 06:14 J -10630861.34 -10630861.24 -10630861.13 0.0272 0.0243
 Saturn -33818-04-28 12:14 J -10630484.13 -10630483.99 -10630483.83 0.0273 0.0213
 Jupiter -33806-09-27 03:21 J -10625949.42 -10625949.36 -10625949.29 0.0500 0.0479
 Uranus -33806-10-25 10:04 J -10625921.31 -10625921.08 -10625920.85 0.0134 0.0056
 Uranus -33805-10-28 19:26 J -10625551.93 -10625551.69 -10625551.45 0.0134 0.0045
 Saturn -33804-10-30 18:43 J -10625184.87 -10625184.72 -10625184.56 0.0286 0.0224
 Mars -33801-03-04 12:57 J -10624329.06 -10624328.96 -10624328.86 0.1731 0.1450
 Pluto -33796-11-26 13:40 J -10622236.17 -10622235.93 -10622235.68 0.0077 0.0022
 Jupiter -33794-10-01 18:28 J -10621561.97 -10621561.73 -10621561.50 0.0502 0.0028
 Saturn -33789-04-22 17:45 J -10619897.01 -10619896.76 -10619896.52 0.0272 0.0020
 Jupiter -33788-03-28 15:35 J -10619557.06 -10619556.85 -10619556.63 0.0526 0.0175
 Neptune -33788-09-21 08:09 J -10619380.25 -10619380.16 -10619380.02 0.0088 0.0080
 Neptune -33787-09-23 20:38 J -10619012.87 -10619012.64 -10619012.40 0.0088 0.0038
 Neptune -33786-09-26 08:52 J -10618645.39 -10618645.13 -10618644.86 0.0088 0.0003
 Neptune -33785-09-27 20:52 J -10618277.85 -10618277.63 -10618277.40 0.0088 0.0044
 Neptune -33784-09-30 08:52 J -10617910.19 -10617910.13 -10617910.05 0.0088 0.0085
 Jupiter -33776-04-02 12:57 J -10615169.10 -10615168.96 -10615168.81 0.0525 0.0406
 Saturn -33775-10-25 08:09 J -10614598.41 -10614598.16 -10614597.92 0.0287 0.0010
 Uranus -33762-04-21 03:35 J -10610037.52 -10610037.35 -10610037.18 0.0144 0.0104
 Uranus -33761-04-25 02:09 J -10609667.65 -10609667.41 -10609667.15 0.0144 0.0022

Saturn -33760-04-17 15:07 J -10609310.04 -10609309.87 -10609309.69 0.0272 0.0188
 Saturn -33759-04-29 21:21 J -10608932.63 -10608932.61 -10608932.57 0.0273 0.0270
 Saturn -33746-10-19 05:59 J -10604012.34 -10604012.25 -10604012.15 0.0287 0.0262
 Saturn -33745-11-01 04:33 J -10603633.31 -10603633.31 -10603633.27 0.0286 0.0285
 Saturn -33730-04-25 02:09 J -10598345.64 -10598345.41 -10598345.17 0.0273 0.0076
 Mars -33722-03-07 23:02 J -10595471.73 -10595471.54 -10595471.35 0.1736 0.0261
 Uranus -33722-10-25 18:28 J -10595239.96 -10595239.73 -10595239.49 0.0134 0.0053
 Uranus -33721-10-29 03:50 J -10594870.57 -10594870.34 -10594870.09 0.0134 0.0049
 Saturn -33716-10-26 19:55 J -10593046.90 -10593046.67 -10593046.42 0.0287 0.0055
 Jupiter -33711-09-30 17:59 J -10591246.98 -10591246.75 -10591246.51 0.0501 0.0073
 Neptune -33705-03-21 19:55 J -10589247.85 -10589247.67 -10589247.48 0.0089 0.0061
 Jupiter -33705-03-27 19:11 J -10589241.89 -10589241.70 -10589241.50 0.0527 0.0264
 Neptune -33704-03-24 06:57 J -10588880.45 -10588880.21 -10588879.95 0.0089 0.0020
 Neptune -33703-03-26 17:59 J -10588512.98 -10588512.75 -10588512.49 0.0089 0.0023
 Neptune -33702-03-29 05:02 J -10588145.45 -10588145.29 -10588145.10 0.0089 0.0065
 Saturn -33701-04-19 00:57 J -10587758.67 -10587758.46 -10587758.24 0.0272 0.0132
 Jupiter -33699-10-05 08:23 J -10586859.25 -10586859.15 -10586859.02 0.0504 0.0436
 Jupiter -33693-04-01 17:16 J -10584853.96 -10584853.78 -10584853.59 0.0525 0.0316
 Saturn -33687-10-20 19:26 J -10582460.87 -10582460.69 -10582460.51 0.0287 0.0197
 Uranus -33678-04-21 10:33 J -10579356.23 -10579356.06 -10579355.88 0.0144 0.0103
 Uranus -33677-04-25 09:21 J -10578986.36 -10578986.11 -10578985.86 0.0145 0.0023
 Saturn -33671-04-26 11:02 J -10576794.25 -10576794.04 -10576793.82 0.0273 0.0131
 Mars -33669-09-04 15:07 J -10575931.95 -10575931.87 -10575931.78 0.1793 0.1605
 Saturn -33657-10-28 09:35 J -10571495.32 -10571495.10 -10571494.87 0.0287 0.0121
 Saturn -33642-04-21 11:02 J -10566207.27 -10566207.04 -10566206.80 0.0272 0.0075
 Uranus -33638-10-26 02:23 J -10564558.63 -10564558.40 -10564558.16 0.0134 0.0050
 Uranus -33637-10-29 11:45 J -10564189.24 -10564189.01 -10564188.77 0.0134 0.0051
 Pluto -33633-05-25 17:59 J -10562885.00 -10562884.75 -10562884.48 0.0067 0.0003
 Jupiter -33628-09-29 22:04 J -10560931.81 -10560931.58 -10560931.36 0.0501 0.0155
 Saturn -33628-10-22 09:35 J -10560909.32 -10560909.10 -10560908.88 0.0286 0.0131

Neptune -33623-09-23 07:55 J -10559112.35 -10559112.17 -10559111.95 0.0088 0.0057
 Jupiter -33622-03-27 18:14 J -10558926.90 -10558926.74 -10558926.58 0.0527 0.0378
 Neptune -33622-09-25 20:09 J -10558744.91 -10558744.66 -10558744.40 0.0088 0.0016
 Neptune -33621-09-27 08:09 J -10558377.40 -10558377.16 -10558376.90 0.0088 0.0025
 Neptune -33620-09-29 20:09 J -10558009.81 -10558009.66 -10558009.47 0.0088 0.0066
 Jupiter -33616-10-04 12:57 J -10556544.12 -10556543.96 -10556543.79 0.0503 0.0356
 Saturn -33612-04-27 19:40 J -10555242.86 -10555242.68 -10555242.50 0.0273 0.0185
 Jupiter -33610-04-01 13:11 J -10554539.16 -10554538.95 -10554538.73 0.0525 0.0190
 Saturn -33598-10-30 23:59 J -10549943.68 -10549943.50 -10549943.31 0.0287 0.0188
 Uranus -33594-04-21 18:43 J -10548674.89 -10548674.72 -10548674.53 0.0144 0.0099
 Uranus -33593-04-25 17:02 J -10548305.03 -10548304.79 -10548304.53 0.0145 0.0027
 Mars -33590-09-08 15:07 J -10547074.05 -10547073.87 -10547073.70 0.1788 0.0818
 Saturn -33583-04-22 20:23 J -10544655.89 -10544655.65 -10544655.41 0.0272 0.0019
 Saturn -33569-10-23 23:59 J -10539357.73 -10539357.50 -10539357.25 0.0286 0.0064
 Saturn -33554-04-17 20:09 J -10534068.79 -10534068.66 -10534068.52 0.0273 0.0226
 Uranus -33554-10-26 10:47 J -10533877.28 -10533877.05 -10533876.80 0.0134 0.0047
 Saturn -33553-04-29 03:07 J -10533691.48 -10533691.37 -10533691.25 0.0273 0.0238
 Uranus -33553-10-29 19:55 J -10533507.89 -10533507.67 -10533507.42 0.0134 0.0055
 Pluto -33547-11-29 02:52 J -10531286.61 -10531286.38 -10531286.12 0.0077 0.0024
 Jupiter -33545-09-28 22:33 J -10530616.76 -10530616.56 -10530616.35 0.0500 0.0247
 Neptune -33541-03-21 07:11 J -10529347.29 -10529347.20 -10529347.07 0.0089 0.0081
 Neptune -33540-03-23 18:28 J -10528979.95 -10528979.73 -10528979.49 0.0089 0.0039
 Neptune -33539-03-26 05:45 J -10528612.51 -10528612.26 -10528612.00 0.0089 0.0003
 Jupiter -33539-03-26 16:04 J -10528611.91 -10528611.83 -10528611.76 0.0529 0.0498
 Saturn -33539-11-01 13:55 J -10528392.04 -10528391.92 -10528391.81 0.0287 0.0253
 Neptune -33538-03-28 16:33 J -10528245.01 -10528244.81 -10528244.57 0.0089 0.0046
 Neptune -33537-03-30 03:21 J -10527877.38 -10527877.36 -10527877.27 0.0089 0.0087
 Jupiter -33533-10-03 12:43 J -10526229.18 -10526228.97 -10526228.77 0.0502 0.0256
 Jupiter -33527-03-31 14:52 J -10524224.11 -10524223.88 -10524223.65 0.0527 0.0090
 Saturn -33524-04-24 04:19 J -10523104.56 -10523104.32 -10523104.07 0.0272 0.0035

Mars -33517-03-05 07:26 J -10520597.30 -10520597.19 -10520597.09 0.1725 0.1410
 Uranus -33510-04-22 04:04 J -10517993.52 -10517993.33 -10517993.14 0.0144 0.0095
 Saturn -33510-10-26 13:26 J -10517806.18 -10517805.94 -10517805.69 0.0286 0.0006
 Uranus -33509-04-26 02:09 J -10517623.65 -10517623.41 -10517623.15 0.0145 0.0031
 Saturn -33495-04-19 01:55 J -10512517.60 -10512517.42 -10512517.23 0.0273 0.0177
 Saturn -33481-10-20 03:07 J -10507219.51 -10507219.37 -10507219.23 0.0287 0.0236
 Uranus -33470-10-26 19:11 J -10503195.94 -10503195.70 -10503195.45 0.0134 0.0044
 Uranus -33469-10-30 04:19 J -10502826.54 -10502826.32 -10502826.08 0.0134 0.0058
 Saturn -33465-04-25 10:47 J -10501553.28 -10501553.05 -10501552.82 0.0272 0.0085
 Jupiter -33462-09-29 00:57 J -10500301.63 -10500301.46 -10500301.28 0.0500 0.0335
 Neptune -33459-09-22 18:28 J -10499211.84 -10499211.73 -10499211.58 0.0088 0.0076
 Neptune -33458-09-25 06:43 J -10498844.44 -10498844.22 -10498843.96 0.0088 0.0036
 Neptune -33457-09-26 19:26 J -10498476.95 -10498476.69 -10498476.43 0.0088 0.0006
 Neptune -33456-09-29 07:11 J -10498109.41 -10498109.20 -10498108.97 0.0088 0.0047
 Saturn -33451-10-28 01:26 J -10496254.68 -10496254.44 -10496254.20 0.0286 0.0064
 Jupiter -33450-10-03 16:47 J -10495914.02 -10495913.80 -10495913.58 0.0502 0.0173
 Jupiter -33444-03-30 18:14 J -10493908.97 -10493908.74 -10493908.51 0.0527 0.0003
 Mars -33438-03-08 16:47 J -10491739.99 -10491739.80 -10491739.62 0.1729 0.0268
 Saturn -33436-04-20 05:59 J -10490966.45 -10490966.25 -10490966.02 0.0273 0.0130
 Uranus -33426-04-22 12:57 J -10487312.14 -10487311.96 -10487311.75 0.0144 0.0090
 Uranus -33425-04-26 11:31 J -10486942.26 -10486942.02 -10486941.77 0.0145 0.0035
 Saturn -33422-10-22 12:14 J -10485668.17 -10485667.99 -10485667.79 0.0287 0.0177
 Saturn -33406-04-27 15:21 J -10480002.08 -10480001.86 -10480001.65 0.0272 0.0134
 Saturn -33392-10-29 10:47 J -10474703.27 -10474703.05 -10474702.82 0.0287 0.0122
 Uranus -33386-10-27 04:19 J -10472514.57 -10472514.32 -10472514.08 0.0134 0.0040
 Pluto -33385-05-26 15:07 J -10472302.04 -10472301.87 -10472301.65 0.0067 0.0044
 Uranus -33385-10-30 13:26 J -10472145.16 -10472144.94 -10472144.71 0.0134 0.0061
 Pluto -33384-05-28 06:43 J -10471935.40 -10471935.22 -10471935.00 0.0067 0.0043
 Jupiter -33379-09-28 07:55 J -10469986.30 -10469986.17 -10469986.03 0.0500 0.0401
 Saturn -33377-04-21 08:52 J -10469415.36 -10469415.13 -10469414.90 0.0272 0.0085

Neptune -33376-03-23 05:45 J -10469079.43 -10469079.26 -10469079.05 0.0089 0.0059
 Neptune -33375-03-25 17:16 J -10468712.03 -10468711.78 -10468711.53 0.0089 0.0017
 Neptune -33374-03-28 04:04 J -10468344.56 -10468344.33 -10468344.07 0.0089 0.0026
 Neptune -33373-03-29 15:07 J -10467977.02 -10467976.87 -10467976.68 0.0089 0.0067
 Jupiter -33367-10-02 22:04 J -10465598.81 -10465598.58 -10465598.35 0.0501 0.0101
 Saturn -33363-10-23 19:11 J -10464116.92 -10464116.70 -10464116.47 0.0287 0.0122
 Jupiter -33361-03-29 17:31 J -10463593.99 -10463593.77 -10463593.54 0.0528 0.0114
 Jupiter -33349-04-03 15:35 J -10459205.94 -10459205.85 -10459205.74 0.0526 0.0470
 Saturn -33347-04-28 17:59 J -10458450.93 -10458450.75 -10458450.57 0.0272 0.0179
 Uranus -33342-04-22 21:07 J -10456630.81 -10456630.62 -10456630.41 0.0144 0.0087
 Uranus -33341-04-26 19:40 J -10456260.92 -10456260.68 -10456260.43 0.0145 0.0038
 Saturn -33333-10-30 17:16 J -10453151.97 -10453151.78 -10453151.58 0.0287 0.0176
 Saturn -33318-04-23 10:19 J -10447864.30 -10447864.07 -10447863.82 0.0272 0.0042
 Mars -33306-09-08 13:11 J -10443343.15 -10443342.95 -10443342.76 0.1796 0.0240
 Saturn -33304-10-24 23:16 J -10442565.77 -10442565.53 -10442565.29 0.0288 0.0072
 Uranus -33302-10-27 12:43 J -10441833.20 -10441832.97 -10441832.71 0.0134 0.0037
 Uranus -33301-10-30 21:35 J -10441463.80 -10441463.60 -10441463.36 0.0134 0.0065
 Pluto -33299-11-29 20:23 J -10440703.84 -10440703.65 -10440703.42 0.0077 0.0045
 Jupiter -33296-09-27 15:35 J -10439670.93 -10439670.85 -10439670.77 0.0499 0.0464
 Neptune -33294-09-24 17:45 J -10438943.95 -10438943.76 -10438943.54 0.0088 0.0054
 Neptune -33293-09-26 05:59 J -10438576.50 -10438576.25 -10438575.98 0.0088 0.0013
 Neptune -33292-09-28 18:14 J -10438208.98 -10438208.74 -10438208.48 0.0088 0.0028
 Neptune -33291-10-01 05:59 J -10437841.40 -10437841.25 -10437841.08 0.0088 0.0070
 Saturn -33289-04-17 14:23 J -10437277.01 -10437276.90 -10437276.78 0.0271 0.0237
 Saturn -33288-04-29 19:11 J -10436899.83 -10436899.70 -10436899.56 0.0272 0.0223
 Jupiter -33284-10-02 04:04 J -10435283.57 -10435283.33 -10435283.09 0.0500 0.0027
 Jupiter -33278-03-30 01:26 J -10433278.65 -10433278.44 -10433278.22 0.0528 0.0186
 Saturn -33274-11-01 21:50 J -10431600.73 -10431600.59 -10431600.43 0.0287 0.0228
 Jupiter -33266-04-04 00:28 J -10428890.62 -10428890.48 -10428890.33 0.0526 0.0405
 Saturn -33259-04-24 10:47 J -10426313.29 -10426313.05 -10426312.80 0.0272 0.0006

Uranus -33258-04-23 04:33 J -10425949.51 -10425949.31 -10425949.10 0.0144 0.0085
 Uranus -33257-04-27 02:52 J -10425579.61 -10425579.38 -10425579.13 0.0145 0.0041
 Saturn -33245-10-26 00:57 J -10421014.71 -10421014.46 -10421014.22 0.0288 0.0025
 Mars -33233-03-06 01:26 J -10416865.55 -10416865.44 -10416865.33 0.1718 0.1374
 Saturn -33230-04-19 15:21 J -10415726.02 -10415725.86 -10415725.68 0.0271 0.0195
 Saturn -33229-04-30 19:55 J -10415348.71 -10415348.67 -10415348.61 0.0272 0.0266
 Uranus -33219-10-23 11:45 J -10411521.01 -10411521.01 -10411520.96 0.0134 0.0134
 Uranus -33218-10-27 21:50 J -10411151.83 -10411151.59 -10411151.33 0.0134 0.0032
 Uranus -33217-10-31 06:57 J -10410782.42 -10410782.21 -10410781.98 0.0134 0.0069
 Saturn -33216-10-19 23:02 J -10410428.56 -10410428.54 -10410428.50 0.0288 0.0285
 Saturn -33215-11-03 00:14 J -10410049.55 -10410049.49 -10410049.42 0.0287 0.0276
 Neptune -33212-03-22 17:02 J -10409178.89 -10409178.79 -10409178.66 0.0089 0.0079
 Neptune -33211-03-25 03:50 J -10408811.55 -10408811.34 -10408811.09 0.0089 0.0037
 Neptune -33210-03-27 15:07 J -10408444.12 -10408443.87 -10408443.61 0.0089 0.0006
 Neptune -33209-03-29 01:40 J -10408076.63 -10408076.43 -10408076.19 0.0089 0.0048
 Neptune -33208-03-31 12:57 J -10407708.96 -10407708.96 -10407708.93 0.0089 0.0089
 Jupiter -33201-10-01 13:40 J -10404968.17 -10404967.93 -10404967.69 0.0500 0.0028
 Saturn -33200-04-25 11:02 J -10404762.28 -10404762.04 -10404761.80 0.0272 0.0044
 Jupiter -33195-03-29 08:52 J -10402963.33 -10402963.13 -10402962.93 0.0529 0.0258
 Jupiter -33189-10-06 05:45 J -10400580.32 -10400580.26 -10400580.20 0.0502 0.0485
 Saturn -33186-10-28 01:26 J -10399463.69 -10399463.44 -10399463.20 0.0288 0.0021
 Jupiter -33183-04-03 01:40 J -10398575.61 -10398575.43 -10398575.24 0.0527 0.0300
 Uranus -33174-04-23 11:31 J -10395268.22 -10395268.02 -10395267.81 0.0144 0.0083
 Uranus -33173-04-27 10:04 J -10394898.32 -10394898.08 -10394897.83 0.0145 0.0043
 Saturn -33171-04-20 16:04 J -10394175.02 -10394174.83 -10394174.62 0.0271 0.0151
 Saturn -33157-10-21 00:14 J -10388877.62 -10388877.49 -10388877.35 0.0288 0.0239
 Mars -33154-03-09 10:47 J -10388008.24 -10388008.05 -10388007.87 0.1722 0.0284
 Saturn -33141-04-26 11:31 J -10383211.24 -10383211.02 -10383210.78 0.0272 0.0088
 Pluto -33136-05-29 04:04 J -10381352.58 -10381352.33 -10381352.06 0.0067 0.0007
 Uranus -33135-10-23 20:52 J -10380839.68 -10380839.63 -10380839.54 0.0134 0.0130

Uranus -33134-10-28 06:57 J -10380470.45 -10380470.21 -10380469.95 0.0134 0.0029
 Uranus -33133-10-31 15:50 J -10380101.04 -10380100.84 -10380100.61 0.0134 0.0073
 Neptune -33130-09-24 03:21 J -10379043.49 -10379043.36 -10379043.21 0.0088 0.0074
 Neptune -33129-09-25 15:50 J -10378676.07 -10378675.84 -10378675.58 0.0088 0.0033
 Neptune -33128-09-28 04:19 J -10378308.58 -10378308.32 -10378308.06 0.0088 0.0009
 Neptune -33127-09-30 16:04 J -10377941.02 -10377940.83 -10377940.59 0.0088 0.0050
 Saturn -33127-10-29 00:43 J -10377912.71 -10377912.47 -10377912.23 0.0288 0.0066
 Jupiter -33118-10-02 00:28 J -10374652.71 -10374652.48 -10374652.24 0.0500 0.0080
 Jupiter -33112-03-28 09:21 J -10372648.28 -10372648.11 -10372647.95 0.0530 0.0370
 Saturn -33112-04-21 17:16 J -10372624.00 -10372623.78 -10372623.56 0.0271 0.0107
 Jupiter -33106-10-06 12:28 J -10370265.10 -10370264.98 -10370264.84 0.0501 0.0416
 Jupiter -33100-04-02 09:35 J -10368260.30 -10368260.10 -10368259.89 0.0528 0.0230
 Saturn -33098-10-23 01:40 J -10367326.60 -10367326.43 -10367326.23 0.0288 0.0192
 Uranus -33090-04-23 19:11 J -10364586.91 -10364586.70 -10364586.49 0.0144 0.0079
 Uranus -33089-04-27 17:31 J -10364217.00 -10364216.77 -10364216.52 0.0145 0.0046
 Saturn -33082-04-28 12:57 J -10361660.17 -10361659.96 -10361659.74 0.0271 0.0133
 Saturn -33068-10-30 00:43 J -10356361.69 -10356361.47 -10356361.23 0.0288 0.0112
 Saturn -33053-04-22 18:57 J -10351072.95 -10351072.71 -10351072.47 0.0271 0.0062
 Uranus -33051-10-24 06:28 J -10350158.31 -10350158.23 -10350158.13 0.0135 0.0125
 Uranus -33050-10-28 16:33 J -10349789.06 -10349788.81 -10349788.56 0.0134 0.0023
 Pluto -33050-12-02 15:07 J -10349754.11 -10349753.87 -10349753.61 0.0077 0.0016
 Uranus -33049-11-01 01:26 J -10349419.63 -10349419.44 -10349419.22 0.0134 0.0077
 Neptune -33047-03-24 14:52 J -10348911.05 -10348910.88 -10348910.66 0.0089 0.0058
 Neptune -33046-03-27 01:55 J -10348543.66 -10348543.42 -10348543.16 0.0089 0.0016
 Neptune -33045-03-28 13:11 J -10348176.19 -10348175.95 -10348175.71 0.0089 0.0027
 Neptune -33044-03-30 23:59 J -10347808.65 -10347808.50 -10347808.33 0.0089 0.0069
 Saturn -33039-10-24 04:19 J -10345775.53 -10345775.32 -10345775.11 0.0288 0.0143
 Jupiter -33035-10-01 06:28 J -10344337.45 -10344337.23 -10344337.00 0.0499 0.0151
 Jupiter -33029-03-27 18:28 J -10342332.86 -10342332.73 -10342332.59 0.0530 0.0433
 Saturn -33023-04-29 15:50 J -10340109.02 -10340108.84 -10340108.66 0.0271 0.0180

Jupiter -33023-10-05 21:07 J -10339949.78 -10339949.62 -10339949.45 0.0501 0.0354

Mars -33022-09-08 09:07 J -10339612.31 -10339612.12 -10339611.92 0.1804 0.0425

Jupiter -33017-04-01 17:31 J -10337944.98 -10337944.77 -10337944.55 0.0528 0.0159

Saturn -33009-10-31 02:38 J -10334810.59 -10334810.39 -10334810.18 0.0288 0.0161

Uranus -33006-04-24 04:33 J -10333905.52 -10333905.31 -10333905.09 0.0144 0.0075

Uranus -33005-04-28 02:52 J -10333535.60 -10333535.38 -10333535.13 0.0145 0.0051

33RD MILLENNIUM BCE

This is a list of transits of Earth in the 33rd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-32994-04-24 21:50 J	-10329521.83	-10329521.59	-10329521.34	0.0271	0.0015		
Saturn	-32980-10-25 08:38 J	-10324224.37	-10324224.14	-10324223.90	0.0288	0.0091		
Uranus	-32967-10-24 16:04 J	-10319476.94	-10319476.83	-10319476.71	0.0135	0.0120		
Uranus	-32966-10-29 02:23 J	-10319107.66	-10319107.40	-10319107.15	0.0134	0.0018		
Saturn	-32965-04-18 17:16 J	-10318934.89	-10318934.78	-10318934.64	0.0271	0.0229		
Neptune	-32965-09-25 00:57 J	-10318775.66	-10318775.46	-10318775.24	0.0088	0.0053		
Uranus	-32965-11-01 11:16 J	-10318738.22	-10318738.03	-10318737.82	0.0134	0.0082		
Saturn	-32964-04-30 20:09 J	-10318557.77	-10318557.66	-10318557.52	0.0271	0.0231		
Neptune	-32964-09-27 13:26 J	-10318408.19	-10318407.94	-10318407.68	0.0088	0.0012		
Neptune	-32963-09-30 01:55 J	-10318040.67	-10318040.42	-10318040.18	0.0088	0.0030		
Neptune	-32962-10-02 13:26 J	-10317673.06	-10317672.94	-10317672.76	0.0088	0.0072		
Jupiter	-32952-09-30 15:50 J	-10314022.05	-10314021.84	-10314021.63	0.0499	0.0209		
Saturn	-32950-11-02 06:43 J	-10313259.38	-10313259.22	-10313259.05	0.0288	0.0213		

Mars -32949-03-06 20:38 J -10313133.76 -10313133.64 -10313133.52 0.1712 0.1310
 Jupiter -32940-10-05 06:14 J -10309634.42 -10309634.24 -10309634.04 0.0501 0.0295
 Saturn -32935-04-26 02:23 J -10307970.64 -10307970.40 -10307970.15 0.0271 0.0036
 Jupiter -32934-04-01 15:07 J -10307630.10 -10307629.87 -10307629.64 0.0528 0.0035
 Uranus -32922-04-24 14:52 J -10303224.09 -10303223.88 -10303223.65 0.0144 0.0069
 Uranus -32921-04-28 13:40 J -10302854.16 -10302853.93 -10302853.69 0.0145 0.0056
 Saturn -32921-10-26 15:21 J -10302673.10 -10302672.86 -10302672.61 0.0288 0.0035
 Saturn -32906-04-20 23:16 J -10297383.70 -10297383.53 -10297383.33 0.0271 0.0177
 Saturn -32891-11-03 13:40 J -10291707.99 -10291707.93 -10291707.83 0.0288 0.0271
 Pluto -32888-05-30 04:19 J -10290769.48 -10290769.32 -10290769.10 0.0067 0.0046
 Pluto -32887-05-31 20:09 J -10290402.86 -10290402.66 -10290402.45 0.0067 0.0041
 Neptune -32883-03-24 00:43 J -10289010.56 -10289010.47 -10289010.32 0.0089 0.0079
 Uranus -32883-10-25 02:52 J -10288795.51 -10288795.38 -10288795.24 0.0134 0.0114
 Neptune -32882-03-26 11:59 J -10288643.22 -10288643.00 -10288642.75 0.0089 0.0036
 Uranus -32882-10-29 12:57 J -10288426.21 -10288425.96 -10288425.70 0.0134 0.0013
 Neptune -32881-03-27 23:16 J -10288275.78 -10288275.53 -10288275.28 0.0089 0.0006
 Uranus -32881-11-01 21:50 J -10288056.76 -10288056.59 -10288056.38 0.0134 0.0088
 Neptune -32880-03-30 09:35 J -10287908.29 -10287908.10 -10287907.86 0.0089 0.0049
 Saturn -32876-04-27 08:38 J -10286419.37 -10286419.14 -10286418.91 0.0271 0.0088
 Mars -32870-03-10 05:31 J -10284276.46 -10284276.27 -10284276.09 0.1716 0.0326
 Jupiter -32869-09-29 18:57 J -10283706.90 -10283706.71 -10283706.51 0.0498 0.0290
 Saturn -32862-10-29 00:57 J -10281121.71 -10281121.46 -10281121.22 0.0288 0.0027
 Jupiter -32857-10-04 08:09 J -10279319.38 -10279319.16 -10279318.95 0.0500 0.0204
 Jupiter -32851-03-31 20:09 J -10277314.89 -10277314.66 -10277314.43 0.0529 0.0048
 Saturn -32847-04-22 07:11 J -10275832.41 -10275832.20 -10275831.98 0.0271 0.0122
 Uranus -32838-04-25 01:40 J -10272542.65 -10272542.43 -10272542.19 0.0144 0.0063
 Uranus -32837-04-29 00:14 J -10272172.70 -10272172.49 -10272172.25 0.0145 0.0063
 Saturn -32833-10-21 21:07 J -10270535.75 -10270535.62 -10270535.47 0.0288 0.0237
 Saturn -32817-04-28 16:04 J -10264868.04 -10264867.83 -10264867.62 0.0271 0.0143
 Saturn -32803-10-30 12:57 J -10259570.19 -10259569.96 -10259569.72 0.0288 0.0092

Pluto -32802-12-03 12:14 J -10259171.18 -10259170.99 -10259170.74 0.0077 0.0041
 Neptune -32801-09-24 09:50 J -10258875.22 -10258875.09 -10258874.95 0.0088 0.0074
 Neptune -32800-09-26 21:50 J -10258507.82 -10258507.59 -10258507.33 0.0088 0.0033
 Neptune -32799-09-29 10:19 J -10258140.32 -10258140.07 -10258139.80 0.0088 0.0009
 Uranus -32799-10-25 13:26 J -10258114.08 -10258113.94 -10258113.77 0.0134 0.0108
 Neptune -32798-10-01 22:33 J -10257772.76 -10257772.56 -10257772.33 0.0088 0.0050
 Uranus -32798-10-29 23:59 J -10257744.76 -10257744.50 -10257744.25 0.0134 0.0007
 Uranus -32797-11-02 08:38 J -10257375.30 -10257375.14 -10257374.94 0.0134 0.0094
 Saturn -32788-04-23 16:19 J -10254281.06 -10254280.82 -10254280.58 0.0271 0.0065
 Jupiter -32786-09-29 21:50 J -10253391.74 -10253391.59 -10253391.43 0.0498 0.0377
 Jupiter -32774-10-04 13:11 J -10249004.18 -10249003.95 -10249003.72 0.0500 0.0126
 Saturn -32774-10-24 10:19 J -10248984.26 -10248984.07 -10248983.87 0.0288 0.0170
 Jupiter -32768-03-30 18:57 J -10246999.93 -10246999.71 -10246999.49 0.0529 0.0164
 Saturn -32759-04-18 20:23 J -10243693.68 -10243693.65 -10243693.61 0.0272 0.0268
 Saturn -32758-04-30 23:59 J -10243316.65 -10243316.50 -10243316.32 0.0272 0.0199
 Jupiter -32756-04-04 14:38 J -10242612.03 -10242611.89 -10242611.74 0.0527 0.0408
 Uranus -32754-04-25 11:16 J -10241861.26 -10241861.03 -10241860.80 0.0144 0.0057
 Uranus -32753-04-29 09:50 J -10241491.30 -10241491.09 -10241490.86 0.0145 0.0067
 Saturn -32744-11-01 02:23 J -10238018.59 -10238018.40 -10238018.18 0.0288 0.0161
 Mars -32738-09-08 03:07 J -10235881.52 -10235881.37 -10235881.22 0.1813 0.1168
 Saturn -32729-04-25 02:09 J -10232729.65 -10232729.41 -10232729.17 0.0271 0.0008
 Neptune -32718-03-25 22:04 J -10228742.77 -10228742.58 -10228742.38 0.0089 0.0058
 Neptune -32717-03-27 08:52 J -10228375.37 -10228375.13 -10228374.87 0.0089 0.0016
 Neptune -32716-03-29 19:55 J -10228007.91 -10228007.67 -10228007.42 0.0089 0.0027
 Neptune -32715-04-01 06:28 J -10227640.38 -10227640.23 -10227640.06 0.0089 0.0069
 Saturn -32715-10-26 00:43 J -10227432.70 -10227432.47 -10227432.24 0.0288 0.0101
 Uranus -32715-10-26 01:11 J -10227432.61 -10227432.45 -10227432.27 0.0134 0.0101 *
 Uranus -32714-10-30 11:31 J -10227063.28 -10227063.02 -10227062.77 0.0134 0.0002
 Uranus -32713-11-02 20:09 J -10226693.81 -10226693.66 -10226693.47 0.0134 0.0100
 Jupiter -32703-09-29 02:23 J -10223076.49 -10223076.40 -10223076.30 0.0498 0.0453

Saturn -32700-04-20 04:33 J -10222142.45 -10222142.31 -10222142.16 0.0272 0.0214
 Saturn -32699-05-02 08:38 J -10221765.22 -10221765.14 -10221765.06 0.0272 0.0254
 Jupiter -32691-10-03 13:40 J -10218689.17 -10218688.93 -10218688.69 0.0499 0.0034
 Jupiter -32685-03-29 16:33 J -10216685.00 -10216684.81 -10216684.62 0.0530 0.0285
 Saturn -32685-11-02 17:31 J -10216466.91 -10216466.77 -10216466.62 0.0288 0.0230
 Jupiter -32673-04-03 16:04 J -10212297.02 -10212296.83 -10212296.64 0.0528 0.0307
 Uranus -32670-04-25 20:23 J -10211179.88 -10211179.65 -10211179.41 0.0144 0.0053
 Saturn -32670-04-27 11:31 J -10211178.26 -10211178.02 -10211177.78 0.0271 0.0050
 Uranus -32669-04-29 19:11 J -10210809.92 -10210809.70 -10210809.48 0.0145 0.0071
 Mars -32665-03-07 17:45 J -10209401.89 -10209401.76 -10209401.63 0.1706 0.1197
 Mars -32659-09-11 04:47 J -10207023.43 -10207023.30 -10207023.17 0.1807 0.1380
 Saturn -32656-10-27 15:35 J -10205881.09 -10205880.85 -10205880.60 0.0288 0.0032
 Saturn -32641-04-21 12:28 J -10200591.17 -10200590.98 -10200590.78 0.0272 0.0160
 Pluto -32639-06-01 20:23 J -10199819.91 -10199819.65 -10199819.39 0.0067 0.0000
 Neptune -32636-09-26 05:02 J -10198607.47 -10198607.29 -10198607.06 0.0088 0.0055
 Neptune -32635-09-28 17:59 J -10198240.01 -10198239.75 -10198239.49 0.0088 0.0013
 Neptune -32634-10-01 05:59 J -10197872.49 -10197872.25 -10197872.00 0.0088 0.0028
 Neptune -32633-10-02 17:59 J -10197504.89 -10197504.75 -10197504.57 0.0088 0.0070
 Uranus -32631-10-26 12:28 J -10196751.14 -10196750.98 -10196750.78 0.0134 0.0094
 Uranus -32630-10-30 23:02 J -10196381.80 -10196381.54 -10196381.28 0.0134 0.0006
 Uranus -32629-11-03 07:55 J -10196012.31 -10196012.17 -10196012.00 0.0134 0.0106
 Saturn -32627-10-22 04:47 J -10195294.36 -10195294.30 -10195294.22 0.0288 0.0275
 Saturn -32611-04-28 20:09 J -10189626.89 -10189626.66 -10189626.44 0.0271 0.0105
 Jupiter -32608-10-02 15:07 J -10188374.10 -10188373.87 -10188373.63 0.0498 0.0059
 Jupiter -32602-03-29 20:09 J -10186369.82 -10186369.66 -10186369.50 0.0531 0.0379
 Saturn -32597-10-29 06:28 J -10184329.47 -10184329.23 -10184328.98 0.0288 0.0038
 Jupiter -32596-10-07 05:45 J -10183986.35 -10183986.26 -10183986.14 0.0501 0.0446
 Jupiter -32590-04-03 17:16 J -10181981.98 -10181981.78 -10181981.56 0.0528 0.0207
 Mars -32586-03-11 01:40 J -10180544.61 -10180544.43 -10180544.25 0.1710 0.0400
 Uranus -32586-04-26 04:33 J -10180498.54 -10180498.31 -10180498.07 0.0144 0.0050

Uranus -32585-04-30 03:07 J -10180128.58 -10180128.37 -10180128.15 0.0145 0.0074
 Saturn -32582-04-23 19:11 J -10179039.92 -10179039.70 -10179039.47 0.0272 0.0108
 Saturn -32568-10-23 17:45 J -10173742.92 -10173742.76 -10173742.58 0.0288 0.0209
 Neptune -32554-03-25 06:14 J -10168842.32 -10168842.24 -10168842.09 0.0089 0.0081
 Neptune -32553-03-26 17:31 J -10168474.98 -10168474.77 -10168474.52 0.0089 0.0039
 Pluto -32553-12-05 11:31 J -10168221.23 -10168221.02 -10168220.77 0.0077 0.0035
 Neptune -32552-03-29 04:47 J -10168107.55 -10168107.30 -10168107.05 0.0089 0.0005
 Saturn -32552-04-30 03:07 J -10168075.56 -10168075.37 -10168075.17 0.0271 0.0159
 Neptune -32551-03-31 15:50 J -10167740.06 -10167739.84 -10167739.62 0.0089 0.0047
 Neptune -32550-04-03 02:09 J -10167372.41 -10167372.41 -10167372.36 0.0089 0.0089
 Uranus -32547-10-27 00:28 J -10166069.65 -10166069.48 -10166069.27 0.0134 0.0088
 Uranus -32546-10-31 10:47 J -10165700.30 -10165700.05 -10165699.79 0.0134 0.0014
 Uranus -32545-11-03 19:26 J -10165330.80 -10165330.69 -10165330.53 0.0134 0.0113
 Saturn -32538-10-31 18:57 J -10162777.94 -10162777.71 -10162777.48 0.0288 0.0104
 Jupiter -32525-10-01 20:23 J -10158058.88 -10158058.65 -10158058.42 0.0498 0.0132
 Saturn -32523-04-25 00:28 J -10157488.71 -10157488.48 -10157488.24 0.0271 0.0058
 Jupiter -32519-03-28 20:09 J -10156054.74 -10156054.66 -10156054.56 0.0531 0.0487
 Jupiter -32513-10-06 09:07 J -10153671.27 -10153671.12 -10153670.95 0.0500 0.0364
 Saturn -32509-10-25 04:33 J -10152191.51 -10152191.31 -10152191.09 0.0288 0.0146
 Jupiter -32507-04-02 15:07 J -10151667.09 -10151666.87 -10151666.64 0.0529 0.0085
 Uranus -32502-04-26 14:38 J -10149817.13 -10149816.89 -10149816.65 0.0144 0.0045
 Uranus -32501-04-30 12:43 J -10149447.17 -10149446.97 -10149446.75 0.0145 0.0079
 Saturn -32494-04-20 05:59 J -10146901.32 -10146901.25 -10146901.16 0.0271 0.0256
 Saturn -32493-05-01 08:09 J -10146524.30 -10146524.16 -10146523.99 0.0271 0.0210
 Saturn -32479-11-02 05:16 J -10141226.47 -10141226.28 -10141226.07 0.0288 0.0166
 Neptune -32472-09-25 12:14 J -10138707.09 -10138706.99 -10138706.84 0.0088 0.0077
 Neptune -32471-09-28 00:28 J -10138339.70 -10138339.48 -10138339.22 0.0088 0.0036
 Neptune -32470-09-30 13:11 J -10137972.21 -10137971.95 -10137971.69 0.0088 0.0006
 Neptune -32469-10-02 00:43 J -10137604.66 -10137604.47 -10137604.22 0.0088 0.0048
 Saturn -32464-04-26 04:04 J -10135937.57 -10135937.33 -10135937.09 0.0271 0.0010

Uranus -32463-10-27 12:43 J -10135388.18 -10135387.97 -10135387.77 0.0134 0.0080
 Uranus -32462-10-31 22:33 J -10135018.81 -10135018.56 -10135018.30 0.0134 0.0021
 Uranus -32461-11-04 07:40 J -10134649.29 -10134649.18 -10134649.06 0.0134 0.0119
 Saturn -32450-10-27 11:59 J -10130640.22 -10130640.00 -10130639.75 0.0289 0.0088
 Jupiter -32442-10-02 02:09 J -10127743.63 -10127743.41 -10127743.20 0.0497 0.0204
 Saturn -32435-04-21 09:35 J -10125350.25 -10125350.10 -10125349.94 0.0270 0.0208
 Saturn -32434-05-03 11:31 J -10124973.08 -10124973.02 -10124972.93 0.0271 0.0258
 Jupiter -32430-10-06 13:55 J -10123356.11 -10123355.92 -10123355.73 0.0499 0.0283
 Jupiter -32424-04-01 21:21 J -10121351.84 -10121351.61 -10121351.38 0.0530 0.0006
 Saturn -32420-11-03 13:11 J -10119675.10 -10119674.95 -10119674.79 0.0288 0.0224
 Uranus -32418-04-27 00:57 J -10119135.70 -10119135.46 -10119135.22 0.0144 0.0039
 Uranus -32417-04-30 23:02 J -10118765.73 -10118765.54 -10118765.32 0.0145 0.0085
 Saturn -32405-04-27 05:45 J -10114386.50 -10114386.26 -10114386.02 0.0271 0.0036
 Pluto -32391-06-03 00:14 J -10109236.70 -10109236.49 -10109236.24 0.0067 0.0031
 Saturn -32391-10-28 17:16 J -10109089.03 -10109088.78 -10109088.54 0.0289 0.0033
 Pluto -32390-06-04 15:35 J -10108869.96 -10108869.85 -10108869.70 0.0068 0.0058
 Neptune -32389-03-26 01:26 J -10108574.61 -10108574.44 -10108574.24 0.0089 0.0061
 Neptune -32388-03-28 12:43 J -10108207.22 -10108206.97 -10108206.72 0.0089 0.0018
 Neptune -32387-03-30 23:31 J -10107839.76 -10107839.52 -10107839.26 0.0089 0.0024
 Neptune -32386-04-02 10:04 J -10107472.22 -10107472.08 -10107471.88 0.0089 0.0067
 Mars -32381-03-08 15:50 J -10105669.99 -10105669.84 -10105669.70 0.1701 0.1057
 Uranus -32379-10-28 01:11 J -10104706.66 -10104706.45 -10104706.23 0.0134 0.0073
 Uranus -32378-11-01 11:16 J -10104337.28 -10104337.03 -10104336.77 0.0134 0.0028
 Uranus -32377-11-04 20:09 J -10103967.73 -10103967.66 -10103967.57 0.0134 0.0126
 Saturn -32376-04-22 11:16 J -10103799.22 -10103799.03 -10103798.83 0.0270 0.0162
 Mars -32375-09-10 23:16 J -10103292.72 -10103292.53 -10103292.35 0.1815 0.0675
 Saturn -32361-11-04 17:59 J -10098123.80 -10098123.75 -10098123.68 0.0288 0.0279
 Jupiter -32359-10-01 08:38 J -10097428.33 -10097428.14 -10097427.94 0.0497 0.0273
 Jupiter -32347-10-05 22:33 J -10093040.77 -10093040.56 -10093040.35 0.0499 0.0223
 Saturn -32346-04-29 06:14 J -10092835.47 -10092835.24 -10092835.00 0.0271 0.0080

Jupiter -32341-04-01 03:35 J -10091036.58 -10091036.35 -10091036.13 0.0530 0.0075
 Uranus -32334-04-27 13:55 J -10088454.16 -10088453.92 -10088453.67 0.0144 0.0030
 Uranus -32333-05-01 11:59 J -10088084.18 -10088084.00 -10088083.79 0.0145 0.0094
 Saturn -32332-10-29 19:11 J -10087537.94 -10087537.70 -10087537.45 0.0289 0.0018
 Jupiter -32329-04-05 20:52 J -10086648.71 -10086648.63 -10086648.54 0.0528 0.0487
 Saturn -32317-04-23 12:14 J -10082248.21 -10082247.99 -10082247.77 0.0270 0.0118
 Neptune -32307-09-27 06:14 J -10078439.41 -10078439.24 -10078439.02 0.0088 0.0059
 Neptune -32306-09-29 18:43 J -10078071.97 -10078071.72 -10078071.45 0.0088 0.0017
 Neptune -32305-10-01 06:57 J -10077704.45 -10077704.21 -10077703.95 0.0088 0.0025
 Pluto -32305-12-06 13:26 J -10077638.19 -10077637.94 -10077637.67 0.0077 0.0009
 Neptune -32304-10-03 18:57 J -10077336.86 -10077336.71 -10077336.52 0.0088 0.0066
 Saturn -32303-10-23 16:47 J -10076951.92 -10076951.80 -10076951.68 0.0289 0.0252
 Mars -32302-03-11 23:16 J -10076812.70 -10076812.53 -10076812.35 0.1704 0.0515
 Uranus -32295-10-28 13:55 J -10074025.13 -10074024.92 -10074024.68 0.0134 0.0064
 Uranus -32294-11-02 00:14 J -10073655.74 -10073655.49 -10073655.24 0.0134 0.0036
 Saturn -32287-04-30 06:14 J -10071284.45 -10071284.24 -10071284.02 0.0271 0.0123
 Jupiter -32276-09-30 19:11 J -10067112.88 -10067112.70 -10067112.52 0.0496 0.0325
 Saturn -32273-10-30 19:40 J -10065986.92 -10065986.68 -10065986.44 0.0289 0.0064
 Jupiter -32264-10-05 09:07 J -10062725.34 -10062725.12 -10062724.89 0.0498 0.0171
 Jupiter -32258-04-01 03:50 J -10060721.55 -10060721.34 -10060721.12 0.0531 0.0187
 Saturn -32258-04-25 12:28 J -10060697.22 -10060696.98 -10060696.75 0.0270 0.0074
 Uranus -32250-04-28 01:11 J -10057772.70 -10057772.45 -10057772.20 0.0144 0.0023
 Uranus -32249-05-01 23:31 J -10057402.69 -10057402.52 -10057402.33 0.0145 0.0100
 Jupiter -32246-04-06 05:02 J -10056333.43 -10056333.29 -10056333.15 0.0529 0.0418
 Saturn -32244-10-24 17:45 J -10055400.92 -10055400.76 -10055400.58 0.0289 0.0205
 Saturn -32228-05-01 06:28 J -10049733.42 -10049733.23 -10049733.04 0.0270 0.0167
 Neptune -32225-03-25 08:38 J -10048674.19 -10048674.14 -10048674.03 0.0089 0.0084
 Neptune -32224-03-27 19:40 J -10048306.88 -10048306.68 -10048306.43 0.0089 0.0042
 Neptune -32223-03-30 07:11 J -10047939.45 -10047939.20 -10047938.94 0.0089 0.0001
 Neptune -32222-04-01 17:45 J -10047571.96 -10047571.76 -10047571.52 0.0089 0.0043

Neptune -32221-04-03 04:33 J -10047204.36 -10047204.31 -10047204.22 0.0089 0.0086
 Saturn -32214-11-01 18:57 J -10044435.93 -10044435.71 -10044435.47 0.0289 0.0112
 Uranus -32211-10-29 03:50 J -10043343.57 -10043343.34 -10043343.11 0.0134 0.0056
 Uranus -32210-11-02 13:26 J -10042974.17 -10042973.94 -10042973.68 0.0134 0.0045
 Saturn -32199-04-26 12:43 J -10039146.22 -10039145.97 -10039145.73 0.0270 0.0030
 Jupiter -32193-09-30 03:21 J -10036797.50 -10036797.36 -10036797.21 0.0496 0.0385
 Saturn -32185-10-25 18:57 J -10033849.91 -10033849.71 -10033849.49 0.0289 0.0157
 Jupiter -32181-10-04 16:33 J -10032410.04 -10032409.81 -10032409.58 0.0498 0.0105
 Jupiter -32175-03-31 14:09 J -10030406.12 -10030405.91 -10030405.71 0.0532 0.0246
 Saturn -32170-04-21 06:57 J -10028559.29 -10028559.21 -10028559.12 0.0270 0.0250
 Saturn -32169-05-02 07:11 J -10028182.35 -10028182.20 -10028182.05 0.0270 0.0213
 Uranus -32167-04-23 15:21 J -10027460.93 -10027460.86 -10027460.78 0.0144 0.0137
 Uranus -32166-04-28 12:57 J -10027091.20 -10027090.96 -10027090.70 0.0144 0.0017
 Uranus -32165-05-02 11:31 J -10026721.17 -10026721.02 -10026720.84 0.0145 0.0108
 Jupiter -32163-04-05 13:55 J -10026018.09 -10026017.92 -10026017.75 0.0529 0.0350
 Saturn -32155-11-02 18:43 J -10022884.92 -10022884.72 -10022884.51 0.0289 0.0157
 Pluto -32143-06-04 04:33 J -10018653.41 -10018653.31 -10018653.18 0.0067 0.0059
 Neptune -32143-09-26 11:31 J -10018539.11 -10018539.02 -10018538.93 0.0088 0.0083
 Pluto -32142-06-05 19:55 J -10018286.89 -10018286.67 -10018286.42 0.0067 0.0028
 Neptune -32142-09-28 23:31 J -10018171.73 -10018171.52 -10018171.27 0.0088 0.0041
 Neptune -32141-09-30 12:14 J -10017804.25 -10017803.99 -10017803.73 0.0088 0.0001
 Saturn -32140-04-27 13:55 J -10017595.16 -10017594.92 -10017594.67 0.0270 0.0016
 Neptune -32140-10-03 00:14 J -10017436.72 -10017436.49 -10017436.26 0.0088 0.0043
 Neptune -32139-10-05 11:59 J -10017069.05 -10017069.00 -10017068.91 0.0088 0.0084
 Uranus -32127-10-29 17:02 J -10012662.02 -10012661.79 -10012661.54 0.0134 0.0048
 Saturn -32126-10-27 20:38 J -10012298.86 -10012298.64 -10012298.41 0.0289 0.0108
 Uranus -32126-11-03 02:52 J -10012292.60 -10012292.38 -10012292.13 0.0134 0.0053
 Saturn -32111-04-22 09:07 J -10007008.27 -10007008.12 -10007007.95 0.0270 0.0203
 Saturn -32110-05-04 09:07 J -10006631.17 -10006631.12 -10006631.05 0.0270 0.0261
 Jupiter -32110-09-30 12:14 J -10006482.09 -10006481.99 -10006481.88 0.0496 0.0444

Jupiter -32098-10-05 03:21 J -10002094.59 -10002094.36 -10002094.12 0.0497 0.0053
 Mars -32097-03-09 14:52 J -10001938.04 -10001937.88 -10001937.72 0.1695 0.0893
 Saturn -32096-11-03 19:55 J -10001333.83 -10001333.67 -10001333.48 0.0289 0.0208
 Jupiter -32092-03-30 14:38 J -10000091.05 -10000090.89 -10000090.71 0.0532 0.0356
 Mars -32091-09-10 16:04 J -9999562.03 -9999561.83 -9999561.63 0.1823 0.0113
 Uranus -32083-04-24 00:28 J -9996779.55 -9996779.48 -9996779.36 0.0144 0.0133
 Uranus -32082-04-28 22:33 J -9996409.81 -9996409.56 -9996409.31 0.0144 0.0011
 Saturn -32081-04-28 16:19 J -9996044.05 -9996043.82 -9996043.58 0.0270 0.0064
 Uranus -32081-05-02 21:07 J -9996039.77 -9996039.62 -9996039.45 0.0145 0.0112
 Jupiter -32080-04-04 12:43 J -9995703.18 -9995702.97 -9995702.76 0.0530 0.0231
 Saturn -32067-10-28 23:59 J -9990747.74 -9990747.50 -9990747.26 0.0289 0.0055
 Neptune -32060-03-27 02:09 J -9988406.56 -9988406.41 -9988406.22 0.0089 0.0066
 Neptune -32059-03-29 13:26 J -9988039.18 -9988038.94 -9988038.69 0.0089 0.0024
 Neptune -32058-03-31 23:59 J -9987671.74 -9987671.50 -9987671.24 0.0089 0.0019
 Neptune -32057-04-02 11:02 J -9987304.21 -9987304.04 -9987303.84 0.0089 0.0061
 Pluto -32057-12-07 16:33 J -9987054.99 -9987054.81 -9987054.58 0.0077 0.0047
 Saturn -32052-04-23 13:11 J -9985457.14 -9985456.95 -9985456.74 0.0270 0.0153
 Uranus -32043-10-30 07:11 J -9981980.44 -9981980.20 -9981979.95 0.0134 0.0039
 Uranus -32042-11-03 16:47 J -9981611.01 -9981610.80 -9981610.56 0.0134 0.0061
 Saturn -32037-11-04 23:16 J -9979782.63 -9979782.53 -9979782.42 0.0289 0.0259
 Saturn -32022-04-30 20:09 J -9974492.87 -9974492.66 -9974492.43 0.0270 0.0114
 Mars -32018-03-12 21:35 J -9973080.78 -9973080.60 -9973080.43 0.1699 0.0646
 Jupiter -32015-10-04 08:52 J -9971779.36 -9971779.13 -9971778.89 0.0497 0.0020
 Jupiter -32009-03-29 17:59 J -9969775.87 -9969775.75 -9969775.63 0.0533 0.0450
 Saturn -32008-10-30 06:14 J -9969196.49 -9969196.24 -9969195.99 0.0289 0.0002
 Jupiter -32003-10-08 21:21 J -9967391.67 -9967391.61 -9967391.53 0.0498 0.0474

32ND MILLENNIUM BCE

This is a list of transits of Earth in the 32nd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-31999-04-24 11:45 J		-9966098.11	-9966098.01	-9966097.87	0.0144	0.0126	
Uranus	-31998-04-29 09:50 J		-9965728.34	-9965728.09	-9965727.83	0.0144	0.0005	
Jupiter	-31997-04-03 19:40 J		-9965387.90	-9965387.68	-9965387.46	0.0531	0.0157	
Uranus	-31997-05-03 08:23 J		-9965358.28	-9965358.15	-9965357.99	0.0145	0.0119	
Saturn	-31993-04-24 18:57 J		-9963905.93	-9963905.71	-9963905.48	0.0270	0.0100	
Saturn	-31979-10-23 23:31 J		-9958610.60	-9958610.52	-9958610.44	0.0289	0.0273	
Neptune	-31978-09-28 04:04 J		-9958271.51	-9958271.33	-9958271.16	0.0088	0.0066	
Neptune	-31977-09-29 15:50 J		-9957904.08	-9957903.84	-9957903.57	0.0088	0.0024	
Neptune	-31976-10-02 04:33 J		-9957536.56	-9957536.31	-9957536.05	0.0088	0.0018	
Neptune	-31975-10-04 16:19 J		-9957168.99	-9957168.82	-9957168.61	0.0088	0.0060	
Saturn	-31963-05-02 01:40 J		-9952941.61	-9952941.43	-9952941.22	0.0270	0.0168	
Uranus	-31960-10-26 09:35 J		-9951668.14	-9951668.10	-9951668.02	0.0135	0.0131	
Uranus	-31959-10-30 20:23 J		-9951298.89	-9951298.65	-9951298.39	0.0135	0.0031	
Uranus	-31958-11-04 06:28 J		-9950929.44	-9950929.23	-9950929.00	0.0134	0.0069	
Saturn	-31949-10-31 14:52 J		-9947645.12	-9947644.88	-9947644.64	0.0289	0.0063	
Saturn	-31934-04-27 02:09 J		-9942354.65	-9942354.41	-9942354.16	0.0270	0.0045	
Jupiter	-31932-10-03 13:26 J		-9941464.17	-9941463.94	-9941463.71	0.0496	0.0096	
Jupiter	-31920-10-08 04:19 J		-9937076.45	-9937076.32	-9937076.18	0.0498	0.0403	
Saturn	-31920-10-25 09:21 J		-9937059.27	-9937059.11	-9937058.93	0.0289	0.0210	
Uranus	-31915-04-24 22:33 J		-9935416.68	-9935416.56	-9935416.41	0.0144	0.0120	
Jupiter	-31914-04-03 18:57 J		-9935072.94	-9935072.71	-9935072.48	0.0531	0.0044	
Uranus	-31914-04-29 20:38 J		-9935046.89	-9935046.64	-9935046.39	0.0144	0.0001	

Uranus	-31913-05-03 19:11 J	-9934676.82	-9934676.70	-9934676.56	0.0145	0.0124
Saturn	-31905-04-21 07:55 J	-9931767.25	-9931767.17	-9931767.07	0.0271	0.0249
Saturn	-31904-05-03 08:52 J	-9931390.26	-9931390.13	-9931389.99	0.0270	0.0221
Neptune	-31895-03-28 19:11 J	-9928138.90	-9928138.70	-9928138.47	0.0089	0.0048
Neptune	-31894-03-31 06:28 J	-9927771.49	-9927771.23	-9927770.98	0.0089	0.0006
Pluto	-31894-06-07 05:02 J	-9927703.54	-9927703.29	-9927703.03	0.0067	0.0011
Neptune	-31893-04-01 17:16 J	-9927404.01	-9927403.78	-9927403.55	0.0089	0.0037
Neptune	-31892-04-04 03:35 J	-9927036.44	-9927036.35	-9927036.21	0.0089	0.0080
Saturn	-31890-11-03 02:23 J	-9926093.61	-9926093.40	-9926093.17	0.0289	0.0130
Uranus	-31876-10-26 23:16 J	-9920986.61	-9920986.53	-9920986.40	0.0135	0.0122
Saturn	-31875-04-28 10:47 J	-9920803.29	-9920803.05	-9920802.80	0.0270	0.0013
Uranus	-31875-10-31 10:33 J	-9920617.31	-9920617.06	-9920616.80	0.0135	0.0021
Uranus	-31874-11-04 20:23 J	-9920247.84	-9920247.65	-9920247.43	0.0134	0.0079
Saturn	-31861-10-26 22:04 J	-9915507.79	-9915507.58	-9915507.36	0.0289	0.0143
Jupiter	-31849-10-02 19:11 J	-9911148.92	-9911148.70	-9911148.48	0.0496	0.0167
Saturn	-31846-04-23 15:21 J	-9910216.02	-9910215.86	-9910215.68	0.0271	0.0195
Jupiter	-31837-10-07 05:45 J	-9906761.44	-9906761.26	-9906761.07	0.0498	0.0315
Jupiter	-31831-04-02 17:02 J	-9904758.02	-9904757.79	-9904757.56	0.0532	0.0075
Uranus	-31831-04-25 13:26 J	-9904735.09	-9904734.94	-9904734.77	0.0144	0.0109
Saturn	-31831-11-04 16:04 J	-9904542.00	-9904541.83	-9904541.64	0.0289	0.0201
Uranus	-31830-04-30 11:16 J	-9904365.28	-9904365.03	-9904364.77	0.0144	0.0012
Uranus	-31829-05-04 10:04 J	-9903995.17	-9903995.08	-9903994.99	0.0145	0.0134
Jupiter	-31819-04-07 17:16 J	-9900369.81	-9900369.78	-9900369.74	0.0530	0.0522
Saturn	-31816-04-29 20:09 J	-9899251.90	-9899251.66	-9899251.42	0.0270	0.0070
Mars	-31813-03-10 14:52 J	-9898206.05	-9898205.88	-9898205.71	0.1690	0.0707
Neptune	-31813-09-28 18:57 J	-9898003.91	-9898003.71	-9898003.47	0.0088	0.0049
Neptune	-31812-10-01 07:40 J	-9897636.44	-9897636.18	-9897635.92	0.0088	0.0007
Neptune	-31811-10-03 19:55 J	-9897268.90	-9897268.67	-9897268.42	0.0088	0.0035
Neptune	-31810-10-06 07:40 J	-9896901.28	-9896901.18	-9896901.03	0.0088	0.0078
Pluto	-31809-12-08 23:45 J	-9896471.55	-9896471.51	-9896471.39	0.0077	0.0073

Pluto	-31808-12-11 00:57 J	-9896104.60	-9896104.46	-9896104.27	0.0076	0.0059
Mars	-31807-09-10 06:43 J	-9895831.39	-9895831.22	-9895831.05	0.1831	0.0994
Saturn	-31802-10-29 13:11 J	-9893956.19	-9893955.95	-9893955.71	0.0289	0.0071
Uranus	-31792-10-27 13:55 J	-9890305.06	-9890304.92	-9890304.78	0.0135	0.0112
Uranus	-31791-11-01 00:57 J	-9889935.72	-9889935.46	-9889935.21	0.0135	0.0012
Uranus	-31790-11-05 10:47 J	-9889566.23	-9889566.05	-9889565.85	0.0134	0.0087
Saturn	-31787-04-24 23:02 J	-9888664.74	-9888664.54	-9888664.32	0.0271	0.0140
Saturn	-31772-11-06 07:11 J	-9882990.27	-9882990.20	-9882990.11	0.0289	0.0272
Jupiter	-31766-10-02 19:55 J	-9880833.87	-9880833.67	-9880833.47	0.0495	0.0260
Saturn	-31757-05-01 05:02 J	-9877700.49	-9877700.29	-9877700.07	0.0270	0.0129
Jupiter	-31754-10-07 07:11 J	-9876446.41	-9876446.20	-9876445.99	0.0497	0.0222
Jupiter	-31748-04-01 20:09 J	-9874442.88	-9874442.66	-9874442.44	0.0532	0.0171
Uranus	-31747-04-26 03:07 J	-9874053.54	-9874053.37	-9874053.18	0.0144	0.0100
Uranus	-31746-05-01 00:57 J	-9873683.71	-9873683.46	-9873683.21	0.0144	0.0021
Uranus	-31745-05-04 23:02 J	-9873313.56	-9873313.54	-9873313.48	0.0145	0.0143
Saturn	-31743-10-31 04:47 J	-9872404.55	-9872404.30	-9872404.06	0.0289	0.0003
Jupiter	-31736-04-06 17:31 J	-9870054.92	-9870054.77	-9870054.63	0.0530	0.0414
Mars	-31734-03-13 20:23 J	-9869348.82	-9869348.65	-9869348.49	0.1693	0.0789
Neptune	-31731-03-28 00:14 J	-9868238.60	-9868238.49	-9868238.32	0.0089	0.0074
Neptune	-31730-03-30 11:45 J	-9867871.25	-9867871.01	-9867870.77	0.0089	0.0031
Neptune	-31729-03-31 22:19 J	-9867503.81	-9867503.57	-9867503.30	0.0089	0.0013
Neptune	-31728-04-03 08:52 J	-9867136.31	-9867136.13	-9867135.91	0.0089	0.0055
Saturn	-31728-04-26 06:57 J	-9867113.43	-9867113.21	-9867112.97	0.0271	0.0085
Mars	-31728-09-13 12:43 J	-9866972.97	-9866972.97	-9866972.96	0.1826	0.1825
Saturn	-31714-10-25 16:33 J	-9861817.92	-9861817.81	-9861817.68	0.0289	0.0250
Uranus	-31708-10-28 04:19 J	-9859623.47	-9859623.32	-9859623.14	0.0135	0.0103
Uranus	-31707-11-01 15:50 J	-9859254.10	-9859253.84	-9859253.59	0.0135	0.0003
Uranus	-31706-11-06 01:40 J	-9858884.59	-9858884.43	-9858884.24	0.0134	0.0097
Saturn	-31698-05-03 13:26 J	-9856149.10	-9856148.94	-9856148.75	0.0270	0.0185
Saturn	-31684-11-01 20:09 J	-9850852.89	-9850852.66	-9850852.42	0.0289	0.0075

Jupiter	-31683-10-01 22:47 J	-9850518.71	-9850518.55	-9850518.38	0.0495	0.0345
Jupiter	-31671-10-06 11:16 J	-9846131.26	-9846131.03	-9846130.80	0.0497	0.0143
Saturn	-31669-04-27 14:09 J	-9845562.15	-9845561.91	-9845561.67	0.0271	0.0030
Jupiter	-31665-03-31 18:28 J	-9844127.93	-9844127.73	-9844127.54	0.0532	0.0289
Uranus	-31663-04-26 18:14 J	-9843371.93	-9843371.74	-9843371.54	0.0144	0.0089
Uranus	-31662-05-01 15:50 J	-9843002.08	-9843001.84	-9843001.59	0.0144	0.0031
Saturn	-31655-10-27 06:28 J	-9840266.42	-9840266.23	-9840266.04	0.0289	0.0179
Jupiter	-31653-04-05 13:55 J	-9839740.11	-9839739.92	-9839739.73	0.0531	0.0287
Neptune	-31649-09-27 22:04 J	-9838103.70	-9838103.58	-9838103.42	0.0088	0.0074
Neptune	-31648-09-30 10:47 J	-9837736.28	-9837736.05	-9837735.80	0.0088	0.0032
Neptune	-31647-10-02 23:16 J	-9837368.79	-9837368.53	-9837368.27	0.0088	0.0010
Pluto	-31646-06-08 15:07 J	-9837120.12	-9837119.87	-9837119.60	0.0067	0.0004
Neptune	-31646-10-05 11:02 J	-9837001.23	-9837001.04	-9837000.81	0.0088	0.0052
Saturn	-31640-04-22 20:52 J	-9834974.75	-9834974.63	-9834974.50	0.0270	0.0230
Saturn	-31639-05-04 21:21 J	-9834597.72	-9834597.61	-9834597.51	0.0270	0.0240
Saturn	-31625-11-03 10:04 J	-9829301.29	-9829301.08	-9829300.86	0.0289	0.0145
Uranus	-31624-10-28 19:11 J	-9828941.86	-9828941.70	-9828941.49	0.0135	0.0093
Uranus	-31623-11-02 06:43 J	-9828572.47	-9828572.22	-9828571.96	0.0135	0.0009
Uranus	-31622-11-06 17:02 J	-9828202.94	-9828202.79	-9828202.63	0.0134	0.0106
Saturn	-31610-04-29 19:40 J	-9824010.92	-9824010.68	-9824010.43	0.0271	0.0023
Jupiter	-31600-10-01 02:38 J	-9820203.52	-9820203.39	-9820203.27	0.0495	0.0423
Saturn	-31596-10-28 18:14 J	-9818714.96	-9818714.74	-9818714.50	0.0289	0.0113
Jupiter	-31588-10-05 14:52 J	-9815816.11	-9815815.88	-9815815.64	0.0496	0.0062
Jupiter	-31582-03-31 16:33 J	-9813812.95	-9813812.81	-9813812.66	0.0533	0.0412
Saturn	-31581-04-24 02:38 J	-9813423.56	-9813423.39	-9813423.20	0.0270	0.0178
Uranus	-31579-04-27 06:14 J	-9812690.44	-9812690.24	-9812690.02	0.0144	0.0082
Uranus	-31578-05-02 03:50 J	-9812320.58	-9812320.34	-9812320.09	0.0144	0.0038
Jupiter	-31570-04-05 18:14 J	-9809424.95	-9809424.74	-9809424.52	0.0532	0.0198
Neptune	-31566-03-29 16:04 J	-9807971.00	-9807970.83	-9807970.61	0.0089	0.0057
Saturn	-31566-11-05 21:21 J	-9807749.77	-9807749.61	-9807749.44	0.0289	0.0211

Neptune	-31565-03-31 03:21 J	-9807603.61	-9807603.36	-9807603.11	0.0089	0.0014
Neptune	-31564-04-02 13:40 J	-9807236.15	-9807235.93	-9807235.67	0.0089	0.0030
Neptune	-31563-04-05 00:28 J	-9806868.61	-9806868.48	-9806868.31	0.0089	0.0072
Pluto	-31560-12-12 12:14 J	-9805521.18	-9805520.99	-9805520.76	0.0076	0.0045
Saturn	-31551-04-30 23:59 J	-9802459.73	-9802459.50	-9802459.26	0.0270	0.0073
Uranus	-31540-10-29 10:04 J	-9798260.26	-9798260.08	-9798259.86	0.0135	0.0083
Uranus	-31539-11-02 21:35 J	-9797890.86	-9797890.60	-9797890.35	0.0135	0.0017
Uranus	-31538-11-07 07:55 J	-9797521.30	-9797521.17	-9797521.04	0.0134	0.0116
Saturn	-31537-10-30 03:07 J	-9797163.62	-9797163.37	-9797163.13	0.0290	0.0050
Mars	-31529-03-11 14:38 J	-9794474.07	-9794473.89	-9794473.72	0.1685	0.0527
Saturn	-31522-04-26 07:11 J	-9791872.41	-9791872.20	-9791871.98	0.0270	0.0127
Saturn	-31507-11-07 06:14 J	-9786198.30	-9786198.24	-9786198.15	0.0289	0.0275
Jupiter	-31505-10-04 20:09 J	-9785500.90	-9785500.66	-9785500.43	0.0496	0.0015
Jupiter	-31499-03-30 23:02 J	-9783497.63	-9783497.54	-9783497.45	0.0534	0.0489
Uranus	-31495-04-27 18:57 J	-9782008.91	-9782008.71	-9782008.48	0.0144	0.0074
Uranus	-31494-05-02 16:19 J	-9781639.05	-9781638.82	-9781638.57	0.0144	0.0046
Jupiter	-31493-10-09 08:52 J	-9781113.19	-9781113.13	-9781113.06	0.0498	0.0478
Saturn	-31492-05-02 02:38 J	-9780908.60	-9780908.39	-9780908.17	0.0270	0.0122
Jupiter	-31487-04-04 22:19 J	-9779109.79	-9779109.57	-9779109.34	0.0532	0.0108
Neptune	-31484-09-29 13:55 J	-9777836.12	-9777835.92	-9777835.72	0.0088	0.0057
Neptune	-31483-10-02 02:09 J	-9777468.67	-9777468.41	-9777468.15	0.0088	0.0015
Neptune	-31482-10-04 14:09 J	-9777101.14	-9777100.91	-9777100.65	0.0088	0.0027
Neptune	-31481-10-06 02:09 J	-9776733.54	-9776733.41	-9776733.21	0.0088	0.0069
Saturn	-31478-11-01 08:23 J	-9775612.40	-9775612.15	-9775611.90	0.0290	0.0008
Saturn	-31463-04-27 10:04 J	-9770321.31	-9770321.08	-9770320.84	0.0269	0.0078
Uranus	-31456-10-30 00:43 J	-9767578.67	-9767578.47	-9767578.24	0.0135	0.0074
Uranus	-31455-11-03 12:14 J	-9767209.24	-9767208.99	-9767208.74	0.0135	0.0027
Uranus	-31454-11-07 21:50 J	-9766839.65	-9766839.59	-9766839.47	0.0134	0.0126
Mars	-31450-03-14 19:55 J	-9765616.82	-9765616.67	-9765616.52	0.1688	0.0948
Saturn	-31449-10-25 04:33 J	-9765026.38	-9765026.31	-9765026.21	0.0289	0.0271

Mars	-31444-09-13 01:55 J	-9763242.60	-9763242.42	-9763242.25	0.1834	0.0908
Saturn	-31433-05-03 04:04 J	-9759357.52	-9759357.33	-9759357.14	0.0270	0.0168
Jupiter	-31422-10-05 04:47 J	-9755185.53	-9755185.30	-9755185.06	0.0495	0.0073
Saturn	-31419-11-02 11:16 J	-9754061.27	-9754061.03	-9754060.78	0.0290	0.0061
Uranus	-31411-04-28 05:59 J	-9751327.46	-9751327.25	-9751327.01	0.0144	0.0068
Uranus	-31410-05-03 03:07 J	-9750957.59	-9750957.37	-9750957.12	0.0144	0.0052
Jupiter	-31410-10-09 18:14 J	-9750797.86	-9750797.74	-9750797.61	0.0497	0.0420
Jupiter	-31404-04-03 21:50 J	-9748794.82	-9748794.59	-9748794.36	0.0533	0.0012
Saturn	-31404-04-28 11:16 J	-9748770.27	-9748770.03	-9748769.79	0.0269	0.0031
Neptune	-31402-03-28 20:38 J	-9748070.71	-9748070.64	-9748070.51	0.0089	0.0083
Neptune	-31401-03-30 07:55 J	-9747703.39	-9747703.17	-9747702.93	0.0089	0.0039
Neptune	-31400-04-01 18:57 J	-9747335.96	-9747335.71	-9747335.45	0.0089	0.0003
Neptune	-31399-04-04 05:16 J	-9746968.47	-9746968.28	-9746968.04	0.0089	0.0047
Neptune	-31398-04-06 16:19 J	-9746600.83	-9746600.82	-9746600.77	0.0089	0.0089
Pluto	-31398-06-10 06:14 J	-9746536.50	-9746536.24	-9746535.98	0.0067	0.0004
Saturn	-31390-10-27 07:55 J	-9743475.33	-9743475.17	-9743475.00	0.0290	0.0218
Saturn	-31375-04-23 05:59 J	-9738183.31	-9738183.25	-9738183.16	0.0270	0.0256
Saturn	-31374-05-05 04:33 J	-9737806.45	-9737806.31	-9737806.15	0.0270	0.0214
Uranus	-31372-10-30 14:23 J	-9736897.11	-9736896.90	-9736896.66	0.0135	0.0065
Uranus	-31371-11-04 01:40 J	-9736527.67	-9736527.43	-9736527.18	0.0135	0.0035
Uranus	-31370-11-08 11:45 J	-9736158.02	-9736158.01	-9736157.96	0.0134	0.0133
Saturn	-31360-11-03 11:31 J	-9732510.24	-9732510.02	-9732509.79	0.0290	0.0110
Saturn	-31345-04-29 11:31 J	-9727219.26	-9727219.02	-9727218.77	0.0269	0.0014
Jupiter	-31339-10-04 13:26 J	-9724870.17	-9724869.94	-9724869.71	0.0495	0.0131
Saturn	-31331-10-28 09:07 J	-9721924.31	-9721924.12	-9721923.91	0.0290	0.0168
Uranus	-31327-04-28 19:55 J	-9720645.89	-9720645.67	-9720645.43	0.0144	0.0059
Jupiter	-31327-10-09 01:55 J	-9720482.58	-9720482.42	-9720482.25	0.0496	0.0355
Uranus	-31326-05-03 16:33 J	-9720276.02	-9720275.81	-9720275.57	0.0144	0.0061
Jupiter	-31321-04-03 07:55 J	-9718479.39	-9718479.17	-9718478.94	0.0533	0.0069
Neptune	-31320-09-28 17:31 J	-9717935.85	-9717935.77	-9717935.67	0.0088	0.0082

Neptune	-31319-10-01 05:45 J	-9717568.48	-9717568.26	-9717568.02	0.0088	0.0040
Neptune	-31318-10-03 18:14 J	-9717201.00	-9717200.74	-9717200.48	0.0088	0.0002
Neptune	-31317-10-05 05:59 J	-9716833.46	-9716833.25	-9716833.00	0.0088	0.0044
Saturn	-31316-04-24 06:14 J	-9716632.38	-9716632.24	-9716632.07	0.0270	0.0211
Neptune	-31316-10-07 17:59 J	-9716465.78	-9716465.75	-9716465.66	0.0088	0.0086
Saturn	-31315-05-06 04:33 J	-9716255.37	-9716255.31	-9716255.24	0.0269	0.0259
Pluto	-31312-12-14 03:21 J	-9714937.54	-9714937.36	-9714937.12	0.0076	0.0045
Jupiter	-31309-04-08 08:23 J	-9714091.16	-9714091.15	-9714091.14	0.0531	0.0529
Saturn	-31301-11-04 11:16 J	-9710959.24	-9710959.03	-9710958.83	0.0290	0.0157
Uranus	-31288-10-31 04:19 J	-9706215.55	-9706215.32	-9706215.08	0.0135	0.0056
Uranus	-31287-11-04 15:21 J	-9705846.09	-9705845.86	-9705845.60	0.0135	0.0044
Saturn	-31286-05-01 11:31 J	-9705668.26	-9705668.02	-9705667.79	0.0269	0.0059
Saturn	-31272-10-29 09:35 J	-9700373.32	-9700373.10	-9700372.87	0.0290	0.0120
Saturn	-31257-04-25 06:28 J	-9695081.41	-9695081.23	-9695081.02	0.0269	0.0166
Jupiter	-31256-10-03 22:47 J	-9694554.76	-9694554.55	-9694554.33	0.0495	0.0188
Mars	-31245-03-12 14:23 J	-9690742.08	-9690741.90	-9690741.72	0.1680	0.0344
Jupiter	-31244-10-08 13:26 J	-9690167.12	-9690166.94	-9690166.75	0.0496	0.0307
Uranus	-31243-04-29 10:04 J	-9689964.31	-9689964.08	-9689963.84	0.0143	0.0049
Uranus	-31242-05-04 06:43 J	-9689594.43	-9689594.22	-9689593.99	0.0144	0.0070
Saturn	-31242-11-06 10:19 J	-9689408.24	-9689408.07	-9689407.89	0.0290	0.0205
Jupiter	-31238-04-03 09:07 J	-9688164.34	-9688164.12	-9688163.90	0.0533	0.0177
Neptune	-31237-03-29 12:14 J	-9687803.16	-9687802.99	-9687802.81	0.0089	0.0066
Neptune	-31236-03-31 23:16 J	-9687435.77	-9687435.53	-9687435.28	0.0089	0.0023
Neptune	-31235-04-03 10:04 J	-9687068.32	-9687068.08	-9687067.82	0.0089	0.0020
Neptune	-31234-04-05 20:23 J	-9686700.80	-9686700.65	-9686700.44	0.0089	0.0064
Saturn	-31227-05-02 11:31 J	-9684117.23	-9684117.02	-9684116.78	0.0269	0.0105
Jupiter	-31226-04-08 07:55 J	-9683776.31	-9683776.17	-9683776.02	0.0531	0.0415
Saturn	-31213-10-30 10:47 J	-9678822.29	-9678822.05	-9678821.81	0.0290	0.0070
Uranus	-31204-10-31 17:16 J	-9675534.01	-9675533.78	-9675533.53	0.0135	0.0049
Uranus	-31203-11-05 04:47 J	-9675164.54	-9675164.30	-9675164.06	0.0135	0.0051

Saturn	-31198-04-27 07:40 J	-9673530.39	-9673530.18	-9673529.95	0.0269	0.0119
Saturn	-31183-11-07 10:33 J	-9667857.18	-9667857.06	-9667856.94	0.0290	0.0253
Jupiter	-31173-10-03 11:02 J	-9664239.25	-9664239.04	-9664238.83	0.0494	0.0232
Saturn	-31168-05-03 12:43 J	-9662566.16	-9662565.97	-9662565.76	0.0269	0.0151
Mars	-31166-03-15 19:26 J	-9661884.83	-9661884.69	-9661884.55	0.1683	0.1112
Jupiter	-31161-10-07 21:21 J	-9659851.81	-9659851.61	-9659851.40	0.0496	0.0246
Mars	-31160-09-12 12:14 J	-9659512.19	-9659511.99	-9659511.79	0.1841	0.0122
Uranus	-31159-04-30 01:26 J	-9659282.68	-9659282.44	-9659282.20	0.0143	0.0038
Uranus	-31158-05-04 21:50 J	-9658912.79	-9658912.59	-9658912.37	0.0144	0.0081
Jupiter	-31155-04-02 14:09 J	-9657849.10	-9657848.91	-9657848.70	0.0534	0.0262
Neptune	-31155-09-30 09:50 J	-9657668.24	-9657668.09	-9657667.89	0.0088	0.0065
Neptune	-31154-10-02 22:19 J	-9657300.81	-9657300.57	-9657300.30	0.0088	0.0023
Saturn	-31154-11-01 13:11 J	-9657271.20	-9657270.95	-9657270.71	0.0290	0.0018
Neptune	-31153-10-04 10:47 J	-9656933.30	-9656933.05	-9656932.79	0.0088	0.0019
Neptune	-31152-10-06 22:47 J	-9656565.72	-9656565.55	-9656565.35	0.0088	0.0061
Pluto	-31150-06-11 23:59 J	-9655952.76	-9655952.50	-9655952.24	0.0067	0.0003
Jupiter	-31143-04-07 16:47 J	-9653460.96	-9653460.80	-9653460.62	0.0532	0.0350
Saturn	-31139-04-28 10:33 J	-9651979.29	-9651979.06	-9651978.82	0.0269	0.0069
Uranus	-31120-11-01 07:26 J	-9644852.43	-9644852.19	-9644851.94	0.0135	0.0039
Uranus	-31119-11-05 18:43 J	-9644482.94	-9644482.72	-9644482.48	0.0135	0.0060
Saturn	-31109-05-04 14:52 J	-9641015.03	-9641014.88	-9641014.70	0.0269	0.0200
Saturn	-31095-11-02 17:59 J	-9635719.99	-9635719.75	-9635719.50	0.0290	0.0039
Jupiter	-31090-10-03 16:33 J	-9633923.99	-9633923.81	-9633923.62	0.0494	0.0301
Saturn	-31080-04-29 14:52 J	-9630428.12	-9630427.88	-9630427.64	0.0269	0.0018
Jupiter	-31078-10-08 04:04 J	-9629536.55	-9629536.33	-9629536.11	0.0495	0.0177
Uranus	-31075-04-30 14:52 J	-9628601.13	-9628600.88	-9628600.63	0.0143	0.0029
Uranus	-31074-05-05 11:16 J	-9628231.21	-9628231.03	-9628230.82	0.0144	0.0090
Neptune	-31072-03-31 04:04 J	-9627535.53	-9627535.33	-9627535.10	0.0089	0.0049
Jupiter	-31072-04-01 21:50 J	-9627533.77	-9627533.59	-9627533.41	0.0534	0.0337
Neptune	-31071-04-02 15:21 J	-9627168.12	-9627167.86	-9627167.61	0.0089	0.0006

Neptune	-31070-04-05 01:55 J	-9626800.64	-9626800.42	-9626800.17	0.0089	0.0038
Neptune	-31069-04-06 12:28 J	-9626433.06	-9626432.98	-9626432.84	0.0089	0.0081
Saturn	-31066-10-27 09:07 J	-9625134.23	-9625134.12	-9625133.98	0.0290	0.0248
Pluto	-31065-12-13 23:16 J	-9624720.61	-9624720.53	-9624720.42	0.0077	0.0071
Pluto	-31064-12-15 23:59 J	-9624353.63	-9624353.50	-9624353.32	0.0076	0.0061
Jupiter	-31060-04-06 17:31 J	-9623145.98	-9623145.77	-9623145.57	0.0532	0.0241
Saturn	-31051-04-24 20:52 J	-9619840.75	-9619840.63	-9619840.49	0.0270	0.0224
Saturn	-31050-05-06 19:26 J	-9619463.77	-9619463.69	-9619463.59	0.0269	0.0251
Mars	-31040-03-11 10:19 J	-9615867.13	-9615867.07	-9615867.00	0.1673	0.1559
Uranus	-31037-10-28 07:26 J	-9614540.22	-9614540.19	-9614540.12	0.0136	0.0133
Uranus	-31036-11-01 19:55 J	-9614170.91	-9614170.67	-9614170.41	0.0135	0.0032
Saturn	-31036-11-04 01:40 J	-9614168.66	-9614168.43	-9614168.20	0.0290	0.0100
Uranus	-31035-11-06 07:11 J	-9613801.41	-9613801.20	-9613800.96	0.0135	0.0068
Saturn	-31021-04-30 20:52 J	-9608876.86	-9608876.63	-9608876.38	0.0269	0.0038
Jupiter	-31007-10-02 23:31 J	-9603608.67	-9603608.52	-9603608.36	0.0494	0.0368
Saturn	-31007-10-28 18:43 J	-9603582.91	-9603582.72	-9603582.53	0.0290	0.0184

31ST MILLENNIUM BCE

This is a list of transits of Earth in the 31st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-30995-10-07 11:45 J	-9599221.24	-9599221.01	-9599220.78	0.0495	0.0115		
Saturn	-30992-04-26 02:52 J	-9598289.57	-9598289.38	-9598289.19	0.0270	0.0171		
Uranus	-30992-04-26 06:57 J	-9598289.26	-9598289.21	-9598289.12	0.0143	0.0137	*	

Uranus	-30991-05-01 03:07 J	-9597919.61	-9597919.37	-9597919.11	0.0143	0.0022
Uranus	-30990-05-05 23:45 J	-9597549.68	-9597549.51	-9597549.31	0.0144	0.0098
Neptune	-30990-10-02 03:50 J	-9597400.56	-9597400.34	-9597400.12	0.0088	0.0046
Jupiter	-30989-03-31 18:14 J	-9597218.84	-9597218.74	-9597218.62	0.0534	0.0464
Neptune	-30989-10-03 15:50 J	-9597033.09	-9597032.84	-9597032.57	0.0088	0.0005
Neptune	-30988-10-06 03:35 J	-9596665.57	-9596665.35	-9596665.09	0.0088	0.0038
Neptune	-30987-10-08 16:19 J	-9596297.93	-9596297.82	-9596297.71	0.0088	0.0079
Jupiter	-30977-04-05 17:16 J	-9592831.00	-9592830.78	-9592830.56	0.0533	0.0132
Saturn	-30977-11-05 11:45 J	-9592617.20	-9592617.01	-9592616.79	0.0290	0.0167
Saturn	-30962-05-03 04:47 J	-9587325.52	-9587325.30	-9587325.07	0.0269	0.0094
Mars	-30961-03-13 15:07 J	-9587010.05	-9587009.87	-9587009.68	0.1675	0.0142
Uranus	-30953-10-28 20:38 J	-9583858.72	-9583858.64	-9583858.52	0.0136	0.0125
Uranus	-30952-11-02 09:21 J	-9583489.36	-9583489.11	-9583488.86	0.0135	0.0024
Uranus	-30951-11-06 20:23 J	-9583119.85	-9583119.65	-9583119.42	0.0135	0.0076
Saturn	-30948-10-30 06:28 J	-9582031.46	-9582031.23	-9582031.00	0.0290	0.0116
Saturn	-30933-04-27 10:04 J	-9576738.30	-9576738.08	-9576737.86	0.0270	0.0116
Jupiter	-30924-10-02 02:09 J	-9573293.50	-9573293.41	-9573293.30	0.0493	0.0449
Saturn	-30918-11-08 01:40 J	-9571065.56	-9571065.43	-9571065.28	0.0290	0.0238
Jupiter	-30912-10-06 13:26 J	-9568906.18	-9568905.94	-9568905.70	0.0494	0.0027
Neptune	-30908-03-30 08:52 J	-9567635.24	-9567635.13	-9567634.96	0.0089	0.0075
Uranus	-30908-04-26 18:28 J	-9567607.82	-9567607.73	-9567607.62	0.0143	0.0130
Neptune	-30907-04-01 20:09 J	-9567267.88	-9567267.66	-9567267.41	0.0089	0.0031
Uranus	-30907-05-01 14:23 J	-9567238.15	-9567237.90	-9567237.65	0.0143	0.0014
Neptune	-30906-04-04 07:26 J	-9566900.44	-9566900.19	-9566899.93	0.0089	0.0012
Uranus	-30906-05-06 10:47 J	-9566868.20	-9566868.05	-9566867.86	0.0144	0.0104
Neptune	-30905-04-05 18:43 J	-9566532.92	-9566532.72	-9566532.52	0.0089	0.0055
Saturn	-30903-05-04 13:40 J	-9565774.12	-9565773.93	-9565773.72	0.0269	0.0153
Pluto	-30903-06-12 06:14 J	-9565735.25	-9565735.24	-9565735.17	0.0067	0.0067
Pluto	-30902-06-13 22:33 J	-9565368.81	-9565368.56	-9565368.32	0.0068	0.0023
Jupiter	-30894-04-05 20:52 J	-9562515.86	-9562515.63	-9562515.40	0.0533	0.0040

Saturn	-30889-10-31 20:52 J	-9560479.87	-9560479.63	-9560479.39	0.0290	0.0044
Mars	-30882-03-16 19:40 J	-9558152.79	-9558152.68	-9558152.56	0.1678	0.1293
Mars	-30876-09-11 21:07 J	-9555781.77	-9555781.62	-9555781.47	0.1849	0.1238
Saturn	-30874-04-29 18:14 J	-9555186.97	-9555186.74	-9555186.50	0.0270	0.0059
Uranus	-30869-10-29 07:55 J	-9553177.29	-9553177.17	-9553177.04	0.0136	0.0118
Uranus	-30868-11-02 20:23 J	-9552807.90	-9552807.65	-9552807.39	0.0135	0.0017
Uranus	-30867-11-07 07:40 J	-9552438.37	-9552438.18	-9552437.96	0.0135	0.0082
Saturn	-30845-04-24 00:28 J	-9544599.51	-9544599.48	-9544599.41	0.0270	0.0264
Saturn	-30844-05-05 23:02 J	-9544222.67	-9544222.54	-9544222.38	0.0269	0.0214
Saturn	-30830-11-03 13:11 J	-9538928.19	-9538927.95	-9538927.70	0.0290	0.0033
Jupiter	-30829-10-05 16:33 J	-9538591.05	-9538590.81	-9538590.58	0.0494	0.0058
Neptune	-30826-10-01 09:35 J	-9537500.23	-9537500.10	-9537499.91	0.0088	0.0070
Neptune	-30825-10-02 22:04 J	-9537132.81	-9537132.58	-9537132.32	0.0088	0.0028
Uranus	-30824-04-27 05:02 J	-9536926.39	-9536926.29	-9536926.14	0.0143	0.0124
Neptune	-30824-10-05 10:33 J	-9536765.31	-9536765.06	-9536764.80	0.0088	0.0015
Uranus	-30823-05-02 01:26 J	-9536556.69	-9536556.44	-9536556.19	0.0143	0.0008
Neptune	-30823-10-07 22:19 J	-9536397.75	-9536397.57	-9536397.35	0.0088	0.0057
Uranus	-30822-05-06 21:50 J	-9536186.73	-9536186.59	-9536186.41	0.0144	0.0110
Jupiter	-30817-10-10 04:04 J	-9534203.45	-9534203.33	-9534203.21	0.0496	0.0425
Pluto	-30817-12-16 00:43 J	-9534136.67	-9534136.47	-9534136.24	0.0077	0.0041
Saturn	-30815-05-01 02:23 J	-9533635.64	-9533635.40	-9533635.16	0.0270	0.0002
Jupiter	-30811-04-04 17:45 J	-9532200.98	-9532200.76	-9532200.53	0.0533	0.0087
Saturn	-30801-10-27 23:31 J	-9528341.65	-9528341.52	-9528341.35	0.0290	0.0227
Jupiter	-30799-04-09 13:55 J	-9527813.00	-9527812.92	-9527812.83	0.0532	0.0493
Mars	-30797-09-15 05:02 J	-9526923.35	-9526923.29	-9526923.23	0.1844	0.1745
Saturn	-30786-04-26 09:50 J	-9523048.24	-9523048.09	-9523047.93	0.0270	0.0205
Uranus	-30785-10-29 19:11 J	-9522495.82	-9522495.70	-9522495.54	0.0136	0.0112
Uranus	-30784-11-03 08:09 J	-9522126.42	-9522126.16	-9522125.90	0.0135	0.0011
Uranus	-30783-11-07 19:26 J	-9521756.87	-9521756.69	-9521756.48	0.0135	0.0089
Saturn	-30771-11-05 05:16 J	-9517376.51	-9517376.28	-9517376.05	0.0290	0.0109

Mars	-30756-03-12 12:28 J	-9512135.09	-9512134.98	-9512134.86	0.1668	0.1316
Saturn	-30756-05-02 09:50 J	-9512084.32	-9512084.09	-9512083.85	0.0270	0.0055
Jupiter	-30746-10-05 18:14 J	-9508275.96	-9508275.74	-9508275.51	0.0494	0.0144
Neptune	-30743-04-01 02:52 J	-9507367.57	-9507367.38	-9507367.18	0.0089	0.0056
Neptune	-30742-04-03 13:40 J	-9507000.17	-9506999.93	-9506999.67	0.0089	0.0013
Saturn	-30742-10-30 14:52 J	-9506790.09	-9506789.88	-9506789.67	0.0290	0.0152
Neptune	-30741-04-05 00:28 J	-9506632.70	-9506632.48	-9506632.23	0.0089	0.0031
Neptune	-30740-04-07 11:16 J	-9506265.15	-9506265.03	-9506264.86	0.0089	0.0074
Uranus	-30740-04-27 17:45 J	-9506244.89	-9506244.76	-9506244.59	0.0143	0.0116
Uranus	-30739-05-02 13:55 J	-9505875.17	-9505874.92	-9505874.67	0.0143	0.0000
Uranus	-30738-05-07 10:19 J	-9505505.21	-9505505.07	-9505504.92	0.0144	0.0117
Jupiter	-30734-10-10 06:14 J	-9503888.41	-9503888.24	-9503888.06	0.0495	0.0336
Jupiter	-30728-04-03 15:07 J	-9501886.08	-9501885.87	-9501885.66	0.0535	0.0213
Saturn	-30727-04-27 17:59 J	-9501496.95	-9501496.75	-9501496.54	0.0269	0.0147
Jupiter	-30716-04-08 16:47 J	-9497497.95	-9497497.80	-9497497.64	0.0533	0.0397
Saturn	-30712-11-06 20:23 J	-9495824.83	-9495824.65	-9495824.45	0.0290	0.0184
Uranus	-30701-10-30 05:16 J	-9491814.43	-9491814.28	-9491814.12	0.0136	0.0106
Uranus	-30700-11-03 17:59 J	-9491445.01	-9491444.75	-9491444.49	0.0136	0.0006
Uranus	-30699-11-08 05:31 J	-9491075.44	-9491075.27	-9491075.07	0.0135	0.0094
Saturn	-30697-05-03 16:19 J	-9490533.04	-9490532.82	-9490532.60	0.0270	0.0110
Saturn	-30683-11-01 03:35 J	-9485238.58	-9485238.35	-9485238.11	0.0290	0.0081
Mars	-30677-03-14 16:47 J	-9483277.98	-9483277.80	-9483277.61	0.1671	0.0094
Saturn	-30668-04-29 00:43 J	-9479945.70	-9479945.47	-9479945.24	0.0269	0.0092
Jupiter	-30663-10-04 21:50 J	-9477960.80	-9477960.59	-9477960.38	0.0493	0.0226
Neptune	-30661-10-02 05:02 J	-9477232.49	-9477232.29	-9477232.06	0.0088	0.0050
Neptune	-30660-10-04 17:31 J	-9476865.03	-9476864.77	-9476864.51	0.0088	0.0008
Neptune	-30659-10-07 05:45 J	-9476497.50	-9476497.26	-9476497.01	0.0088	0.0034
Neptune	-30658-10-09 17:45 J	-9476129.88	-9476129.76	-9476129.62	0.0088	0.0076
Uranus	-30656-04-28 06:57 J	-9475563.35	-9475563.21	-9475563.02	0.0143	0.0107
Uranus	-30655-05-03 03:07 J	-9475193.62	-9475193.37	-9475193.11	0.0143	0.0009

Pluto	-30655-06-14 07:55 J	-9475151.36	-9475151.17	-9475150.93	0.0067	0.0038
Uranus	-30654-05-07 23:02 J	-9474823.63	-9474823.54	-9474823.39	0.0144	0.0126
Pluto	-30654-06-15 23:45 J	-9474784.65	-9474784.51	-9474784.33	0.0068	0.0053
Saturn	-30653-11-08 09:35 J	-9474273.22	-9474273.10	-9474272.99	0.0290	0.0255
Jupiter	-30651-10-09 09:50 J	-9473573.29	-9473573.09	-9473572.88	0.0495	0.0254
Jupiter	-30645-04-02 19:26 J	-9471570.88	-9471570.69	-9471570.50	0.0535	0.0302
Saturn	-30638-05-05 21:21 J	-9468981.80	-9468981.61	-9468981.42	0.0270	0.0163
Jupiter	-30633-04-07 18:43 J	-9467182.91	-9467182.72	-9467182.53	0.0533	0.0294
Saturn	-30624-11-02 13:55 J	-9463687.17	-9463686.92	-9463686.67	0.0290	0.0014
Uranus	-30617-10-30 16:19 J	-9461132.97	-9461132.82	-9461132.63	0.0136	0.0100
Uranus	-30616-11-04 05:31 J	-9460763.53	-9460763.27	-9460763.01	0.0136	0.0001
Uranus	-30615-11-08 17:16 J	-9460393.94	-9460393.78	-9460393.60	0.0135	0.0100
Saturn	-30609-04-30 05:16 J	-9458394.51	-9458394.28	-9458394.03	0.0269	0.0039
Mars	-30598-03-17 21:35 J	-9454420.68	-9454420.60	-9454420.53	0.1674	0.1510
Saturn	-30580-04-25 02:23 J	-9447807.44	-9447807.40	-9447807.34	0.0270	0.0264
Jupiter	-30580-10-04 03:35 J	-9447645.53	-9447645.35	-9447645.15	0.0493	0.0297
Neptune	-30579-03-31 10:33 J	-9447467.16	-9447467.06	-9447466.94	0.0089	0.0080
Saturn	-30579-05-07 00:14 J	-9447430.63	-9447430.49	-9447430.33	0.0269	0.0214
Neptune	-30578-04-02 21:35 J	-9447099.83	-9447099.60	-9447099.36	0.0089	0.0037
Neptune	-30577-04-04 08:23 J	-9446732.40	-9446732.15	-9446731.89	0.0089	0.0007
Neptune	-30576-04-06 18:57 J	-9446364.90	-9446364.71	-9446364.48	0.0089	0.0050
Uranus	-30572-04-28 20:38 J	-9444881.81	-9444881.64	-9444881.45	0.0143	0.0098
Uranus	-30571-05-03 16:19 J	-9444512.06	-9444511.82	-9444511.56	0.0143	0.0017
Uranus	-30570-05-08 12:28 J	-9444142.06	-9444141.98	-9444141.88	0.0144	0.0134
Pluto	-30569-12-18 07:55 J	-9443552.42	-9443552.17	-9443551.91	0.0077	0.0009
Jupiter	-30568-10-08 16:19 J	-9443258.03	-9443257.82	-9443257.59	0.0494	0.0186
Saturn	-30565-11-03 20:23 J	-9442135.89	-9442135.65	-9442135.41	0.0290	0.0047
Jupiter	-30562-04-02 16:19 J	-9441255.94	-9441255.82	-9441255.67	0.0535	0.0432
Jupiter	-30550-04-07 16:47 J	-9436868.02	-9436867.80	-9436867.58	0.0534	0.0171
Saturn	-30550-05-02 08:38 J	-9436843.38	-9436843.14	-9436842.90	0.0269	0.0012

Saturn	-30536-10-28 17:02 J	-9431549.93	-9431549.79	-9431549.65	0.0290	0.0237
Uranus	-30533-10-31 02:38 J	-9430451.56	-9430451.39	-9430451.20	0.0136	0.0094
Uranus	-30532-11-04 15:35 J	-9430082.10	-9430081.85	-9430081.59	0.0136	0.0006
Uranus	-30531-11-09 03:21 J	-9429712.50	-9429712.36	-9429712.18	0.0135	0.0105
Saturn	-30521-04-26 04:47 J	-9426256.44	-9426256.30	-9426256.15	0.0270	0.0215
Saturn	-30520-05-08 01:55 J	-9425879.46	-9425879.42	-9425879.36	0.0269	0.0262
Mars	-30513-09-14 14:09 J	-9423193.10	-9423192.91	-9423192.72	0.1851	0.0664
Saturn	-30506-11-05 23:59 J	-9420584.72	-9420584.50	-9420584.26	0.0291	0.0104
Neptune	-30497-10-01 12:43 J	-9417332.10	-9417331.97	-9417331.81	0.0088	0.0072
Jupiter	-30497-10-03 13:40 J	-9417330.09	-9417329.93	-9417329.76	0.0492	0.0350
Neptune	-30496-10-04 01:11 J	-9416964.68	-9416964.45	-9416964.19	0.0088	0.0030
Neptune	-30495-10-06 13:26 J	-9416597.18	-9416596.94	-9416596.67	0.0088	0.0013
Neptune	-30494-10-09 01:26 J	-9416229.62	-9416229.44	-9416229.21	0.0088	0.0055
Saturn	-30491-05-03 10:04 J	-9415292.32	-9415292.08	-9415291.84	0.0269	0.0060
Uranus	-30488-04-29 07:55 J	-9414200.35	-9414200.17	-9414199.97	0.0143	0.0091
Uranus	-30487-05-04 03:35 J	-9413830.59	-9413830.35	-9413830.10	0.0143	0.0024
Uranus	-30486-05-08 23:31 J	-9413460.55	-9413460.52	-9413460.44	0.0144	0.0140
Jupiter	-30485-10-07 23:59 J	-9412942.73	-9412942.50	-9412942.27	0.0494	0.0122
Jupiter	-30479-04-01 22:04 J	-9410940.63	-9410940.58	-9410940.51	0.0536	0.0515
Saturn	-30477-10-29 20:09 J	-9409998.84	-9409998.66	-9409998.46	0.0290	0.0183
Mars	-30472-03-13 15:21 J	-9408403.00	-9408402.86	-9408402.71	0.1664	0.1050
Jupiter	-30467-04-07 01:40 J	-9406552.65	-9406552.43	-9406552.20	0.0534	0.0106
Saturn	-30462-04-28 06:14 J	-9404705.43	-9404705.24	-9404705.05	0.0269	0.0166
Uranus	-30449-10-31 13:40 J	-9399770.11	-9399769.93	-9399769.72	0.0136	0.0088
Uranus	-30448-11-05 02:52 J	-9399400.64	-9399400.38	-9399400.13	0.0135	0.0012
Saturn	-30447-11-07 00:43 J	-9399033.66	-9399033.47	-9399033.25	0.0291	0.0156
Uranus	-30447-11-09 14:23 J	-9399031.03	-9399030.90	-9399030.74	0.0135	0.0111
Saturn	-30432-05-04 10:33 J	-9393741.28	-9393741.06	-9393740.84	0.0269	0.0107
Saturn	-30418-10-31 22:04 J	-9388447.80	-9388447.58	-9388447.36	0.0290	0.0131
Neptune	-30414-04-02 05:59 J	-9387199.43	-9387199.25	-9387199.05	0.0089	0.0060

Jupiter -30414-10-03 21:50 J -9387014.71 -9387014.59 -9387014.46 0.0492 0.0410
 Neptune -30413-04-03 17:02 J -9386832.04 -9386831.79 -9386831.54 0.0089 0.0017
 Neptune -30412-04-06 03:35 J -9386464.58 -9386464.35 -9386464.10 0.0089 0.0027
 Neptune -30411-04-08 14:23 J -9386097.04 -9386096.90 -9386096.72 0.0089 0.0070
 Pluto -30407-06-16 14:23 J -9384567.16 -9384566.90 -9384566.64 0.0068 0.0003
 Uranus -30404-04-29 17:59 J -9383518.94 -9383518.75 -9383518.54 0.0142 0.0086
 Saturn -30403-04-29 06:28 J -9383154.44 -9383154.23 -9383154.00 0.0269 0.0120
 Uranus -30403-05-04 13:26 J -9383149.18 -9383148.94 -9383148.68 0.0143 0.0029
 Jupiter -30402-10-08 09:07 J -9382627.35 -9382627.12 -9382626.88 0.0494 0.0064
 Mars -30393-03-15 19:26 J -9379545.87 -9379545.69 -9379545.51 0.1667 0.0332
 Saturn -30388-11-07 23:59 J -9377482.67 -9377482.50 -9377482.32 0.0291 0.0204
 Jupiter -30384-04-06 02:23 J -9376237.63 -9376237.40 -9376237.17 0.0534 0.0009
 Saturn -30373-05-05 10:33 J -9372190.25 -9372190.06 -9372189.85 0.0269 0.0154
 Uranus -30365-10-31 22:47 J -9369088.73 -9369088.55 -9369088.33 0.0136 0.0084
 Uranus -30364-11-05 11:59 J -9368719.25 -9368719.00 -9368718.74 0.0136 0.0017
 Uranus -30363-11-09 23:45 J -9368349.63 -9368349.51 -9368349.36 0.0135 0.0115
 Saturn -30359-11-01 22:04 J -9366896.81 -9366896.58 -9366896.34 0.0291 0.0082
 Saturn -30344-04-30 07:11 J -9361603.43 -9361603.20 -9361602.96 0.0269 0.0073
 Neptune -30332-10-03 09:50 J -9357064.30 -9357064.09 -9357063.88 0.0088 0.0051
 Jupiter -30331-10-03 09:07 J -9356699.20 -9356699.12 -9356699.03 0.0492 0.0458
 Neptune -30331-10-05 22:19 J -9356696.83 -9356696.57 -9356696.31 0.0088 0.0009
 Neptune -30330-10-08 10:47 J -9356329.29 -9356329.05 -9356328.81 0.0088 0.0033
 Neptune -30329-10-09 22:33 J -9355961.67 -9355961.56 -9355961.40 0.0088 0.0076
 Saturn -30329-11-08 23:31 J -9355931.64 -9355931.52 -9355931.40 0.0291 0.0252
 Pluto -30322-12-19 18:28 J -9353334.87 -9353334.73 -9353334.58 0.0077 0.0062
 Pluto -30321-12-20 18:57 J -9352967.80 -9352967.71 -9352967.59 0.0076 0.0070
 Uranus -30320-04-30 02:23 J -9352837.59 -9352837.40 -9352837.18 0.0142 0.0082
 Uranus -30319-05-04 21:35 J -9352467.83 -9352467.60 -9352467.34 0.0143 0.0032
 Jupiter -30319-10-07 22:04 J -9352311.82 -9352311.58 -9352311.35 0.0493 0.0025
 Saturn -30314-05-07 10:33 J -9350639.21 -9350639.06 -9350638.88 0.0268 0.0200

Jupiter	-30301-04-05 08:23 J	-9345922.37	-9345922.15	-9345921.92	0.0535	0.0087
Saturn	-30300-11-02 22:33 J	-9345345.81	-9345345.56	-9345345.31	0.0291	0.0032
Jupiter	-30289-04-10 11:45 J	-9341534.03	-9341534.01	-9341533.98	0.0533	0.0529
Saturn	-30285-05-01 08:38 J	-9340052.39	-9340052.14	-9340051.90	0.0269	0.0025
Uranus	-30281-11-01 08:38 J	-9338407.34	-9338407.14	-9338406.92	0.0136	0.0079
Uranus	-30280-11-05 21:35 J	-9338037.84	-9338037.60	-9338037.34	0.0136	0.0022
Uranus	-30279-11-10 09:35 J	-9337668.21	-9337668.10	-9337667.97	0.0135	0.0120
Saturn	-30256-04-26 15:07 J	-9329464.98	-9329464.87	-9329464.74	0.0269	0.0233
Saturn	-30255-05-08 11:31 J	-9329088.10	-9329088.02	-9329087.91	0.0269	0.0247
Neptune	-30250-04-01 15:50 J	-9327298.92	-9327298.84	-9327298.72	0.0089	0.0082
Neptune	-30249-04-03 02:38 J	-9326931.60	-9326931.39	-9326931.14	0.0089	0.0039
Neptune	-30248-04-05 13:55 J	-9326564.17	-9326563.92	-9326563.66	0.0089	0.0005
Neptune	-30247-04-08 00:28 J	-9326196.69	-9326196.48	-9326196.26	0.0089	0.0048
Saturn	-30241-11-04 00:28 J	-9323794.73	-9323794.48	-9323794.23	0.0291	0.0021
Uranus	-30236-04-30 11:16 J	-9322156.22	-9322156.03	-9322155.80	0.0142	0.0079
Jupiter	-30236-10-07 05:31 J	-9321996.51	-9321996.27	-9321996.04	0.0493	0.0039
Uranus	-30235-05-05 06:28 J	-9321786.46	-9321786.23	-9321785.97	0.0143	0.0036
Mars	-30229-09-13 21:35 J	-9319462.80	-9319462.60	-9319462.41	0.1858	0.0511
Saturn	-30226-05-03 10:47 J	-9318501.30	-9318501.05	-9318500.81	0.0269	0.0025
Jupiter	-30224-10-11 16:33 J	-9317608.91	-9317608.81	-9317608.69	0.0494	0.0438
Jupiter	-30218-04-05 17:45 J	-9315606.98	-9315606.76	-9315606.54	0.0535	0.0153
Saturn	-30212-10-28 13:26 J	-9313209.00	-9313208.94	-9313208.85	0.0290	0.0275
Jupiter	-30206-04-10 13:26 J	-9311219.08	-9311218.94	-9311218.80	0.0533	0.0425
Saturn	-30197-04-27 16:47 J	-9307913.97	-9307913.80	-9307913.61	0.0269	0.0186
Uranus	-30197-11-01 16:19 J	-9307726.02	-9307725.82	-9307725.59	0.0136	0.0076
Uranus	-30196-11-06 05:31 J	-9307356.53	-9307356.27	-9307356.02	0.0136	0.0024
Uranus	-30195-11-10 17:02 J	-9306986.88	-9306986.79	-9306986.66	0.0135	0.0123
Mars	-30188-03-14 19:11 J	-9304670.86	-9304670.70	-9304670.53	0.1661	0.0770
Saturn	-30182-11-06 04:04 J	-9302243.57	-9302243.33	-9302243.09	0.0291	0.0076
Neptune	-30168-10-02 18:57 J	-9297163.85	-9297163.71	-9297163.56	0.0088	0.0072

Saturn	-30167-05-04 14:09 J	-9296950.14	-9296949.91	-9296949.67	0.0269	0.0076
Neptune	-30167-10-05 07:11 J	-9296796.43	-9296796.20	-9296795.94	0.0088	0.0030
Neptune	-30166-10-07 19:40 J	-9296428.93	-9296428.68	-9296428.42	0.0088	0.0013
Neptune	-30165-10-09 07:55 J	-9296061.36	-9296061.17	-9296060.95	0.0088	0.0055
Pluto	-30160-06-17 07:11 J	-9294349.39	-9294349.20	-9294348.96	0.0067	0.0039
Pluto	-30159-06-18 22:33 J	-9293982.69	-9293982.56	-9293982.37	0.0068	0.0053
Jupiter	-30153-10-06 14:38 J	-9291681.12	-9291680.89	-9291680.66	0.0493	0.0096
Saturn	-30153-10-29 18:28 J	-9291657.89	-9291657.73	-9291657.56	0.0290	0.0218
Uranus	-30152-04-30 21:50 J	-9291474.81	-9291474.59	-9291474.38	0.0142	0.0073
Uranus	-30151-05-05 16:33 J	-9291105.05	-9291104.81	-9291104.57	0.0143	0.0040
Jupiter	-30141-10-11 02:52 J	-9287293.53	-9287293.38	-9287293.23	0.0494	0.0386
Saturn	-30138-04-29 20:09 J	-9286362.86	-9286362.66	-9286362.45	0.0270	0.0136
Jupiter	-30135-04-04 15:35 J	-9285292.04	-9285291.85	-9285291.65	0.0535	0.0273
Jupiter	-30123-04-09 15:35 J	-9280904.03	-9280903.85	-9280903.67	0.0534	0.0326
Saturn	-30123-11-07 11:02 J	-9280692.26	-9280692.04	-9280691.82	0.0291	0.0138
Uranus	-30113-11-02 00:57 J	-9277044.67	-9277044.46	-9277044.23	0.0136	0.0072
Uranus	-30112-11-06 13:55 J	-9276675.16	-9276674.92	-9276674.66	0.0136	0.0028
Uranus	-30111-11-11 02:09 J	-9276305.50	-9276305.41	-9276305.31	0.0135	0.0126
Mars	-30109-03-16 22:33 J	-9275813.73	-9275813.56	-9275813.38	0.1663	0.0595
Saturn	-30108-05-05 19:11 J	-9275398.91	-9275398.70	-9275398.48	0.0269	0.0130
Saturn	-30094-11-01 02:23 J	-9270106.60	-9270106.40	-9270106.18	0.0290	0.0156
Neptune	-30085-04-02 12:57 J	-9267031.12	-9267030.96	-9267030.75	0.0089	0.0061
Neptune	-30084-04-04 23:59 J	-9266663.73	-9266663.50	-9266663.24	0.0089	0.0018
Neptune	-30083-04-07 11:02 J	-9266296.27	-9266296.04	-9266295.79	0.0089	0.0026
Neptune	-30082-04-09 21:21 J	-9265928.74	-9265928.61	-9265928.43	0.0089	0.0070
Saturn	-30079-05-01 00:57 J	-9264811.69	-9264811.46	-9264811.23	0.0270	0.0084
Pluto	-30074-12-22 11:02 J	-9262750.28	-9262750.04	-9262749.78	0.0076	0.0018
Jupiter	-30070-10-06 19:26 J	-9261365.91	-9261365.69	-9261365.47	0.0492	0.0167
Uranus	-30068-05-01 08:38 J	-9260793.35	-9260793.14	-9260792.91	0.0142	0.0067
Uranus	-30067-05-06 03:35 J	-9260423.58	-9260423.35	-9260423.10	0.0143	0.0047

Saturn	-30064-11-08 20:38 J	-9259140.81	-9259140.64	-9259140.46	0.0291	0.0204
Jupiter	-30058-10-11 06:28 J	-9256978.42	-9256978.23	-9256978.05	0.0494	0.0306
Jupiter	-30052-04-03 18:28 J	-9254976.89	-9254976.73	-9254976.56	0.0536	0.0371
Saturn	-30049-05-07 01:55 J	-9253847.59	-9253847.42	-9253847.24	0.0269	0.0186
Jupiter	-30040-04-08 20:52 J	-9250588.83	-9250588.63	-9250588.42	0.0534	0.0241
Saturn	-30035-11-02 13:55 J	-9248555.15	-9248554.92	-9248554.68	0.0290	0.0087
Uranus	-30029-11-02 09:07 J	-9246363.33	-9246363.12	-9246362.89	0.0136	0.0069
Uranus	-30028-11-06 22:04 J	-9245993.82	-9245993.58	-9245993.32	0.0136	0.0031
Uranus	-30027-11-11 10:04 J	-9245624.14	-9245624.08	-9245623.99	0.0135	0.0129
Saturn	-30020-05-02 06:57 J	-9243260.45	-9243260.21	-9243259.96	0.0270	0.0029
Saturn	-30005-11-10 09:35 J	-9237589.17	-9237589.10	-9237589.02	0.0291	0.0276
Neptune	-30003-10-04 17:16 J	-9236895.99	-9236895.78	-9236895.56	0.0088	0.0050
Neptune	-30002-10-07 05:45 J	-9236528.51	-9236528.26	-9236527.99	0.0088	0.0008
Neptune	-30001-10-08 17:45 J	-9236160.98	-9236160.76	-9236160.50	0.0088	0.0035

30TH MILLENNIUM BCE

This is a list of transits of Earth in the 30th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Neptune	-30000-10-11 06:14 J	-9235793.35	-9235793.24	-9235793.10	0.0088	0.0077		
Saturn	-29991-04-27 12:43 J	-9232673.08	-9232672.97	-9232672.86	0.0270	0.0239		
Saturn	-29990-05-09 09:50 J	-9232296.18	-9232296.09	-9232295.98	0.0269	0.0245		
Jupiter	-29987-10-05 22:19 J	-9231050.77	-9231050.57	-9231050.36	0.0492	0.0250		
Uranus	-29984-05-01 19:26 J	-9230111.92	-9230111.69	-9230111.46	0.0142	0.0061		

Uranus	-29983-05-06 14:09 J	-9229742.14	-9229741.91	-9229741.67	0.0143	0.0052
Saturn	-29976-11-04 03:50 J	-9227003.59	-9227003.34	-9227003.09	0.0290	0.0014
Jupiter	-29975-10-10 10:33 J	-9226663.27	-9226663.06	-9226662.85	0.0493	0.0227
Jupiter	-29969-04-02 19:11 J	-9224661.79	-9224661.70	-9224661.59	0.0536	0.0476
Saturn	-29961-05-03 14:23 J	-9221709.14	-9221708.90	-9221708.65	0.0270	0.0029
Jupiter	-29957-04-07 17:45 J	-9220273.98	-9220273.76	-9220273.53	0.0534	0.0115
Saturn	-29947-10-29 14:09 J	-9216416.97	-9216416.91	-9216416.84	0.0290	0.0278
Mars	-29945-09-13 03:07 J	-9215732.43	-9215732.37	-9215732.31	0.1864	0.1774
Uranus	-29945-11-02 17:59 J	-9215681.96	-9215681.75	-9215681.50	0.0136	0.0066
Uranus	-29944-11-07 07:11 J	-9215312.44	-9215312.20	-9215311.94	0.0136	0.0035
Uranus	-29943-11-11 19:11 J	-9214942.73	-9214942.70	-9214942.63	0.0135	0.0133
Saturn	-29932-04-28 21:35 J	-9211121.78	-9211121.60	-9211121.42	0.0269	0.0179
Neptune	-29921-04-01 23:59 J	-9207130.57	-9207130.50	-9207130.36	0.0089	0.0082
Neptune	-29920-04-04 11:31 J	-9206763.24	-9206763.02	-9206762.78	0.0089	0.0038
Neptune	-29919-04-06 22:19 J	-9206395.82	-9206395.57	-9206395.31	0.0089	0.0006
Neptune	-29918-04-09 09:07 J	-9206028.32	-9206028.12	-9206027.90	0.0089	0.0049
Saturn	-29917-11-05 20:23 J	-9205451.90	-9205451.65	-9205451.41	0.0290	0.0065
Pluto	-29912-06-19 19:26 J	-9203764.93	-9203764.69	-9203764.44	0.0068	0.0020
Mars	-29904-03-15 23:16 J	-9200938.71	-9200938.53	-9200938.36	0.1657	0.0488
Jupiter	-29904-10-05 01:40 J	-9200735.60	-9200735.43	-9200735.25	0.0492	0.0329
Saturn	-29902-05-05 22:19 J	-9200157.80	-9200157.57	-9200157.34	0.0270	0.0087
Uranus	-29900-05-02 04:19 J	-9199430.54	-9199430.32	-9199430.08	0.0142	0.0057
Uranus	-29899-05-06 23:16 J	-9199060.75	-9199060.53	-9199060.29	0.0143	0.0057
Jupiter	-29892-10-09 11:59 J	-9196348.22	-9196348.00	-9196347.77	0.0493	0.0140
Saturn	-29888-10-31 05:45 J	-9194865.44	-9194865.26	-9194865.08	0.0290	0.0201
Jupiter	-29874-04-07 15:07 J	-9189959.10	-9189958.87	-9189958.64	0.0535	0.0011
Saturn	-29873-04-30 06:57 J	-9189570.42	-9189570.21	-9189569.99	0.0269	0.0119
Mars	-29866-09-17 15:35 J	-9186873.98	-9186873.85	-9186873.73	0.1860	0.1466
Uranus	-29861-11-03 02:38 J	-9185000.61	-9185000.39	-9185000.15	0.0136	0.0061
Uranus	-29860-11-07 15:35 J	-9184631.09	-9184630.85	-9184630.60	0.0136	0.0038

Saturn	-29858-11-08 12:43 J	-9183900.18	-9183899.97	-9183899.75	0.0290	0.0144
Saturn	-29843-05-07 06:14 J	-9178606.44	-9178606.24	-9178606.04	0.0270	0.0146
Neptune	-29839-10-04 03:35 J	-9176995.50	-9176995.35	-9176995.19	0.0088	0.0070
Neptune	-29838-10-06 15:35 J	-9176628.08	-9176627.85	-9176627.58	0.0088	0.0028
Neptune	-29837-10-08 04:04 J	-9176260.58	-9176260.33	-9176260.06	0.0088	0.0015
Neptune	-29836-10-10 16:19 J	-9175893.00	-9175892.82	-9175892.60	0.0088	0.0058
Saturn	-29829-11-01 21:21 J	-9173313.83	-9173313.61	-9173313.38	0.0290	0.0124
Pluto	-29827-12-23 04:33 J	-9172532.53	-9172532.31	-9172532.05	0.0077	0.0030
Mars	-29825-03-18 02:09 J	-9172081.57	-9172081.41	-9172081.25	0.1659	0.0860
Jupiter	-29821-10-04 04:47 J	-9170420.43	-9170420.30	-9170420.17	0.0491	0.0412
Uranus	-29816-05-02 12:14 J	-9168749.22	-9168748.99	-9168748.75	0.0142	0.0053
Uranus	-29815-05-07 07:26 J	-9168379.42	-9168379.19	-9168378.96	0.0143	0.0059
Saturn	-29814-05-02 15:35 J	-9168019.09	-9168018.85	-9168018.61	0.0269	0.0058
Jupiter	-29809-10-08 14:09 J	-9166033.14	-9166032.91	-9166032.67	0.0492	0.0052
Saturn	-29799-11-10 04:33 J	-9162348.46	-9162348.31	-9162348.15	0.0291	0.0222
Jupiter	-29791-04-06 17:31 J	-9159643.99	-9159643.77	-9159643.54	0.0535	0.0108
Saturn	-29784-05-08 13:26 J	-9157055.09	-9157054.94	-9157054.77	0.0269	0.0204
Jupiter	-29779-04-11 16:33 J	-9155255.90	-9155255.81	-9155255.71	0.0534	0.0484
Uranus	-29777-11-03 11:02 J	-9154319.26	-9154319.04	-9154318.79	0.0136	0.0058
Uranus	-29776-11-08 00:14 J	-9153949.73	-9153949.49	-9153949.24	0.0136	0.0042
Saturn	-29770-11-04 11:02 J	-9151762.28	-9151762.04	-9151761.79	0.0290	0.0049
Neptune	-29756-04-03 22:33 J	-9146862.73	-9146862.56	-9146862.35	0.0089	0.0059
Neptune	-29755-04-06 09:50 J	-9146495.33	-9146495.09	-9146494.83	0.0089	0.0015
Saturn	-29755-05-03 23:02 J	-9146467.78	-9146467.54	-9146467.30	0.0269	0.0001
Neptune	-29754-04-08 20:38 J	-9146127.86	-9146127.64	-9146127.38	0.0089	0.0029
Neptune	-29753-04-10 07:26 J	-9145760.32	-9145760.19	-9145760.02	0.0089	0.0072
Uranus	-29732-05-02 19:11 J	-9138067.93	-9138067.70	-9138067.46	0.0142	0.0051
Uranus	-29731-05-07 14:23 J	-9137698.12	-9137697.90	-9137697.67	0.0143	0.0061
Saturn	-29726-04-28 22:19 J	-9135880.69	-9135880.57	-9135880.43	0.0270	0.0226
Jupiter	-29726-10-08 17:59 J	-9135717.98	-9135717.75	-9135717.51	0.0492	0.0028

Saturn	-29725-05-09 19:40 J	-9135503.74	-9135503.68	-9135503.62	0.0269	0.0260
Jupiter	-29714-10-13 05:59 J	-9131330.34	-9131330.25	-9131330.15	0.0494	0.0449
Saturn	-29711-11-05 22:04 J	-9130210.82	-9130210.58	-9130210.33	0.0291	0.0022
Jupiter	-29708-04-05 12:57 J	-9129329.17	-9129328.96	-9129328.76	0.0536	0.0246
Mars	-29699-03-14 23:31 J	-9126063.58	-9126063.52	-9126063.46	0.1651	0.1554
Jupiter	-29696-04-10 12:57 J	-9124941.12	-9124940.96	-9124940.78	0.0535	0.0355
Saturn	-29696-05-05 04:47 J	-9124916.53	-9124916.30	-9124916.05	0.0269	0.0058
Uranus	-29693-11-03 18:28 J	-9123637.95	-9123637.73	-9123637.48	0.0136	0.0055
Uranus	-29692-11-08 07:55 J	-9123268.41	-9123268.17	-9123267.93	0.0136	0.0044
Saturn	-29682-10-30 18:43 J	-9119624.80	-9119624.72	-9119624.61	0.0290	0.0268
Neptune	-29674-10-06 02:52 J	-9116727.60	-9116727.38	-9116727.16	0.0088	0.0047
Neptune	-29673-10-07 15:21 J	-9116360.12	-9116359.86	-9116359.60	0.0088	0.0005
Neptune	-29672-10-10 03:07 J	-9115992.58	-9115992.37	-9115992.11	0.0088	0.0038
Neptune	-29671-10-12 15:35 J	-9115624.94	-9115624.85	-9115624.73	0.0088	0.0080
Saturn	-29667-04-30 03:21 J	-9114329.54	-9114329.36	-9114329.17	0.0270	0.0171
Pluto	-29665-06-20 17:45 J	-9113547.02	-9113546.76	-9113546.50	0.0068	0.0007
Saturn	-29652-11-07 05:59 J	-9108659.48	-9108659.25	-9108659.01	0.0291	0.0088
Uranus	-29648-05-03 03:07 J	-9107386.61	-9107386.37	-9107386.13	0.0142	0.0049
Uranus	-29647-05-07 22:04 J	-9107016.80	-9107016.58	-9107016.35	0.0143	0.0063
Jupiter	-29643-10-08 02:09 J	-9105402.64	-9105402.41	-9105402.18	0.0492	0.0090
Saturn	-29637-05-06 09:07 J	-9103365.35	-9103365.12	-9103364.90	0.0269	0.0111
Jupiter	-29631-10-12 11:59 J	-9101015.14	-9101015.00	-9101014.84	0.0493	0.0378
Jupiter	-29625-04-04 16:47 J	-9099013.97	-9099013.80	-9099013.62	0.0537	0.0339
Saturn	-29623-11-01 02:23 J	-9098073.56	-9098073.40	-9098073.21	0.0290	0.0205
Mars	-29620-03-17 02:52 J	-9097206.57	-9097206.38	-9097206.20	0.1654	0.0210
Jupiter	-29613-04-09 20:23 J	-9094625.84	-9094625.65	-9094625.45	0.0535	0.0280
Uranus	-29609-11-04 02:09 J	-9092956.64	-9092956.41	-9092956.17	0.0136	0.0052
Saturn	-29608-05-01 06:14 J	-9092778.46	-9092778.24	-9092778.02	0.0269	0.0119
Uranus	-29608-11-08 15:21 J	-9092587.09	-9092586.86	-9092586.61	0.0136	0.0047
Saturn	-29593-11-08 10:19 J	-9087108.28	-9087108.07	-9087107.85	0.0291	0.0146

Neptune	-29592-04-03 10:04 J	-9086962.16	-9086962.08	-9086961.93	0.0089	0.0080
Neptune	-29591-04-05 21:35 J	-9086594.83	-9086594.60	-9086594.36	0.0089	0.0036
Neptune	-29590-04-08 08:38 J	-9086227.40	-9086227.14	-9086226.89	0.0089	0.0008
Neptune	-29589-04-09 18:57 J	-9085859.89	-9085859.71	-9085859.48	0.0089	0.0052
Mars	-29582-09-16 19:11 J	-9083143.90	-9083143.70	-9083143.49	0.1866	0.0163
Pluto	-29580-12-24 02:52 J	-9082314.51	-9082314.38	-9082314.21	0.0077	0.0062
Pluto	-29579-12-26 03:07 J	-9081947.43	-9081947.37	-9081947.24	0.0076	0.0072
Saturn	-29578-05-08 10:47 J	-9081814.23	-9081814.05	-9081813.84	0.0268	0.0162
Uranus	-29564-05-03 12:14 J	-9076705.22	-9076704.99	-9076704.74	0.0142	0.0045
Saturn	-29564-11-02 06:43 J	-9076522.42	-9076522.22	-9076521.99	0.0291	0.0147
Uranus	-29563-05-08 07:11 J	-9076335.41	-9076335.20	-9076334.97	0.0143	0.0068
Jupiter	-29560-10-07 09:07 J	-9075087.34	-9075087.12	-9075086.89	0.0491	0.0155
Saturn	-29549-05-02 07:55 J	-9071227.41	-9071227.17	-9071226.94	0.0269	0.0068
Jupiter	-29548-10-11 19:55 J	-9070699.85	-9070699.67	-9070699.49	0.0493	0.0315
Jupiter	-29542-04-05 00:28 J	-9068698.62	-9068698.48	-9068698.33	0.0537	0.0414
Mars	-29541-03-19 05:31 J	-9068349.40	-9068349.27	-9068349.13	0.1656	0.1124
Saturn	-29534-11-10 11:45 J	-9065557.18	-9065557.01	-9065556.82	0.0291	0.0201
Jupiter	-29530-04-09 19:55 J	-9064310.89	-9064310.67	-9064310.45	0.0535	0.0163
Uranus	-29525-11-04 09:35 J	-9062275.33	-9062275.10	-9062274.85	0.0136	0.0050
Uranus	-29524-11-08 23:02 J	-9061905.77	-9061905.54	-9061905.29	0.0136	0.0050
Saturn	-29519-05-09 11:02 J	-9060263.17	-9060263.04	-9060262.87	0.0268	0.0210
Neptune	-29510-10-05 13:11 J	-9056827.10	-9056826.95	-9056826.77	0.0088	0.0068
Neptune	-29509-10-07 01:40 J	-9056459.67	-9056459.43	-9056459.16	0.0088	0.0025
Neptune	-29508-10-09 14:23 J	-9056092.15	-9056091.90	-9056091.64	0.0088	0.0018
Neptune	-29507-10-12 02:09 J	-9055724.57	-9055724.41	-9055724.20	0.0088	0.0061
Saturn	-29505-11-03 08:38 J	-9054971.37	-9054971.14	-9054970.90	0.0291	0.0093
Saturn	-29490-05-04 08:09 J	-9049676.40	-9049676.16	-9049675.91	0.0269	0.0021
Uranus	-29480-05-03 22:33 J	-9046023.79	-9046023.56	-9046023.31	0.0142	0.0039
Uranus	-29479-05-08 17:16 J	-9045653.98	-9045653.78	-9045653.55	0.0143	0.0073
Jupiter	-29477-10-06 19:55 J	-9044771.89	-9044771.67	-9044771.45	0.0491	0.0205

Saturn	-29475-11-11 11:02 J	-9044006.15	-9044006.04	-9044005.91	0.0291	0.0251
Jupiter	-29465-10-11 08:38 J	-9040384.34	-9040384.14	-9040383.94	0.0493	0.0273
Saturn	-29461-04-28 15:07 J	-9039088.98	-9039088.87	-9039088.74	0.0269	0.0232
Saturn	-29460-05-10 10:47 J	-9038712.11	-9038712.05	-9038711.97	0.0268	0.0255
Jupiter	-29459-04-03 23:31 J	-9038383.54	-9038383.52	-9038383.49	0.0537	0.0532
Jupiter	-29447-04-09 02:09 J	-9033995.64	-9033995.41	-9033995.18	0.0536	0.0083
Saturn	-29446-11-05 08:52 J	-9033420.37	-9033420.13	-9033419.88	0.0291	0.0042
Uranus	-29441-11-04 18:14 J	-9031593.97	-9031593.74	-9031593.48	0.0136	0.0046
Uranus	-29440-11-09 07:55 J	-9031224.41	-9031224.17	-9031223.93	0.0136	0.0053
Saturn	-29431-05-05 08:09 J	-9028125.40	-9028125.16	-9028124.91	0.0269	0.0026
Neptune	-29427-04-05 10:04 J	-9026694.28	-9026694.08	-9026693.88	0.0089	0.0056
Neptune	-29426-04-07 20:52 J	-9026326.88	-9026326.63	-9026326.38	0.0089	0.0013
Neptune	-29425-04-09 07:26 J	-9025959.43	-9025959.19	-9025958.95	0.0089	0.0031
Neptune	-29424-04-11 17:45 J	-9025591.87	-9025591.76	-9025591.59	0.0089	0.0075
Pluto	-29418-06-22 18:57 J	-9023328.92	-9023328.71	-9023328.44	0.0068	0.0026
Pluto	-29417-06-23 10:47 J	-9022962.05	-9022962.05	-9022962.00	0.0068	0.0068
Mars	-29415-03-16 03:50 J	-9022331.45	-9022331.34	-9022331.22	0.1648	0.1255
Saturn	-29402-04-30 14:38 J	-9017538.06	-9017537.89	-9017537.71	0.0269	0.0187
Uranus	-29396-05-04 08:09 J	-9015342.40	-9015342.16	-9015341.91	0.0142	0.0035
Uranus	-29395-05-09 02:38 J	-9014972.59	-9014972.39	-9014972.17	0.0143	0.0077
Jupiter	-29394-10-07 06:14 J	-9014456.44	-9014456.24	-9014456.04	0.0491	0.0253
Saturn	-29387-11-06 08:09 J	-9011869.41	-9011869.16	-9011868.91	0.0291	0.0007
Jupiter	-29382-10-11 17:02 J	-9010069.00	-9010068.79	-9010068.57	0.0492	0.0216
Saturn	-29372-05-06 08:38 J	-9006574.38	-9006574.14	-9006573.91	0.0268	0.0074
Jupiter	-29364-04-08 12:14 J	-9003680.22	-9003679.99	-9003679.76	0.0536	0.0021
Uranus	-29357-11-05 03:07 J	-9000912.60	-9000912.37	-9000912.11	0.0136	0.0042
Uranus	-29356-11-09 16:33 J	-9000543.04	-9000542.81	-9000542.57	0.0136	0.0057
Neptune	-29346-10-04 23:45 J	-8996926.52	-8996926.51	-8996926.46	0.0088	0.0087
Neptune	-29345-10-06 12:43 J	-8996559.19	-8996558.97	-8996558.74	0.0088	0.0044
Neptune	-29344-10-09 01:11 J	-8996191.71	-8996191.45	-8996191.19	0.0088	0.0002

Saturn	-29343-05-01 14:23 J	-8995987.09	-8995986.90	-8995986.68	0.0269	0.0142
Neptune	-29343-10-11 13:26 J	-8995824.16	-8995823.94	-8995823.70	0.0088	0.0041
Neptune	-29342-10-14 01:11 J	-8995456.49	-8995456.45	-8995456.34	0.0088	0.0084
Mars	-29336-03-18 06:28 J	-8993474.41	-8993474.23	-8993474.04	0.1650	0.0075
Pluto	-29332-12-27 03:07 J	-8991729.57	-8991729.37	-8991729.15	0.0076	0.0044
Saturn	-29328-11-07 08:52 J	-8990318.37	-8990318.13	-8990317.88	0.0291	0.0059
Uranus	-29313-04-29 21:35 J	-8985030.60	-8985030.60	-8985030.55	0.0142	0.0141
Saturn	-29313-05-07 09:21 J	-8985023.32	-8985023.11	-8985022.89	0.0268	0.0122
Uranus	-29312-05-04 16:04 J	-8984661.07	-8984660.83	-8984660.58	0.0142	0.0032
Uranus	-29311-05-09 10:33 J	-8984291.25	-8984291.06	-8984290.83	0.0143	0.0080
Jupiter	-29311-10-06 14:52 J	-8984141.06	-8984140.88	-8984140.69	0.0491	0.0311
Jupiter	-29299-10-11 03:50 J	-8979753.56	-8979753.34	-8979753.11	0.0492	0.0166
Saturn	-29299-10-31 21:07 J	-8979732.75	-8979732.62	-8979732.49	0.0290	0.0246
Mars	-29298-09-15 20:52 J	-8979413.78	-8979413.63	-8979413.48	0.1872	0.1253
Saturn	-29284-05-02 15:50 J	-8974436.07	-8974435.84	-8974435.61	0.0269	0.0093
Jupiter	-29281-04-07 11:31 J	-8973365.24	-8973365.02	-8973364.79	0.0536	0.0093
Uranus	-29273-11-05 12:14 J	-8970231.23	-8970230.99	-8970230.73	0.0136	0.0038
Uranus	-29272-11-10 01:26 J	-8969861.66	-8969861.44	-8969861.20	0.0136	0.0061
Jupiter	-29269-04-12 12:14 J	-8968977.05	-8968976.99	-8968976.92	0.0535	0.0509
Saturn	-29269-11-08 11:31 J	-8968767.25	-8968767.02	-8968766.80	0.0291	0.0114
Neptune	-29263-04-04 21:35 J	-8966793.71	-8966793.60	-8966793.45	0.0089	0.0077
Neptune	-29262-04-07 08:09 J	-8966426.38	-8966426.16	-8966425.90	0.0089	0.0034
Neptune	-29261-04-08 19:11 J	-8966058.94	-8966058.70	-8966058.44	0.0089	0.0011
Neptune	-29260-04-11 05:59 J	-8965691.44	-8965691.25	-8965691.04	0.0089	0.0054
Mars	-29257-03-20 09:07 J	-8964617.21	-8964617.12	-8964617.02	0.1652	0.1395
Saturn	-29254-05-09 11:59 J	-8963472.18	-8963472.00	-8963471.81	0.0268	0.0173
Saturn	-29240-11-02 00:43 J	-8958181.66	-8958181.47	-8958181.28	0.0290	0.0190
Uranus	-29229-04-30 04:33 J	-8954349.34	-8954349.31	-8954349.25	0.0142	0.0139
Uranus	-29228-05-04 22:47 J	-8953979.79	-8953979.55	-8953979.30	0.0142	0.0030
Jupiter	-29228-10-06 01:11 J	-8953825.61	-8953825.45	-8953825.28	0.0491	0.0359

Uranus	-29227-05-09 17:16 J	-8953609.98	-8953609.78	-8953609.56	0.0143	0.0081
Saturn	-29225-05-03 18:14 J	-8952884.98	-8952884.74	-8952884.50	0.0269	0.0044
Jupiter	-29216-10-10 11:02 J	-8949438.27	-8949438.04	-8949437.81	0.0492	0.0106
Saturn	-29210-11-10 16:33 J	-8947216.00	-8947215.81	-8947215.61	0.0291	0.0173
Jupiter	-29198-04-07 16:47 J	-8943050.01	-8943049.80	-8943049.58	0.0537	0.0178
Saturn	-29196-04-28 20:52 J	-8942297.67	-8942297.63	-8942297.58	0.0270	0.0264
Saturn	-29195-05-10 16:33 J	-8941920.92	-8941920.81	-8941920.67	0.0268	0.0228
Uranus	-29190-11-02 06:28 J	-8939919.26	-8939919.23	-8939919.15	0.0137	0.0134
Uranus	-29189-11-05 20:52 J	-8939549.87	-8939549.63	-8939549.38	0.0136	0.0034
Uranus	-29188-11-10 09:50 J	-8939180.30	-8939180.09	-8939179.85	0.0136	0.0064
Jupiter	-29186-04-12 19:40 J	-8938661.81	-8938661.68	-8938661.55	0.0535	0.0434
Neptune	-29181-10-05 23:02 J	-8936658.71	-8936658.54	-8936658.36	0.0088	0.0065
Saturn	-29181-11-03 07:11 J	-8936630.42	-8936630.20	-8936629.98	0.0290	0.0129
Neptune	-29180-10-08 11:31 J	-8936291.26	-8936291.02	-8936290.75	0.0088	0.0022
Neptune	-29179-10-11 00:14 J	-8935923.74	-8935923.49	-8935923.23	0.0088	0.0021
Neptune	-29178-10-13 12:28 J	-8935556.14	-8935555.98	-8935555.78	0.0088	0.0064
Pluto	-29171-06-24 00:14 J	-8933110.71	-8933110.49	-8933110.26	0.0068	0.0033
Pluto	-29170-06-25 15:35 J	-8932743.95	-8932743.85	-8932743.70	0.0068	0.0060
Saturn	-29166-05-05 22:19 J	-8931333.81	-8931333.57	-8931333.32	0.0269	0.0011
Saturn	-29151-11-12 01:40 J	-8925664.56	-8925664.43	-8925664.29	0.0291	0.0241
Uranus	-29145-04-30 10:33 J	-8923668.10	-8923668.06	-8923667.98	0.0142	0.0138
Jupiter	-29145-10-05 06:28 J	-8923510.34	-8923510.23	-8923510.12	0.0490	0.0430
Uranus	-29144-05-05 04:47 J	-8923298.54	-8923298.30	-8923298.05	0.0142	0.0029
Uranus	-29143-05-09 23:31 J	-8922928.73	-8922928.52	-8922928.31	0.0143	0.0081
Saturn	-29137-04-30 02:52 J	-8920746.53	-8920746.38	-8920746.22	0.0270	0.0208
Jupiter	-29133-10-09 15:50 J	-8919123.07	-8919122.84	-8919122.60	0.0491	0.0031
Mars	-29131-03-17 08:52 J	-8918599.29	-8918599.13	-8918598.98	0.1646	0.0946
Saturn	-29122-11-05 17:45 J	-8915079.00	-8915078.76	-8915078.52	0.0290	0.0060
Jupiter	-29115-04-06 18:28 J	-8912734.92	-8912734.73	-8912734.53	0.0536	0.0277
Saturn	-29107-05-07 04:04 J	-8909782.56	-8909782.33	-8909782.09	0.0270	0.0066

Uranus	-29106-11-02 14:38 J	-8909237.95	-8909237.89	-8909237.79	0.0137	0.0130
Uranus	-29105-11-06 05:02 J	-8908868.54	-8908868.29	-8908868.04	0.0136	0.0031
Uranus	-29104-11-10 17:59 J	-8908498.96	-8908498.75	-8908498.51	0.0136	0.0067
Jupiter	-29103-04-11 17:31 J	-8908346.95	-8908346.77	-8908346.59	0.0535	0.0314
Neptune	-29098-04-06 20:38 J	-8906525.83	-8906525.64	-8906525.42	0.0089	0.0053
Neptune	-29097-04-08 07:26 J	-8906158.43	-8906158.19	-8906157.93	0.0089	0.0010
Neptune	-29096-04-10 17:59 J	-8905790.97	-8905790.75	-8905790.50	0.0089	0.0034
Neptune	-29095-04-13 04:33 J	-8905423.42	-8905423.31	-8905423.16	0.0089	0.0077
Pluto	-29085-12-28 08:38 J	-8901511.34	-8901511.14	-8901510.89	0.0076	0.0037
Saturn	-29078-05-02 10:33 J	-8899195.26	-8899195.06	-8899194.85	0.0269	0.0149
Saturn	-29063-11-07 07:40 J	-8893527.43	-8893527.18	-8893526.93	0.0290	0.0015
Uranus	-29061-04-30 18:28 J	-8892986.80	-8892986.73	-8892986.66	0.0142	0.0135
Uranus	-29060-05-05 11:59 J	-8892617.24	-8892617.00	-8892616.74	0.0142	0.0027
Uranus	-29059-05-10 06:14 J	-8892247.43	-8892247.24	-8892247.02	0.0143	0.0084
Mars	-29052-03-19 11:02 J	-8889742.22	-8889742.04	-8889741.86	0.1647	0.0368
Jupiter	-29050-10-09 20:38 J	-8888807.88	-8888807.64	-8888807.41	0.0492	0.0043
Saturn	-29048-05-08 11:31 J	-8888231.24	-8888231.02	-8888230.80	0.0270	0.0124
Jupiter	-29038-10-14 06:43 J	-8884420.34	-8884420.22	-8884420.10	0.0492	0.0424
Saturn	-29034-11-01 17:02 J	-8882940.90	-8882940.79	-8882940.67	0.0290	0.0256
Jupiter	-29032-04-05 14:38 J	-8882420.03	-8882419.89	-8882419.74	0.0537	0.0410
Uranus	-29022-11-02 22:33 J	-8878556.64	-8878556.56	-8878556.45	0.0137	0.0127
Uranus	-29021-11-06 12:28 J	-8878187.22	-8878186.98	-8878186.71	0.0136	0.0029
Jupiter	-29020-04-10 16:04 J	-8878032.04	-8878031.83	-8878031.62	0.0536	0.0195
Uranus	-29020-11-11 02:09 J	-8877817.63	-8877817.41	-8877817.19	0.0136	0.0069
Saturn	-29019-05-03 18:57 J	-8877643.93	-8877643.71	-8877643.47	0.0269	0.0089
Neptune	-29017-10-05 08:38 J	-8876758.18	-8876758.14	-8876758.05	0.0088	0.0085
Neptune	-29016-10-07 21:21 J	-8876390.83	-8876390.61	-8876390.37	0.0088	0.0042
Neptune	-29015-10-10 10:19 J	-8876023.33	-8876023.07	-8876022.81	0.0088	0.0001
Neptune	-29014-10-12 22:19 J	-8875655.77	-8875655.57	-8875655.32	0.0088	0.0044
Neptune	-29013-10-14 10:47 J	-8875288.08	-8875288.05	-8875287.98	0.0088	0.0086

Saturn -29004-11-08 23:45 J -8871975.74 -8871975.51 -8871975.28 0.0290 0.0095

29TH MILLENNIUM BCE

This is a list of transits of Earth in the 29th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-28989-05-09 19:26 J		-8866679.86	-8866679.69	-8866679.51	0.0269	0.0184	
Uranus	-28977-05-01 03:21 J		-8862305.44	-8862305.36	-8862305.25	0.0142	0.0131	
Uranus	-28976-05-05 21:07 J		-8861935.86	-8861935.62	-8861935.37	0.0142	0.0023	
Uranus	-28975-05-10 15:21 J		-8861566.04	-8861565.86	-8861565.64	0.0143	0.0088	
Saturn	-28975-11-03 09:07 J		-8861389.31	-8861389.12	-8861388.92	0.0290	0.0176	
Jupiter	-28967-10-08 23:02 J		-8858492.77	-8858492.54	-8858492.31	0.0491	0.0127	
Saturn	-28960-05-05 04:19 J		-8856092.56	-8856092.32	-8856092.07	0.0269	0.0026	
Jupiter	-28955-10-13 08:23 J		-8854105.32	-8854105.15	-8854104.97	0.0492	0.0335	
Jupiter	-28949-04-04 16:04 J		-8852104.89	-8852104.83	-8852104.76	0.0538	0.0515	
Saturn	-28945-11-10 17:02 J		-8850423.98	-8850423.79	-8850423.59	0.0291	0.0178	
Uranus	-28938-11-03 06:57 J		-8847875.30	-8847875.21	-8847875.08	0.0137	0.0123	
Jupiter	-28937-04-09 17:31 J		-8847716.99	-8847716.77	-8847716.54	0.0536	0.0094	
Uranus	-28937-11-06 21:21 J		-8847505.86	-8847505.61	-8847505.35	0.0136	0.0025	
Uranus	-28936-11-11 10:33 J		-8847136.26	-8847136.06	-8847135.83	0.0136	0.0073	
Mars	-28935-09-18 10:47 J		-8846825.25	-8846825.05	-8846824.86	0.1874	0.0627	
Neptune	-28934-04-06 07:55 J		-8846625.28	-8846625.17	-8846625.00	0.0089	0.0075	
Neptune	-28933-04-07 18:57 J		-8846257.93	-8846257.71	-8846257.46	0.0089	0.0031	
Neptune	-28932-04-10 05:59 J		-8845890.50	-8845890.25	-8845890.00	0.0089	0.0012	

Neptune	-28931-04-12 16:19 J	-8845523.01	-8845522.82	-8845522.61	0.0089	0.0056
Saturn	-28931-04-30 05:45 J	-8845505.33	-8845505.26	-8845505.17	0.0271	0.0254
Saturn	-28930-05-12 03:07 J	-8845128.45	-8845128.37	-8845128.25	0.0269	0.0245
Pluto	-28924-06-25 10:33 J	-8842892.29	-8842892.06	-8842891.81	0.0068	0.0027
Pluto	-28923-06-27 02:38 J	-8842525.44	-8842525.39	-8842525.33	0.0068	0.0066
Saturn	-28916-11-05 01:11 J	-8839837.68	-8839837.45	-8839837.21	0.0290	0.0096
Saturn	-28901-05-06 13:11 J	-8834541.19	-8834540.95	-8834540.71	0.0269	0.0037
Uranus	-28893-05-01 13:26 J	-8831624.04	-8831623.94	-8831623.81	0.0142	0.0126
Uranus	-28892-05-06 07:26 J	-8831254.44	-8831254.19	-8831253.94	0.0142	0.0017
Uranus	-28891-05-11 01:55 J	-8830884.60	-8830884.42	-8830884.22	0.0143	0.0093
Saturn	-28886-11-13 09:50 J	-8828872.19	-8828872.09	-8828871.97	0.0291	0.0260
Jupiter	-28884-10-08 01:11 J	-8828177.66	-8828177.45	-8828177.23	0.0491	0.0212
Saturn	-28872-05-01 13:55 J	-8823954.08	-8823953.92	-8823953.74	0.0270	0.0192
Jupiter	-28872-10-12 10:33 J	-8823790.26	-8823790.06	-8823789.85	0.0492	0.0250
Saturn	-28857-11-06 16:19 J	-8818286.07	-8818285.82	-8818285.57	0.0290	0.0016
Jupiter	-28854-04-09 11:31 J	-8817402.25	-8817402.02	-8817401.79	0.0536	0.0052
Uranus	-28854-11-03 17:02 J	-8817193.92	-8817193.79	-8817193.66	0.0137	0.0118
Uranus	-28853-11-07 06:57 J	-8816824.47	-8816824.21	-8816823.96	0.0136	0.0020
Neptune	-28852-10-07 06:57 J	-8816490.37	-8816490.21	-8816490.00	0.0088	0.0063
Uranus	-28852-11-11 20:09 J	-8816454.87	-8816454.66	-8816454.45	0.0136	0.0077
Neptune	-28851-10-09 19:55 J	-8816122.91	-8816122.67	-8816122.40	0.0088	0.0020
Neptune	-28850-10-12 08:09 J	-8815755.40	-8815755.16	-8815754.89	0.0088	0.0024
Neptune	-28849-10-13 20:38 J	-8815387.79	-8815387.64	-8815387.45	0.0088	0.0066
Mars	-28847-03-18 13:55 J	-8814867.09	-8814866.92	-8814866.75	0.1643	0.0630
Saturn	-28842-05-08 21:07 J	-8812989.85	-8812989.62	-8812989.40	0.0269	0.0098
Pluto	-28838-12-30 19:11 J	-8811292.88	-8811292.70	-8811292.46	0.0076	0.0044
Saturn	-28813-05-02 20:52 J	-8802402.83	-8802402.63	-8802402.41	0.0270	0.0132
Uranus	-28809-05-01 22:47 J	-8800942.66	-8800942.55	-8800942.41	0.0142	0.0121
Uranus	-28808-05-06 16:47 J	-8800573.05	-8800572.80	-8800572.55	0.0142	0.0013
Uranus	-28807-05-11 11:45 J	-8800203.19	-8800203.01	-8800202.82	0.0143	0.0097

Jupiter	-28801-10-07 04:33 J	-8797862.49	-8797862.31	-8797862.11	0.0490	0.0294
Saturn	-28798-11-09 04:04 J	-8796734.57	-8796734.33	-8796734.08	0.0291	0.0059
Jupiter	-28789-10-11 16:19 J	-8793475.04	-8793474.82	-8793474.60	0.0491	0.0177
Saturn	-28783-05-10 03:35 J	-8791438.54	-8791438.35	-8791438.15	0.0269	0.0158
Jupiter	-28771-04-08 13:26 J	-8787087.16	-8787086.94	-8787086.72	0.0537	0.0154
Uranus	-28770-11-04 02:38 J	-8786512.51	-8786512.39	-8786512.22	0.0137	0.0113
Neptune	-28769-04-07 05:59 J	-8786357.43	-8786357.25	-8786357.02	0.0089	0.0053
Saturn	-28769-11-02 01:55 J	-8786148.55	-8786148.42	-8786148.27	0.0290	0.0236
Uranus	-28769-11-07 17:16 J	-8786143.04	-8786142.78	-8786142.53	0.0136	0.0015
Mars	-28768-03-20 16:04 J	-8786009.99	-8786009.83	-8786009.66	0.1645	0.0680
Neptune	-28768-04-09 16:47 J	-8785990.04	-8785989.80	-8785989.54	0.0089	0.0009
Uranus	-28768-11-12 06:14 J	-8785773.43	-8785773.24	-8785773.02	0.0136	0.0083
Neptune	-28767-04-12 03:35 J	-8785622.58	-8785622.35	-8785622.11	0.0089	0.0035
Neptune	-28766-04-14 14:23 J	-8785255.02	-8785254.90	-8785254.78	0.0089	0.0078
Jupiter	-28759-04-13 16:47 J	-8782698.91	-8782698.80	-8782698.68	0.0536	0.0459
Saturn	-28754-05-05 02:38 J	-8780851.62	-8780851.39	-8780851.15	0.0270	0.0074
Saturn	-28739-11-10 13:26 J	-8775183.16	-8775182.94	-8775182.72	0.0291	0.0128
Uranus	-28725-05-02 07:40 J	-8770261.31	-8770261.18	-8770261.03	0.0142	0.0117
Uranus	-28724-05-07 01:40 J	-8769891.68	-8769891.43	-8769891.18	0.0142	0.0009
Saturn	-28724-05-11 08:23 J	-8769887.30	-8769887.15	-8769887.01	0.0268	0.0214
Uranus	-28723-05-11 20:38 J	-8769521.81	-8769521.64	-8769521.46	0.0143	0.0101
Jupiter	-28718-10-07 11:02 J	-8767547.19	-8767547.04	-8767546.87	0.0490	0.0360
Saturn	-28710-11-04 10:19 J	-8764597.27	-8764597.07	-8764596.86	0.0290	0.0169
Jupiter	-28706-10-11 21:35 J	-8763159.83	-8763159.60	-8763159.37	0.0491	0.0104
Saturn	-28695-05-06 06:57 J	-8759300.45	-8759300.21	-8759299.97	0.0269	0.0018
Jupiter	-28688-04-07 18:57 J	-8756771.92	-8756771.71	-8756771.51	0.0537	0.0241
Neptune	-28688-10-06 16:04 J	-8756589.88	-8756589.83	-8756589.73	0.0088	0.0084
Neptune	-28687-10-09 04:47 J	-8756222.52	-8756222.30	-8756222.06	0.0088	0.0041
Neptune	-28686-10-11 17:31 J	-8755855.03	-8755854.77	-8755854.51	0.0088	0.0002
Uranus	-28686-11-04 13:40 J	-8755831.09	-8755830.93	-8755830.78	0.0137	0.0107

Neptune	-28685-10-13 05:31 J	-8755487.47	-8755487.27	-8755487.02	0.0088	0.0045
Uranus	-28685-11-08 03:35 J	-8755461.61	-8755461.35	-8755461.09	0.0136	0.0009
Neptune	-28684-10-15 18:14 J	-8755119.75	-8755119.74	-8755119.69	0.0088	0.0087
Uranus	-28684-11-12 16:33 J	-8755091.99	-8755091.81	-8755091.60	0.0136	0.0088
Saturn	-28680-11-11 18:43 J	-8753631.91	-8753631.72	-8753631.54	0.0291	0.0191
Pluto	-28677-06-27 01:11 J	-8752673.70	-8752673.45	-8752673.19	0.0068	0.0008
Jupiter	-28676-04-12 14:09 J	-8752384.08	-8752383.91	-8752383.73	0.0536	0.0333
Saturn	-28666-05-01 15:21 J	-8748712.98	-8748712.86	-8748712.72	0.0270	0.0230
Saturn	-28665-05-12 11:02 J	-8748336.04	-8748336.04	-8748336.01	0.0268	0.0268
Mars	-28651-09-17 11:31 J	-8743095.20	-8743095.02	-8743094.83	0.1879	0.0831
Saturn	-28651-11-05 15:50 J	-8743046.07	-8743045.84	-8743045.60	0.0291	0.0108
Mars	-28642-03-17 17:59 J	-8739991.80	-8739991.75	-8739991.70	0.1639	0.1570
Uranus	-28641-05-02 14:23 J	-8739580.02	-8739579.90	-8739579.73	0.0142	0.0115
Uranus	-28640-05-07 08:52 J	-8739210.38	-8739210.13	-8739209.88	0.0142	0.0007
Uranus	-28639-05-12 03:50 J	-8738840.50	-8738840.34	-8738840.16	0.0143	0.0103
Saturn	-28636-05-07 09:21 J	-8737749.35	-8737749.11	-8737748.87	0.0269	0.0035
Jupiter	-28635-10-06 18:14 J	-8737231.85	-8737231.74	-8737231.62	0.0490	0.0425
Jupiter	-28623-10-11 06:28 J	-8732844.47	-8732844.23	-8732843.99	0.0491	0.0045
Saturn	-28621-11-12 20:38 J	-8732080.76	-8732080.64	-8732080.50	0.0291	0.0247
Saturn	-28607-05-02 17:16 J	-8727161.95	-8727161.78	-8727161.59	0.0270	0.0179
Jupiter	-28605-04-06 16:47 J	-8726456.97	-8726456.80	-8726456.63	0.0537	0.0365
Neptune	-28605-04-06 16:19 J	-8726456.93	-8726456.82	-8726456.65	0.0089	0.0074 *
Neptune	-28604-04-09 03:35 J	-8726089.58	-8726089.35	-8726089.10	0.0089	0.0031
Neptune	-28603-04-11 14:23 J	-8725722.15	-8725721.90	-8725721.64	0.0089	0.0013
Neptune	-28602-04-14 00:57 J	-8725354.64	-8725354.46	-8725354.25	0.0089	0.0057
Uranus	-28602-11-04 23:31 J	-8725149.68	-8725149.52	-8725149.33	0.0137	0.0102
Uranus	-28601-11-08 13:55 J	-8724780.17	-8724779.92	-8724779.66	0.0136	0.0004
Uranus	-28600-11-13 03:21 J	-8724410.54	-8724410.36	-8724410.17	0.0136	0.0093
Jupiter	-28593-04-11 19:26 J	-8722068.89	-8722068.69	-8722068.48	0.0537	0.0249
Saturn	-28592-11-06 17:45 J	-8721495.00	-8721494.76	-8721494.52	0.0291	0.0052

Pluto	-28592-12-30 13:26 J	-8721441.08	-8721440.94	-8721440.75	0.0077	0.0059
Pluto	-28590-01-01 14:23 J	-8721073.92	-8721073.90	-8721073.86	0.0076	0.0076
Saturn	-28577-05-08 10:47 J	-8716198.28	-8716198.05	-8716197.82	0.0269	0.0086
Mars	-28563-03-19 19:55 J	-8711134.85	-8711134.67	-8711134.49	0.1641	0.0295
Uranus	-28557-05-02 22:19 J	-8708898.70	-8708898.57	-8708898.40	0.0142	0.0112
Uranus	-28556-05-07 16:47 J	-8708529.05	-8708528.80	-8708528.55	0.0142	0.0005
Uranus	-28555-05-12 11:31 J	-8708159.18	-8708159.02	-8708158.85	0.0143	0.0105
Jupiter	-28552-10-06 06:43 J	-8706916.28	-8706916.22	-8706916.14	0.0490	0.0464
Saturn	-28548-05-03 17:45 J	-8705610.97	-8705610.76	-8705610.54	0.0269	0.0130
Jupiter	-28540-10-10 16:47 J	-8702529.04	-8702528.80	-8702528.56	0.0490	0.0005
Saturn	-28533-11-07 17:59 J	-8699944.00	-8699943.75	-8699943.51	0.0291	0.0004
Jupiter	-28528-10-15 03:35 J	-8698141.42	-8698141.35	-8698141.26	0.0491	0.0462
Neptune	-28523-10-08 13:11 J	-8696322.11	-8696321.95	-8696321.75	0.0088	0.0063
Jupiter	-28522-04-07 02:23 J	-8696141.54	-8696141.40	-8696141.27	0.0538	0.0429
Neptune	-28522-10-11 01:40 J	-8695954.67	-8695954.43	-8695954.16	0.0088	0.0020
Neptune	-28521-10-12 14:09 J	-8695587.15	-8695586.91	-8695586.64	0.0088	0.0023
Neptune	-28520-10-15 02:23 J	-8695219.55	-8695219.40	-8695219.20	0.0088	0.0066
Saturn	-28518-05-10 11:02 J	-8694647.25	-8694647.04	-8694646.83	0.0268	0.0135
Uranus	-28518-11-05 09:07 J	-8694468.28	-8694468.12	-8694467.92	0.0137	0.0097
Uranus	-28517-11-08 23:59 J	-8694098.76	-8694098.50	-8694098.24	0.0136	0.0002
Uranus	-28516-11-13 12:57 J	-8693729.12	-8693728.96	-8693728.77	0.0136	0.0098
Jupiter	-28510-04-12 05:31 J	-8691753.48	-8691753.27	-8691753.05	0.0537	0.0185
Saturn	-28489-05-04 17:16 J	-8684060.00	-8684059.78	-8684059.54	0.0269	0.0084
Mars	-28484-03-21 21:50 J	-8682277.74	-8682277.59	-8682277.44	0.1642	0.0998
Saturn	-28474-11-09 17:16 J	-8678393.02	-8678392.78	-8678392.53	0.0291	0.0050
Uranus	-28473-05-03 07:11 J	-8678217.34	-8678217.20	-8678217.01	0.0142	0.0108
Uranus	-28472-05-08 01:26 J	-8677847.69	-8677847.44	-8677847.19	0.0142	0.0002
Uranus	-28471-05-12 19:55 J	-8677477.82	-8677477.67	-8677477.49	0.0143	0.0109
Saturn	-28459-05-11 11:02 J	-8673096.21	-8673096.04	-8673095.86	0.0268	0.0183
Jupiter	-28457-10-10 02:23 J	-8672213.64	-8672213.40	-8672213.17	0.0490	0.0057

Jupiter	-28445-10-14 15:07 J	-8667825.99	-8667825.87	-8667825.74	0.0491	0.0415
Saturn	-28445-11-02 05:16 J	-8667807.39	-8667807.28	-8667807.17	0.0290	0.0260
Neptune	-28440-04-08 12:43 J	-8666189.15	-8666188.97	-8666188.74	0.0089	0.0054
Jupiter	-28439-04-06 05:31 J	-8665826.31	-8665826.27	-8665826.21	0.0538	0.0522
Neptune	-28439-04-11 00:14 J	-8665821.74	-8665821.49	-8665821.24	0.0089	0.0010
Neptune	-28438-04-13 10:33 J	-8665454.28	-8665454.06	-8665453.81	0.0089	0.0034
Neptune	-28437-04-14 21:07 J	-8665086.72	-8665086.62	-8665086.47	0.0089	0.0077
Uranus	-28434-11-05 19:40 J	-8663786.86	-8663786.68	-8663786.47	0.0137	0.0091
Uranus	-28433-11-09 10:19 J	-8663417.32	-8663417.07	-8663416.81	0.0136	0.0007
Uranus	-28432-11-13 23:45 J	-8663047.67	-8663047.51	-8663047.34	0.0136	0.0103
Saturn	-28430-05-06 16:47 J	-8662509.04	-8662508.80	-8662508.56	0.0269	0.0038
Pluto	-28430-06-29 21:07 J	-8662454.86	-8662454.62	-8662454.38	0.0068	0.0024
Jupiter	-28427-04-11 05:59 J	-8661438.48	-8661438.25	-8661438.02	0.0537	0.0076
Saturn	-28415-11-10 16:47 J	-8656842.03	-8656841.80	-8656841.56	0.0291	0.0101
Saturn	-28401-04-30 15:35 J	-8651921.85	-8651921.85	-8651921.84	0.0270	0.0270
Saturn	-28400-05-12 11:16 J	-8651545.15	-8651545.03	-8651544.90	0.0268	0.0230
Uranus	-28389-05-03 19:11 J	-8647535.86	-8647535.70	-8647535.51	0.0142	0.0101
Uranus	-28388-05-08 13:11 J	-8647166.20	-8647165.95	-8647165.69	0.0142	0.0007
Uranus	-28387-05-13 07:40 J	-8646796.31	-8646796.18	-8646796.02	0.0143	0.0115
Saturn	-28386-11-04 04:47 J	-8646256.47	-8646256.30	-8646256.13	0.0290	0.0211
Jupiter	-28374-10-10 14:38 J	-8641898.13	-8641897.89	-8641897.66	0.0491	0.0097
Saturn	-28371-05-07 16:47 J	-8640958.04	-8640957.80	-8640957.55	0.0270	0.0009
Jupiter	-28362-10-15 00:43 J	-8637510.63	-8637510.47	-8637510.31	0.0491	0.0365
Neptune	-28359-10-07 20:38 J	-8636421.69	-8636421.64	-8636421.57	0.0088	0.0086
Mars	-28358-03-19 00:14 J	-8636259.61	-8636259.49	-8636259.37	0.1637	0.1228
Neptune	-28358-10-10 09:35 J	-8636054.33	-8636054.10	-8636053.87	0.0088	0.0042
Neptune	-28357-10-11 22:04 J	-8635686.84	-8635686.58	-8635686.32	0.0088	0.0001
Neptune	-28356-10-14 10:19 J	-8635319.29	-8635319.07	-8635318.83	0.0088	0.0043
Saturn	-28356-11-11 18:14 J	-8635290.94	-8635290.74	-8635290.52	0.0291	0.0155
Neptune	-28355-10-16 22:19 J	-8634951.59	-8634951.57	-8634951.49	0.0088	0.0087

Uranus	-28350-11-06 06:43 J	-8633105.40	-8633105.22	-8633105.00	0.0137	0.0085
Uranus	-28349-11-09 21:35 J	-8632735.85	-8632735.60	-8632735.34	0.0136	0.0013
Uranus	-28348-11-14 10:47 J	-8632366.19	-8632366.05	-8632365.88	0.0136	0.0109
Pluto	-28344-01-01 13:11 J	-8631222.20	-8631221.95	-8631221.69	0.0077	0.0012
Jupiter	-28344-04-10 13:26 J	-8631123.17	-8631122.94	-8631122.71	0.0537	0.0006
Saturn	-28342-05-02 16:47 J	-8630370.93	-8630370.80	-8630370.66	0.0270	0.0221
Saturn	-28327-11-05 06:43 J	-8624705.42	-8624705.22	-8624705.01	0.0290	0.0157
Saturn	-28312-05-08 17:45 J	-8619407.00	-8619406.76	-8619406.52	0.0270	0.0057
Uranus	-28305-05-04 06:43 J	-8616854.39	-8616854.22	-8616854.02	0.0142	0.0094
Uranus	-28304-05-09 00:43 J	-8616484.72	-8616484.47	-8616484.22	0.0142	0.0013
Uranus	-28303-05-13 19:11 J	-8616114.83	-8616114.70	-8616114.57	0.0143	0.0121
Saturn	-28297-11-12 22:04 J	-8613739.75	-8613739.58	-8613739.41	0.0291	0.0212
Jupiter	-28291-10-09 21:50 J	-8611582.81	-8611582.59	-8611582.36	0.0490	0.0159
Mars	-28288-09-20 03:50 J	-8610506.49	-8610506.34	-8610506.18	0.1880	0.1201
Saturn	-28283-05-03 19:55 J	-8608819.86	-8608819.67	-8608819.48	0.0270	0.0169
Mars	-28279-03-21 02:23 J	-8607402.59	-8607402.40	-8607402.22	0.1638	0.0053
Jupiter	-28279-10-14 07:40 J	-8607195.36	-8607195.18	-8607194.99	0.0491	0.0300
Neptune	-28276-04-07 22:19 J	-8606288.67	-8606288.57	-8606288.41	0.0089	0.0076
Neptune	-28275-04-10 09:21 J	-8605921.34	-8605921.11	-8605920.87	0.0089	0.0033
Neptune	-28274-04-12 19:55 J	-8605553.91	-8605553.67	-8605553.41	0.0089	0.0011
Neptune	-28273-04-14 06:28 J	-8605186.41	-8605186.23	-8605186.01	0.0089	0.0055
Saturn	-28268-11-06 11:59 J	-8603154.23	-8603154.00	-8603153.76	0.0290	0.0097
Uranus	-28266-11-06 19:40 J	-8602423.88	-8602423.68	-8602423.46	0.0137	0.0077
Uranus	-28265-11-10 10:19 J	-8602054.32	-8602054.07	-8602053.82	0.0136	0.0020
Uranus	-28264-11-14 23:45 J	-8601684.64	-8601684.51	-8601684.37	0.0136	0.0116
Jupiter	-28261-04-09 16:47 J	-8600808.03	-8600807.80	-8600807.57	0.0537	0.0088
Saturn	-28253-05-09 20:09 J	-8597855.88	-8597855.66	-8597855.43	0.0270	0.0108
Jupiter	-28249-04-14 16:04 J	-8596419.90	-8596419.83	-8596419.75	0.0535	0.0502
Saturn	-28238-11-15 05:31 J	-8592188.34	-8592188.27	-8592188.19	0.0291	0.0278
Saturn	-28224-05-05 00:28 J	-8587268.69	-8587268.48	-8587268.26	0.0270	0.0115

Uranus	-28221-05-04 18:57 J	-8586172.91	-8586172.71	-8586172.51	0.0142	0.0087
Uranus	-28220-05-09 12:28 J	-8585803.22	-8585802.98	-8585802.73	0.0142	0.0020
Uranus	-28219-05-14 06:57 J	-8585433.31	-8585433.21	-8585433.09	0.0143	0.0128
Saturn	-28209-11-07 20:52 J	-8581602.88	-8581602.63	-8581602.38	0.0290	0.0031
Jupiter	-28208-10-09 04:19 J	-8581267.52	-8581267.32	-8581267.10	0.0490	0.0225
Mars	-28200-03-23 04:04 J	-8578545.44	-8578545.33	-8578545.22	0.1640	0.1332
Jupiter	-28196-10-13 14:23 J	-8576880.10	-8576879.90	-8576879.69	0.0491	0.0237
Saturn	-28194-05-12 00:57 J	-8576304.65	-8576304.46	-8576304.26	0.0270	0.0164
Neptune	-28194-10-09 15:21 J	-8576154.01	-8576153.86	-8576153.66	0.0088	0.0066
Neptune	-28193-10-11 04:04 J	-8575786.57	-8575786.33	-8575786.06	0.0088	0.0023
Neptune	-28192-10-13 16:47 J	-8575419.05	-8575418.80	-8575418.54	0.0088	0.0020
Neptune	-28191-10-16 05:02 J	-8575051.46	-8575051.29	-8575051.09	0.0088	0.0063
Pluto	-28184-06-30 03:35 J	-8572602.56	-8572602.35	-8572602.09	0.0068	0.0029
Pluto	-28183-07-01 19:26 J	-8572235.72	-8572235.69	-8572235.61	0.0068	0.0067
Uranus	-28182-11-07 08:38 J	-8571742.35	-8571742.14	-8571741.90	0.0137	0.0069
Uranus	-28181-11-10 23:16 J	-8571372.78	-8571372.53	-8571372.27	0.0136	0.0028
Uranus	-28180-11-15 11:59 J	-8571003.08	-8571003.00	-8571002.87	0.0136	0.0124
Jupiter	-28178-04-09 15:07 J	-8570493.08	-8570492.87	-8570492.66	0.0537	0.0209
Jupiter	-28166-04-14 17:02 J	-8566104.95	-8566104.79	-8566104.64	0.0536	0.0396
Saturn	-28165-05-06 06:57 J	-8565717.44	-8565717.21	-8565716.96	0.0270	0.0056
Saturn	-28150-11-10 09:50 J	-8560051.34	-8560051.09	-8560050.85	0.0290	0.0044
Uranus	-28137-05-05 04:04 J	-8555491.52	-8555491.33	-8555491.11	0.0142	0.0083
Uranus	-28136-05-09 22:04 J	-8555121.83	-8555121.58	-8555121.33	0.0142	0.0023
Saturn	-28135-05-13 07:26 J	-8554753.33	-8554753.19	-8554753.05	0.0270	0.0222
Uranus	-28135-05-14 16:04 J	-8554751.90	-8554751.83	-8554751.71	0.0143	0.0132
Jupiter	-28125-10-08 07:26 J	-8550952.37	-8550952.19	-8550952.00	0.0490	0.0304
Saturn	-28121-11-03 18:14 J	-8549464.88	-8549464.74	-8549464.59	0.0289	0.0233
Jupiter	-28113-10-12 17:45 J	-8546564.98	-8546564.76	-8546564.53	0.0491	0.0157
Neptune	-28111-04-09 17:16 J	-8546020.95	-8546020.78	-8546020.56	0.0089	0.0057
Neptune	-28110-04-12 04:33 J	-8545653.56	-8545653.31	-8545653.06	0.0089	0.0013

Neptune	-28109-04-13 14:38 J	-8545286.11	-8545285.89	-8545285.63	0.0089	0.0032
Neptune	-28108-04-16 01:26 J	-8544918.56	-8544918.44	-8544918.28	0.0089	0.0074
Saturn	-28106-05-08 15:35 J	-8544166.10	-8544165.85	-8544165.61	0.0270	0.0008
Uranus	-28098-11-07 22:04 J	-8541060.80	-8541060.58	-8541060.34	0.0137	0.0061
Pluto	-28097-01-04 17:45 J	-8541002.93	-8541002.76	-8541002.56	0.0076	0.0054
Uranus	-28097-11-11 12:14 J	-8540691.22	-8540690.99	-8540690.73	0.0136	0.0037
Uranus	-28096-11-16 01:26 J	-8540321.49	-8540321.44	-8540321.36	0.0136	0.0131
Jupiter	-28095-04-08 17:45 J	-8540177.95	-8540177.76	-8540177.57	0.0538	0.0307
Saturn	-28091-11-12 01:11 J	-8538499.68	-8538499.45	-8538499.23	0.0290	0.0125
Jupiter	-28083-04-13 18:57 J	-8535789.90	-8535789.71	-8535789.52	0.0536	0.0296
Saturn	-28077-05-02 17:31 J	-8533578.89	-8533578.77	-8533578.62	0.0271	0.0227
Mars	-28074-03-20 06:43 J	-8532527.38	-8532527.22	-8532527.07	0.1635	0.0879
Saturn	-28062-11-06 10:04 J	-8527913.28	-8527913.08	-8527912.85	0.0290	0.0152
Uranus	-28053-05-05 14:09 J	-8524810.11	-8524809.91	-8524809.70	0.0142	0.0078
Uranus	-28052-05-10 07:26 J	-8524440.43	-8524440.19	-8524439.93	0.0142	0.0029
Uranus	-28051-05-15 01:55 J	-8524070.48	-8524070.42	-8524070.33	0.0143	0.0136
Saturn	-28047-05-10 00:43 J	-8522614.70	-8522614.47	-8522614.23	0.0270	0.0072
Jupiter	-28042-10-08 09:50 J	-8520637.23	-8520637.09	-8520636.94	0.0489	0.0387
Saturn	-28032-11-13 18:28 J	-8516947.90	-8516947.73	-8516947.56	0.0291	0.0209
Jupiter	-28030-10-12 20:09 J	-8516249.89	-8516249.66	-8516249.42	0.0490	0.0073
Neptune	-28029-10-10 09:35 J	-8515886.30	-8515886.10	-8515885.86	0.0088	0.0047
Neptune	-28028-10-12 22:33 J	-8515518.82	-8515518.56	-8515518.30	0.0088	0.0004
Neptune	-28027-10-15 11:02 J	-8515151.27	-8515151.04	-8515150.80	0.0088	0.0039
Neptune	-28026-10-17 23:16 J	-8514783.60	-8514783.53	-8514783.42	0.0088	0.0082
Saturn	-28018-05-05 02:38 J	-8512027.58	-8512027.39	-8512027.19	0.0271	0.0161
Uranus	-28014-11-08 10:47 J	-8510379.28	-8510379.05	-8510378.81	0.0137	0.0053
Uranus	-28013-11-12 00:57 J	-8510009.70	-8510009.46	-8510009.21	0.0136	0.0043
Jupiter	-28012-04-07 16:47 J	-8509862.94	-8509862.80	-8509862.66	0.0537	0.0423
Mars	-28004-09-19 02:38 J	-8506776.60	-8506776.39	-8506776.19	0.1884	0.0335
Saturn	-28003-11-08 02:38 J	-8506361.63	-8506361.39	-8506361.15	0.0290	0.0068

28TH MILLENNIUM BCE

This is a list of transits of Earth in the 28th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-28000-04-12 12:57 J		-8505475.18	-8505474.96	-8505474.74	0.0537	0.0152	
Mars	-27995-03-22 08:23 J		-8503670.33	-8503670.15	-8503669.97	0.1636	0.0389	
Saturn	-27988-05-11 10:19 J		-8501063.27	-8501063.07	-8501062.86	0.0269	0.0137	
Uranus	-27969-05-05 22:33 J		-8494128.76	-8494128.56	-8494128.34	0.0142	0.0075	
Uranus	-27968-05-10 15:50 J		-8493759.07	-8493758.84	-8493758.58	0.0142	0.0032	
Uranus	-27967-05-15 10:19 J		-8493389.11	-8493389.07	-8493389.00	0.0143	0.0139	
Saturn	-27959-05-06 11:31 J		-8490476.24	-8490476.02	-8490475.79	0.0271	0.0096	
Jupiter	-27959-10-07 11:16 J		-8490322.07	-8490322.03	-8490321.97	0.0490	0.0476	
Neptune	-27947-04-09 01:11 J		-8486120.53	-8486120.45	-8486120.31	0.0089	0.0081	
Jupiter	-27947-10-11 21:50 J		-8485934.82	-8485934.59	-8485934.35	0.0490	0.0018	
Neptune	-27946-04-11 12:14 J		-8485753.21	-8485752.99	-8485752.75	0.0089	0.0037	
Neptune	-27945-04-12 23:02 J		-8485385.79	-8485385.54	-8485385.29	0.0089	0.0007	
Neptune	-27944-04-15 09:07 J		-8485018.31	-8485018.12	-8485017.89	0.0089	0.0050	
Saturn	-27944-11-09 18:28 J		-8484809.98	-8484809.73	-8484809.49	0.0290	0.0015	
Pluto	-27937-07-02 06:43 J		-8482383.45	-8482383.22	-8482382.97	0.0068	0.0025	
Jupiter	-27935-10-16 09:07 J		-8481547.21	-8481547.12	-8481547.02	0.0491	0.0449	
Uranus	-27930-11-08 23:16 J		-8479697.77	-8479697.53	-8479697.29	0.0137	0.0046	
Saturn	-27929-05-12 19:11 J		-8479511.85	-8479511.70	-8479511.54	0.0269	0.0202	
Uranus	-27929-11-12 13:11 J		-8479328.18	-8479327.95	-8479327.70	0.0136	0.0051	

Jupiter	-27917-04-11 13:26 J	-8475160.17	-8475159.94	-8475159.71	0.0537	0.0043
Saturn	-27915-11-03 17:31 J	-8474223.81	-8474223.77	-8474223.70	0.0289	0.0281
Saturn	-27900-05-07 19:40 J	-8468924.92	-8468924.68	-8468924.44	0.0270	0.0032
Uranus	-27885-05-06 10:47 J	-8463447.25	-8463447.05	-8463446.81	0.0142	0.0068
Saturn	-27885-11-11 07:40 J	-8463258.41	-8463258.18	-8463257.94	0.0290	0.0094
Uranus	-27884-05-11 04:04 J	-8463077.56	-8463077.33	-8463077.08	0.0142	0.0039
Saturn	-27871-05-03 05:16 J	-8458337.37	-8458337.28	-8458337.17	0.0271	0.0246
Saturn	-27870-05-15 02:23 J	-8457960.42	-8457960.40	-8457960.34	0.0269	0.0265
Neptune	-27865-10-09 13:26 J	-8455986.07	-8455985.94	-8455985.77	0.0088	0.0072
Jupiter	-27864-10-11 02:09 J	-8455619.64	-8455619.41	-8455619.17	0.0490	0.0092
Neptune	-27864-10-12 02:23 J	-8455618.63	-8455618.40	-8455618.14	0.0088	0.0029
Neptune	-27863-10-14 15:21 J	-8455251.12	-8455250.86	-8455250.60	0.0088	0.0014
Neptune	-27862-10-17 03:35 J	-8454883.53	-8454883.35	-8454883.14	0.0088	0.0057
Saturn	-27856-11-05 06:57 J	-8452672.37	-8452672.21	-8452672.02	0.0289	0.0204
Jupiter	-27852-10-15 12:28 J	-8451232.13	-8451231.98	-8451231.82	0.0491	0.0368
Pluto	-27851-01-05 01:40 J	-8451150.68	-8451150.43	-8451150.17	0.0077	0.0005
Uranus	-27847-11-04 19:55 J	-8449385.68	-8449385.67	-8449385.64	0.0137	0.0137
Uranus	-27846-11-09 11:16 J	-8449016.28	-8449016.03	-8449015.78	0.0137	0.0039
Uranus	-27845-11-13 01:26 J	-8448646.66	-8448646.44	-8448646.19	0.0136	0.0057
Saturn	-27841-05-09 02:09 J	-8447373.65	-8447373.41	-8447373.16	0.0270	0.0030
Jupiter	-27834-04-11 16:19 J	-8444845.05	-8444844.82	-8444844.59	0.0537	0.0056
Saturn	-27826-11-13 17:59 J	-8441706.94	-8441706.75	-8441706.54	0.0291	0.0167
Jupiter	-27822-04-16 11:31 J	-8440457.08	-8440457.02	-8440456.95	0.0536	0.0514
Saturn	-27812-05-04 11:31 J	-8436786.20	-8436786.02	-8436785.85	0.0271	0.0186
Uranus	-27801-05-06 23:31 J	-8432765.74	-8432765.52	-8432765.29	0.0142	0.0060
Uranus	-27800-05-11 17:02 J	-8432396.03	-8432395.79	-8432395.56	0.0142	0.0046
Saturn	-27797-11-06 16:33 J	-8431121.02	-8431120.81	-8431120.58	0.0290	0.0133
Mars	-27790-03-21 13:11 J	-8428795.13	-8428794.95	-8428794.78	0.1633	0.0532
Neptune	-27782-04-10 19:11 J	-8425852.87	-8425852.70	-8425852.50	0.0089	0.0061
Saturn	-27782-05-11 07:11 J	-8425822.42	-8425822.20	-8425821.97	0.0270	0.0089

Neptune -27781-04-12 05:45 J -8425485.49 -8425485.26 -8425485.00 0.0089 0.0019
 Jupiter -27781-10-10 06:43 J -8425304.44 -8425304.22 -8425303.99 0.0490 0.0168
 Neptune -27780-04-14 16:33 J -8425118.05 -8425117.81 -8425117.56 0.0089 0.0026
 Neptune -27779-04-17 03:07 J -8424750.53 -8424750.37 -8424750.21 0.0089 0.0069
 Jupiter -27769-10-14 18:43 J -8420916.90 -8420916.72 -8420916.53 0.0491 0.0298
 Saturn -27767-11-15 00:57 J -8420155.60 -8420155.46 -8420155.31 0.0291 0.0234
 Uranus -27763-11-05 09:21 J -8418704.19 -8418704.11 -8418704.01 0.0137 0.0129
 Uranus -27762-11-10 00:57 J -8418334.71 -8418334.46 -8418334.21 0.0137 0.0031
 Uranus -27761-11-13 15:07 J -8417965.08 -8417964.87 -8417964.63 0.0136 0.0066
 Saturn -27753-05-05 15:21 J -8415235.07 -8415234.86 -8415234.65 0.0270 0.0130
 Jupiter -27751-04-10 12:14 J -8414530.20 -8414529.99 -8414529.77 0.0538 0.0189
 Jupiter -27739-04-15 14:52 J -8410142.02 -8410141.88 -8410141.73 0.0537 0.0419
 Saturn -27738-11-08 22:47 J -8409569.79 -8409569.55 -8409569.31 0.0290 0.0068
 Saturn -27723-05-12 10:04 J -8404271.28 -8404271.08 -8404270.87 0.0269 0.0143
 Uranus -27717-05-07 14:38 J -8402084.13 -8402083.89 -8402083.66 0.0142 0.0050
 Uranus -27716-05-12 07:55 J -8401714.40 -8401714.17 -8401713.94 0.0142 0.0056
 Mars -27711-03-23 14:23 J -8399938.06 -8399937.90 -8399937.73 0.1634 0.0728
 Neptune -27700-10-11 05:59 J -8395718.44 -8395718.25 -8395718.03 0.0088 0.0054
 Neptune -27699-10-13 18:57 J -8395350.97 -8395350.71 -8395350.45 0.0088 0.0011
 Jupiter -27698-10-10 17:59 J -8394988.97 -8394988.75 -8394988.54 0.0490 0.0214
 Neptune -27698-10-16 07:11 J -8394983.43 -8394983.20 -8394982.94 0.0088 0.0032
 Neptune -27697-10-17 19:40 J -8394615.79 -8394615.68 -8394615.52 0.0088 0.0075
 Saturn -27694-05-07 17:31 J -8393684.00 -8393683.77 -8393683.53 0.0270 0.0077
 Pluto -27691-07-03 19:40 J -8392530.92 -8392530.68 -8392530.41 0.0068 0.0010
 Jupiter -27686-10-15 03:35 J -8390601.55 -8390601.35 -8390601.14 0.0490 0.0245
 Uranus -27679-11-05 23:45 J -8388022.62 -8388022.51 -8388022.37 0.0137 0.0120
 Saturn -27679-11-10 01:26 J -8388018.68 -8388018.44 -8388018.19 0.0290 0.0012
 Uranus -27678-11-10 15:21 J -8387653.11 -8387652.86 -8387652.61 0.0137 0.0022
 Uranus -27677-11-14 05:31 J -8387283.47 -8387283.27 -8387283.04 0.0136 0.0075
 Jupiter -27668-04-09 20:23 J -8384214.84 -8384214.65 -8384214.44 0.0538 0.0260

Saturn	-27664-05-13 11:02 J	-8382720.19	-8382720.04	-8382719.86	0.0269	0.0195
Jupiter	-27656-04-14 23:31 J	-8379826.69	-8379826.52	-8379826.35	0.0537	0.0349
Mars	-27641-09-21 14:38 J	-8374188.00	-8374187.89	-8374187.77	0.1885	0.1557
Saturn	-27635-05-08 17:59 J	-8372132.98	-8372132.75	-8372132.50	0.0270	0.0028
Uranus	-27633-05-08 02:52 J	-8371402.62	-8371402.38	-8371402.14	0.0142	0.0043
Uranus	-27632-05-12 20:23 J	-8371032.87	-8371032.65	-8371032.42	0.0142	0.0062
Saturn	-27620-11-11 01:26 J	-8366467.69	-8366467.44	-8366467.20	0.0291	0.0042
Neptune	-27618-04-10 01:11 J	-8365952.49	-8365952.45	-8365952.38	0.0089	0.0087
Neptune	-27617-04-11 11:45 J	-8365585.22	-8365585.01	-8365584.77	0.0089	0.0043
Neptune	-27616-04-13 22:33 J	-8365217.81	-8365217.56	-8365217.30	0.0089	0.0001
Neptune	-27615-04-16 09:07 J	-8364850.34	-8364850.12	-8364849.89	0.0089	0.0044
Jupiter	-27615-10-10 03:07 J	-8364673.57	-8364673.37	-8364673.17	0.0489	0.0267
Neptune	-27614-04-18 18:57 J	-8364482.73	-8364482.71	-8364482.62	0.0089	0.0088
Saturn	-27606-05-03 15:21 J	-8361545.89	-8361545.86	-8361545.81	0.0271	0.0267
Pluto	-27605-01-06 13:40 J	-8361298.11	-8361297.93	-8361297.71	0.0077	0.0049
Saturn	-27605-05-14 11:31 J	-8361169.10	-8361169.02	-8361168.91	0.0269	0.0245
Jupiter	-27603-10-14 12:43 J	-8360286.19	-8360285.97	-8360285.75	0.0490	0.0188
Uranus	-27595-11-06 14:23 J	-8357341.03	-8357340.90	-8357340.73	0.0137	0.0110
Uranus	-27594-11-11 06:14 J	-8356971.49	-8356971.24	-8356970.98	0.0137	0.0013
Uranus	-27593-11-14 20:38 J	-8356601.83	-8356601.64	-8356601.42	0.0136	0.0083
Saturn	-27591-11-04 14:09 J	-8355881.99	-8355881.91	-8355881.82	0.0289	0.0271
Mars	-27585-03-19 18:43 J	-8353919.81	-8353919.72	-8353919.63	0.1631	0.1430
Jupiter	-27585-04-08 23:02 J	-8353899.70	-8353899.54	-8353899.36	0.0538	0.0356
Saturn	-27576-05-09 17:45 J	-8350582.00	-8350581.76	-8350581.52	0.0270	0.0020
Jupiter	-27573-04-13 23:45 J	-8349511.72	-8349511.51	-8349511.31	0.0537	0.0240
Saturn	-27561-11-12 00:28 J	-8344916.72	-8344916.48	-8344916.24	0.0291	0.0092
Uranus	-27550-05-04 23:02 J	-8341090.57	-8341090.54	-8341090.47	0.0141	0.0138
Uranus	-27549-05-08 16:04 J	-8340721.07	-8340720.83	-8340720.59	0.0142	0.0035
Uranus	-27548-05-13 09:21 J	-8340351.32	-8340351.11	-8340350.88	0.0142	0.0070
Saturn	-27547-05-04 15:21 J	-8339994.99	-8339994.86	-8339994.70	0.0270	0.0219

Neptune	-27536-10-10 08:52 J	-8335818.21	-8335818.13	-8335817.99	0.0088	0.0080
Neptune	-27535-10-12 21:50 J	-8335450.82	-8335450.59	-8335450.34	0.0088	0.0037
Neptune	-27534-10-15 10:33 J	-8335083.32	-8335083.06	-8335082.79	0.0088	0.0006
Neptune	-27533-10-16 23:02 J	-8334715.75	-8334715.54	-8334715.31	0.0088	0.0049
Jupiter	-27532-10-09 14:09 J	-8334358.09	-8334357.91	-8334357.72	0.0489	0.0313
Saturn	-27532-11-05 11:45 J	-8334331.16	-8334331.01	-8334330.85	0.0289	0.0225
Jupiter	-27520-10-14 01:55 J	-8329970.65	-8329970.42	-8329970.19	0.0490	0.0153
Saturn	-27517-05-10 17:02 J	-8329031.02	-8329030.79	-8329030.55	0.0270	0.0067
Uranus	-27511-11-07 05:16 J	-8326659.45	-8326659.28	-8326659.10	0.0137	0.0101
Uranus	-27510-11-11 20:52 J	-8326289.88	-8326289.63	-8326289.37	0.0137	0.0004
Uranus	-27509-11-15 11:16 J	-8325920.20	-8325920.03	-8325919.82	0.0136	0.0093
Mars	-27506-03-22 19:40 J	-8325062.87	-8325062.68	-8325062.50	0.1632	0.0187
Jupiter	-27502-04-09 04:04 J	-8323584.45	-8323584.33	-8323584.19	0.0538	0.0442
Saturn	-27502-11-13 22:47 J	-8323365.76	-8323365.55	-8323365.33	0.0291	0.0142
Jupiter	-27490-04-14 08:23 J	-8319196.36	-8319196.15	-8319195.93	0.0538	0.0173
Saturn	-27488-05-05 16:04 J	-8318444.02	-8318443.83	-8318443.64	0.0270	0.0170
Saturn	-27473-11-06 11:02 J	-8312780.23	-8312780.04	-8312779.84	0.0289	0.0176
Uranus	-27466-05-05 09:21 J	-8310409.17	-8310409.11	-8310409.01	0.0141	0.0133
Uranus	-27465-05-09 02:09 J	-8310039.65	-8310039.41	-8310039.16	0.0142	0.0030
Uranus	-27464-05-13 19:40 J	-8309669.89	-8309669.68	-8309669.46	0.0142	0.0074
Saturn	-27458-05-12 16:33 J	-8307480.02	-8307479.81	-8307479.58	0.0270	0.0115
Neptune	-27453-04-10 17:02 J	-8305684.92	-8305684.79	-8305684.61	0.0089	0.0070
Neptune	-27452-04-13 04:19 J	-8305317.56	-8305317.32	-8305317.08	0.0089	0.0026
Neptune	-27451-04-15 14:38 J	-8304950.13	-8304949.89	-8304949.63	0.0089	0.0018
Neptune	-27450-04-18 00:57 J	-8304582.62	-8304582.46	-8304582.25	0.0089	0.0062
Jupiter	-27449-10-09 00:28 J	-8304042.64	-8304042.48	-8304042.32	0.0489	0.0359
Pluto	-27445-07-04 13:40 J	-8302678.14	-8302677.93	-8302677.68	0.0068	0.0031
Pluto	-27444-07-06 05:16 J	-8302311.32	-8302311.28	-8302311.17	0.0068	0.0065
Saturn	-27443-11-14 23:02 J	-8301814.72	-8301814.54	-8301814.35	0.0291	0.0194
Jupiter	-27437-10-13 11:02 J	-8299655.27	-8299655.04	-8299654.81	0.0490	0.0099

Saturn	-27429-05-06 17:02 J	-8296893.00	-8296892.79	-8296892.57	0.0270	0.0120
Mars	-27427-03-24 20:38 J	-8296205.77	-8296205.64	-8296205.50	0.1633	0.1071
Uranus	-27427-11-07 18:43 J	-8295977.90	-8295977.72	-8295977.52	0.0138	0.0092
Uranus	-27426-11-12 10:47 J	-8295608.31	-8295608.05	-8295607.79	0.0137	0.0005
Uranus	-27425-11-16 01:11 J	-8295238.60	-8295238.45	-8295238.26	0.0136	0.0101
Jupiter	-27419-04-08 14:09 J	-8293268.99	-8293268.91	-8293268.83	0.0538	0.0503
Saturn	-27414-11-08 11:31 J	-8291229.24	-8291229.02	-8291228.79	0.0289	0.0124
Jupiter	-27407-04-13 13:26 J	-8288881.17	-8288880.94	-8288880.72	0.0537	0.0088
Saturn	-27399-05-13 17:31 J	-8285928.95	-8285928.77	-8285928.57	0.0270	0.0164
Saturn	-27384-11-16 01:55 J	-8280263.53	-8280263.42	-8280263.28	0.0291	0.0252
Uranus	-27382-05-05 22:19 J	-8279727.68	-8279727.57	-8279727.45	0.0141	0.0125
Uranus	-27381-05-09 14:38 J	-8279358.13	-8279357.89	-8279357.64	0.0142	0.0023
Uranus	-27380-05-14 07:55 J	-8278988.37	-8278988.17	-8278987.96	0.0142	0.0081
Neptune	-27371-10-12 00:28 J	-8275550.64	-8275550.48	-8275550.27	0.0088	0.0063
Saturn	-27370-05-08 19:40 J	-8275341.92	-8275341.68	-8275341.45	0.0270	0.0068
Neptune	-27370-10-14 13:11 J	-8275183.19	-8275182.95	-8275182.68	0.0088	0.0020
Neptune	-27369-10-16 01:55 J	-8274815.67	-8274815.42	-8274815.16	0.0088	0.0023
Neptune	-27368-10-18 14:09 J	-8274448.07	-8274447.91	-8274447.73	0.0088	0.0066
Jupiter	-27366-10-09 07:55 J	-8273727.28	-8273727.17	-8273727.04	0.0489	0.0419
Pluto	-27358-01-09 06:14 J	-8271078.39	-8271078.24	-8271078.04	0.0076	0.0057
Mars	-27357-09-20 11:45 J	-8270458.22	-8270458.01	-8270457.81	0.1888	0.0055
Saturn	-27355-11-09 16:04 J	-8269678.08	-8269677.83	-8269677.59	0.0289	0.0065
Jupiter	-27354-10-13 19:40 J	-8269339.91	-8269339.68	-8269339.44	0.0490	0.0045
Uranus	-27343-11-08 07:40 J	-8265296.37	-8265296.18	-8265295.96	0.0138	0.0085
Uranus	-27342-11-12 23:59 J	-8264926.76	-8264926.50	-8264926.24	0.0137	0.0013
Uranus	-27341-11-16 14:23 J	-8264557.03	-8264556.90	-8264556.72	0.0136	0.0109
Saturn	-27340-05-14 19:40 J	-8264377.82	-8264377.68	-8264377.53	0.0270	0.0215
Jupiter	-27324-04-12 14:23 J	-8258566.13	-8258565.90	-8258565.67	0.0537	0.0018
Saturn	-27311-05-09 23:31 J	-8253790.76	-8253790.52	-8253790.28	0.0270	0.0013
Mars	-27301-03-21 00:57 J	-8250187.60	-8250187.46	-8250187.32	0.1630	0.1082

Uranus	-27298-05-06 11:45 J	-8249046.13	-8249046.01	-8249045.86	0.0141	0.0117
Uranus	-27297-05-10 03:50 J	-8248676.58	-8248676.34	-8248676.08	0.0141	0.0016
Uranus	-27296-05-14 20:52 J	-8248306.82	-8248306.63	-8248306.43	0.0142	0.0088
Saturn	-27296-11-10 23:59 J	-8248126.75	-8248126.50	-8248126.25	0.0289	0.0002
Neptune	-27288-04-12 08:38 J	-8245417.34	-8245417.14	-8245416.93	0.0089	0.0053
Neptune	-27287-04-14 19:26 J	-8245049.94	-8245049.69	-8245049.43	0.0089	0.0009
Neptune	-27286-04-17 05:59 J	-8244682.47	-8244682.25	-8244682.01	0.0089	0.0035
Neptune	-27285-04-18 16:19 J	-8244314.92	-8244314.82	-8244314.68	0.0089	0.0079
Jupiter	-27283-10-08 14:38 J	-8243411.93	-8243411.89	-8243411.85	0.0490	0.0482
Saturn	-27282-05-05 00:57 J	-8243203.55	-8243203.46	-8243203.37	0.0272	0.0253
Jupiter	-27271-10-13 00:43 J	-8239024.71	-8239024.47	-8239024.23	0.0490	0.0027
Saturn	-27267-11-05 07:40 J	-8237540.22	-8237540.18	-8237540.11	0.0288	0.0281
Jupiter	-27259-10-17 11:16 J	-8234637.13	-8234637.03	-8234636.91	0.0491	0.0432
Uranus	-27259-11-08 20:38 J	-8234614.85	-8234614.64	-8234614.42	0.0138	0.0077
Uranus	-27258-11-13 12:43 J	-8234245.22	-8234244.97	-8234244.71	0.0137	0.0021
Uranus	-27257-11-17 03:35 J	-8233875.46	-8233875.35	-8233875.19	0.0137	0.0116
Saturn	-27252-05-11 05:02 J	-8232239.53	-8232239.29	-8232239.05	0.0270	0.0046
Jupiter	-27241-04-11 18:57 J	-8228250.93	-8228250.71	-8228250.48	0.0538	0.0106
Saturn	-27237-11-12 11:45 J	-8226575.25	-8226575.01	-8226574.77	0.0290	0.0076
Jupiter	-27229-04-16 19:55 J	-8223862.76	-8223862.67	-8223862.58	0.0536	0.0492
Saturn	-27223-05-06 06:14 J	-8221652.39	-8221652.24	-8221652.06	0.0272	0.0194
Mars	-27222-03-24 02:09 J	-8221330.60	-8221330.41	-8221330.23	0.1630	0.0167
Uranus	-27214-05-07 03:50 J	-8218364.49	-8218364.34	-8218364.17	0.0141	0.0106
Uranus	-27213-05-10 20:09 J	-8217994.91	-8217994.66	-8217994.41	0.0141	0.0005
Uranus	-27212-05-15 12:43 J	-8217625.14	-8217624.97	-8217624.78	0.0142	0.0099
Saturn	-27208-11-06 20:09 J	-8215988.82	-8215988.66	-8215988.47	0.0289	0.0205
Neptune	-27206-10-13 17:02 J	-8215283.02	-8215282.79	-8215282.57	0.0088	0.0045
Neptune	-27205-10-15 05:16 J	-8214915.54	-8214915.28	-8214915.01	0.0088	0.0003
Neptune	-27204-10-17 17:45 J	-8214547.99	-8214547.76	-8214547.53	0.0088	0.0040
Neptune	-27203-10-20 05:31 J	-8214180.31	-8214180.27	-8214180.16	0.0088	0.0084

Pluto	-27199-07-06 09:21 J	-8212825.28	-8212825.11	-8212824.91	0.0068	0.0047
Pluto	-27198-07-08 01:11 J	-8212458.62	-8212458.45	-8212458.26	0.0068	0.0048
Saturn	-27193-05-12 12:28 J	-8210688.19	-8210687.98	-8210687.75	0.0270	0.0109
Jupiter	-27188-10-12 04:19 J	-8208709.55	-8208709.32	-8208709.09	0.0490	0.0105
Saturn	-27178-11-15 03:07 J	-8205023.58	-8205023.37	-8205023.16	0.0290	0.0158
Jupiter	-27176-10-16 14:52 J	-8204322.04	-8204321.88	-8204321.71	0.0490	0.0353
Uranus	-27175-11-09 11:16 J	-8203933.25	-8203933.03	-8203932.80	0.0138	0.0068
Uranus	-27174-11-14 03:35 J	-8203563.60	-8203563.35	-8203563.10	0.0137	0.0029
Uranus	-27173-11-17 18:14 J	-8203193.82	-8203193.74	-8203193.61	0.0137	0.0125
Saturn	-27164-05-07 13:40 J	-8200101.14	-8200100.93	-8200100.71	0.0272	0.0131
Jupiter	-27158-04-11 18:28 J	-8197935.94	-8197935.73	-8197935.52	0.0537	0.0218
Saturn	-27149-11-08 11:45 J	-8194437.23	-8194437.01	-8194436.78	0.0289	0.0122
Jupiter	-27146-04-16 14:52 J	-8193548.05	-8193547.88	-8193547.71	0.0537	0.0355
Mars	-27143-03-26 03:07 J	-8192473.46	-8192473.37	-8192473.28	0.1631	0.1414
Saturn	-27134-05-14 21:07 J	-8189136.80	-8189136.62	-8189136.43	0.0270	0.0174
Uranus	-27130-05-07 18:43 J	-8187682.88	-8187682.72	-8187682.52	0.0141	0.0097
Uranus	-27129-05-11 11:02 J	-8187313.29	-8187313.04	-8187312.79	0.0141	0.0005
Uranus	-27128-05-16 03:21 J	-8186943.51	-8186943.36	-8186943.18	0.0142	0.0108
Neptune	-27124-04-11 12:43 J	-8185517.06	-8185516.97	-8185516.83	0.0089	0.0080
Neptune	-27123-04-13 23:31 J	-8185149.73	-8185149.52	-8185149.27	0.0089	0.0036
Neptune	-27122-04-16 10:33 J	-8184782.31	-8184782.06	-8184781.80	0.0089	0.0008
Neptune	-27121-04-17 21:07 J	-8184414.81	-8184414.62	-8184414.40	0.0089	0.0052
Saturn	-27119-11-16 19:55 J	-8183471.79	-8183471.67	-8183471.53	0.0290	0.0244
Pluto	-27112-01-10 02:52 J	-8181225.61	-8181225.38	-8181225.15	0.0076	0.0037
Saturn	-27105-05-08 22:33 J	-8178549.79	-8178549.56	-8178549.32	0.0272	0.0064
Jupiter	-27105-10-11 05:31 J	-8178394.48	-8178394.27	-8178394.05	0.0490	0.0194
Jupiter	-27093-10-15 15:50 J	-8174007.03	-8174006.84	-8174006.63	0.0490	0.0262
Uranus	-27091-11-10 01:40 J	-8173251.65	-8173251.43	-8173251.19	0.0138	0.0059
Saturn	-27090-11-11 04:19 J	-8172885.56	-8172885.32	-8172885.07	0.0289	0.0038
Uranus	-27090-11-14 17:45 J	-8172882.00	-8172881.76	-8172881.50	0.0137	0.0038

Uranus	-27089-11-18 08:38 J	-8172512.18	-8172512.14	-8172512.06	0.0137	0.0133
Jupiter	-27075-04-10 12:28 J	-8167621.14	-8167620.98	-8167620.81	0.0538	0.0362
Saturn	-27075-05-16 06:28 J	-8167585.33	-8167585.23	-8167585.12	0.0270	0.0241
Mars	-27073-09-19 07:26 J	-8166728.27	-8166728.19	-8166728.10	0.1891	0.1710
Jupiter	-27063-04-15 15:07 J	-8163233.07	-8163232.87	-8163232.66	0.0537	0.0245
Uranus	-27046-05-08 09:50 J	-8157001.29	-8157001.09	-8157000.90	0.0141	0.0087
Saturn	-27046-05-11 07:40 J	-8156998.42	-8156998.18	-8156997.94	0.0271	0.0004
Uranus	-27045-05-12 01:40 J	-8156631.68	-8156631.43	-8156631.18	0.0141	0.0014
Uranus	-27044-05-16 17:59 J	-8156261.87	-8156261.75	-8156261.59	0.0142	0.0117
Neptune	-27042-10-12 19:55 J	-8155382.80	-8155382.67	-8155382.50	0.0088	0.0071
Neptune	-27041-10-14 08:23 J	-8155015.38	-8155015.15	-8155014.89	0.0088	0.0028
Neptune	-27040-10-16 21:07 J	-8154647.87	-8154647.62	-8154647.36	0.0088	0.0015
Neptune	-27039-10-19 09:07 J	-8154280.30	-8154280.12	-8154279.90	0.0088	0.0058
Saturn	-27031-11-12 20:23 J	-8151333.89	-8151333.65	-8151333.41	0.0289	0.0048
Jupiter	-27022-10-11 09:35 J	-8148079.29	-8148079.10	-8148078.90	0.0489	0.0271
Mars	-27017-03-22 07:55 J	-8146455.34	-8146455.17	-8146455.01	0.1628	0.0723
Saturn	-27017-05-05 17:31 J	-8146410.91	-8146410.77	-8146410.62	0.0272	0.0216
Jupiter	-27010-10-15 18:43 J	-8143691.94	-8143691.72	-8143691.50	0.0490	0.0180
Uranus	-27007-11-10 17:02 J	-8142570.03	-8142569.79	-8142569.55	0.0138	0.0049
Uranus	-27006-11-15 09:07 J	-8142200.36	-8142200.12	-8142199.88	0.0137	0.0047
Saturn	-27002-11-06 21:07 J	-8140747.73	-8140747.62	-8140747.49	0.0288	0.0249

27TH MILLENNIUM BCE

This is a list of transits of Earth in the 27th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
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TRANSIT

TIME

Jupiter	-26992-04-09 15:21 J	-8137305.98	-8137305.86	-8137305.75	0.0538	0.0460
Saturn	-26987-05-12 16:47 J	-8135447.03	-8135446.80	-8135446.57	0.0271	0.0071
Jupiter	-26980-04-14 16:19 J	-8132918.05	-8132917.82	-8132917.60	0.0537	0.0137
Saturn	-26972-11-14 10:47 J	-8129782.26	-8129782.05	-8129781.82	0.0290	0.0132
Uranus	-26962-05-08 22:19 J	-8126319.77	-8126319.57	-8126319.36	0.0141	0.0080
Uranus	-26961-05-12 14:09 J	-8125950.16	-8125949.91	-8125949.67	0.0141	0.0021
Uranus	-26960-05-17 06:14 J	-8125580.35	-8125580.24	-8125580.10	0.0142	0.0123
Neptune	-26959-04-13 03:50 J	-8125249.49	-8125249.34	-8125249.14	0.0089	0.0063
Neptune	-26958-04-15 14:52 J	-8124882.11	-8124881.88	-8124881.62	0.0089	0.0020
Saturn	-26958-05-08 02:23 J	-8124859.60	-8124859.40	-8124859.20	0.0272	0.0149
Neptune	-26957-04-17 01:40 J	-8124514.66	-8124514.43	-8124514.18	0.0089	0.0025
Neptune	-26956-04-19 12:14 J	-8124147.13	-8124146.99	-8124146.80	0.0089	0.0069
Pluto	-26953-07-07 09:35 J	-8122972.24	-8122972.10	-8122971.89	0.0068	0.0050
Pluto	-26952-07-09 01:40 J	-8122605.60	-8122605.43	-8122605.22	0.0068	0.0047
Saturn	-26943-11-08 11:16 J	-8119196.23	-8119196.03	-8119195.83	0.0289	0.0169
Jupiter	-26939-10-10 12:43 J	-8117764.13	-8117763.97	-8117763.80	0.0489	0.0351
Mars	-26938-03-25 09:07 J	-8117598.30	-8117598.12	-8117597.95	0.1629	0.0527
Saturn	-26928-05-14 00:57 J	-8113895.67	-8113895.46	-8113895.25	0.0271	0.0137
Jupiter	-26927-10-14 21:07 J	-8113376.86	-8113376.62	-8113376.39	0.0490	0.0094
Uranus	-26923-11-11 06:14 J	-8111888.49	-8111888.24	-8111887.99	0.0138	0.0041
Uranus	-26922-11-15 21:50 J	-8111518.81	-8111518.59	-8111518.34	0.0137	0.0055
Saturn	-26913-11-15 22:04 J	-8108230.75	-8108230.58	-8108230.41	0.0290	0.0207
Saturn	-26899-05-09 10:04 J	-8103308.31	-8103308.08	-8103307.85	0.0271	0.0084
Jupiter	-26897-04-13 10:19 J	-8102603.30	-8102603.07	-8102602.84	0.0538	0.0009
Saturn	-26884-11-09 22:19 J	-8097644.80	-8097644.57	-8097644.33	0.0289	0.0094
Uranus	-26878-05-09 09:50 J	-8095638.29	-8095638.09	-8095637.87	0.0141	0.0074
Uranus	-26877-05-13 01:26 J	-8095268.68	-8095268.44	-8095268.19	0.0141	0.0027
Neptune	-26877-10-13 12:43 J	-8095115.16	-8095114.97	-8095114.74	0.0088	0.0053

Uranus	-26876-05-17 17:59 J	-8094898.84	-8094898.75	-8094898.64	0.0142	0.0129
Neptune	-26876-10-16 01:26 J	-8094747.69	-8094747.44	-8094747.17	0.0088	0.0010
Neptune	-26875-10-18 13:55 J	-8094380.15	-8094379.92	-8094379.67	0.0088	0.0033
Neptune	-26874-10-21 01:55 J	-8094012.53	-8094012.42	-8094012.27	0.0088	0.0076
Saturn	-26869-05-15 07:11 J	-8092344.36	-8092344.20	-8092344.04	0.0270	0.0199
Pluto	-26866-01-12 02:38 J	-8091372.60	-8091372.39	-8091372.13	0.0076	0.0034
Jupiter	-26856-10-09 17:59 J	-8087448.87	-8087448.75	-8087448.63	0.0489	0.0424
Saturn	-26854-11-18 05:45 J	-8086679.32	-8086679.26	-8086679.18	0.0290	0.0277
Jupiter	-26844-10-14 05:45 J	-8083061.49	-8083061.26	-8083061.02	0.0490	0.0039
Saturn	-26840-05-10 15:35 J	-8081757.09	-8081756.85	-8081756.61	0.0271	0.0024
Uranus	-26840-11-07 01:40 J	-8081576.50	-8081576.43	-8081576.34	0.0138	0.0131
Uranus	-26839-11-11 18:57 J	-8081206.95	-8081206.71	-8081206.45	0.0138	0.0034
Uranus	-26838-11-16 11:02 J	-8080837.26	-8080837.04	-8080836.80	0.0137	0.0063
Saturn	-26825-11-11 05:16 J	-8076093.53	-8076093.28	-8076093.03	0.0289	0.0027
Jupiter	-26814-04-13 16:33 J	-8072288.03	-8072287.81	-8072287.58	0.0538	0.0086
Mars	-26812-03-21 14:23 J	-8071579.94	-8071579.90	-8071579.85	0.1627	0.1574
Saturn	-26811-05-05 13:11 J	-8071169.98	-8071169.95	-8071169.91	0.0272	0.0268
Saturn	-26810-05-17 11:16 J	-8070793.08	-8070793.03	-8070792.95	0.0270	0.0258
Jupiter	-26802-04-18 18:57 J	-8067899.76	-8067899.71	-8067899.64	0.0537	0.0518
Neptune	-26795-04-12 09:35 J	-8065349.10	-8065349.10	-8065349.10	0.0089	0.0089
Neptune	-26794-04-14 19:40 J	-8064981.88	-8064981.68	-8064981.44	0.0089	0.0047
Uranus	-26794-05-09 22:04 J	-8064956.79	-8064956.58	-8064956.35	0.0141	0.0067
Neptune	-26793-04-16 06:43 J	-8064614.47	-8064614.22	-8064613.96	0.0089	0.0003
Uranus	-26793-05-13 13:26 J	-8064587.17	-8064586.94	-8064586.69	0.0141	0.0034
Neptune	-26792-04-18 17:02 J	-8064247.00	-8064246.79	-8064246.55	0.0089	0.0042
Uranus	-26792-05-18 05:31 J	-8064217.32	-8064217.27	-8064217.18	0.0142	0.0136
Neptune	-26791-04-21 03:35 J	-8063879.40	-8063879.35	-8063879.25	0.0089	0.0085
Saturn	-26781-05-11 18:57 J	-8060205.95	-8060205.71	-8060205.47	0.0271	0.0033
Jupiter	-26773-10-09 03:21 J	-8057133.42	-8057133.36	-8057133.31	0.0489	0.0474
Saturn	-26766-11-13 08:38 J	-8054542.38	-8054542.14	-8054541.89	0.0290	0.0034

Jupiter	-26761-10-13 13:40 J	-8052746.17	-8052745.93	-8052745.70	0.0489	0.0023
Uranus	-26756-11-07 11:31 J	-8050895.11	-8050895.02	-8050894.90	0.0139	0.0126
Uranus	-26755-11-12 05:16 J	-8050525.53	-8050525.28	-8050525.03	0.0138	0.0028
Uranus	-26754-11-16 21:07 J	-8050155.83	-8050155.62	-8050155.38	0.0137	0.0068
Saturn	-26752-05-06 15:35 J	-8049618.99	-8049618.85	-8049618.69	0.0272	0.0214
Jupiter	-26749-10-17 23:02 J	-8048358.65	-8048358.54	-8048358.42	0.0490	0.0429
Saturn	-26737-11-06 00:14 J	-8043956.54	-8043956.49	-8043956.42	0.0288	0.0278
Mars	-26733-03-23 15:07 J	-8042723.05	-8042722.87	-8042722.68	0.1628	0.0348
Jupiter	-26731-04-12 17:45 J	-8041972.98	-8041972.76	-8041972.55	0.0538	0.0189
Saturn	-26722-05-13 19:55 J	-8038654.90	-8038654.67	-8038654.44	0.0271	0.0084
Jupiter	-26719-04-17 17:59 J	-8037584.89	-8037584.75	-8037584.59	0.0537	0.0402
Neptune	-26713-10-12 17:02 J	-8035214.88	-8035214.79	-8035214.64	0.0088	0.0078
Neptune	-26712-10-15 05:59 J	-8034847.47	-8034847.25	-8034846.99	0.0088	0.0035
Neptune	-26711-10-17 18:43 J	-8034479.97	-8034479.72	-8034479.45	0.0088	0.0009
Uranus	-26710-05-10 12:28 J	-8034275.20	-8034274.98	-8034274.75	0.0141	0.0058
Mars	-26710-09-22 22:04 J	-8034139.78	-8034139.58	-8034139.38	0.1891	0.0316
Neptune	-26710-10-20 07:26 J	-8034112.40	-8034112.19	-8034111.98	0.0088	0.0051
Uranus	-26709-05-14 03:35 J	-8033905.58	-8033905.35	-8033905.10	0.0141	0.0042
Pluto	-26707-07-09 11:02 J	-8033119.20	-8033119.04	-8033118.85	0.0068	0.0050
Saturn	-26707-11-14 08:52 J	-8032991.36	-8032991.13	-8032990.89	0.0290	0.0088
Pluto	-26706-07-11 02:23 J	-8032752.56	-8032752.40	-8032752.18	0.0068	0.0046
Saturn	-26693-05-07 16:47 J	-8028067.99	-8028067.80	-8028067.61	0.0271	0.0162
Jupiter	-26678-10-13 23:59 J	-8022430.74	-8022430.50	-8022430.27	0.0489	0.0071
Saturn	-26678-11-07 22:47 J	-8022405.69	-8022405.55	-8022405.39	0.0288	0.0229
Uranus	-26672-11-07 23:31 J	-8020213.64	-8020213.52	-8020213.38	0.0139	0.0119
Uranus	-26671-11-12 17:02 J	-8019844.04	-8019843.79	-8019843.53	0.0138	0.0022
Uranus	-26670-11-17 09:07 J	-8019474.32	-8019474.12	-8019473.89	0.0137	0.0075
Jupiter	-26666-10-18 11:45 J	-8018043.14	-8018043.01	-8018042.86	0.0490	0.0394
Saturn	-26663-05-14 18:57 J	-8017103.92	-8017103.71	-8017103.50	0.0271	0.0132
Mars	-26654-03-26 16:33 J	-8013865.97	-8013865.81	-8013865.66	0.1628	0.0899

Jupiter -26648-04-11 22:47 J -8011657.74 -8011657.55 -8011657.35 0.0538 0.0274
 Saturn -26648-11-15 07:26 J -8011440.40 -8011440.19 -8011439.97 0.0290 0.0138
 Jupiter -26636-04-17 03:07 J -8007269.55 -8007269.37 -8007269.19 0.0538 0.0336
 Saturn -26634-05-09 16:19 J -8006517.04 -8006516.82 -8006516.60 0.0271 0.0113
 Neptune -26630-04-14 02:09 J -8005081.55 -8005081.41 -8005081.25 0.0089 0.0072
 Neptune -26629-04-15 12:28 J -8004714.20 -8004713.98 -8004713.72 0.0089 0.0029
 Neptune -26628-04-17 23:16 J -8004346.77 -8004346.53 -8004346.27 0.0089 0.0016
 Neptune -26627-04-20 09:50 J -8003979.26 -8003979.09 -8003978.88 0.0089 0.0059
 Uranus -26626-05-11 03:35 J -8003593.58 -8003593.35 -8003593.11 0.0140 0.0048
 Uranus -26625-05-14 18:57 J -8003223.94 -8003223.71 -8003223.47 0.0141 0.0052
 Pluto -26620-01-13 05:31 J -8001519.48 -8001519.27 -8001519.03 0.0076 0.0037
 Saturn -26619-11-08 19:55 J -8000854.86 -8000854.67 -8000854.48 0.0288 0.0183
 Saturn -26604-05-15 17:31 J -7995552.95 -7995552.77 -7995552.59 0.0271 0.0178
 Jupiter -26595-10-13 11:16 J -7992115.26 -7992115.03 -7992114.80 0.0489 0.0112
 Saturn -26589-11-16 05:31 J -7989889.46 -7989889.27 -7989889.08 0.0290 0.0186
 Uranus -26588-11-08 10:33 J -7989532.19 -7989532.06 -7989531.90 0.0139 0.0113
 Uranus -26587-11-13 04:19 J -7989162.57 -7989162.32 -7989162.06 0.0138 0.0015
 Uranus -26586-11-17 20:38 J -7988792.84 -7988792.64 -7988792.42 0.0137 0.0081
 Jupiter -26583-10-17 21:50 J -7987727.75 -7987727.59 -7987727.41 0.0490 0.0345
 Saturn -26575-05-10 15:35 J -7984966.09 -7984965.85 -7984965.61 0.0271 0.0066
 Jupiter -26565-04-11 09:50 J -7981342.27 -7981342.09 -7981341.91 0.0538 0.0330
 Saturn -26560-11-09 17:31 J -7979303.99 -7979303.77 -7979303.55 0.0288 0.0136
 Jupiter -26553-04-16 08:52 J -7976954.33 -7976954.13 -7976953.93 0.0537 0.0256
 Neptune -26548-10-14 11:31 J -7974947.19 -7974947.02 -7974946.81 0.0088 0.0059
 Neptune -26547-10-17 00:14 J -7974579.74 -7974579.49 -7974579.22 0.0088 0.0016
 Neptune -26546-10-19 12:43 J -7974212.20 -7974211.97 -7974211.70 0.0088 0.0028
 Saturn -26545-05-16 15:35 J -7974001.97 -7974001.85 -7974001.70 0.0271 0.0224
 Neptune -26545-10-21 00:57 J -7973844.59 -7973844.46 -7973844.28 0.0088 0.0071
 Uranus -26543-05-07 03:21 J -7973281.41 -7973281.36 -7973281.30 0.0140 0.0136
 Uranus -26542-05-11 17:59 J -7972911.99 -7972911.75 -7972911.51 0.0140 0.0039

Uranus	-26541-05-15 09:07 J	-7972542.33	-7972542.12	-7972541.88	0.0141	0.0061
Saturn	-26530-11-18 03:50 J	-7968338.47	-7968338.34	-7968338.19	0.0290	0.0236
Mars	-26528-03-22 22:04 J	-7967847.71	-7967847.58	-7967847.46	0.1627	0.1194
Saturn	-26516-05-11 15:21 J	-7963415.10	-7963414.86	-7963414.62	0.0271	0.0017
Jupiter	-26512-10-12 20:52 J	-7961799.85	-7961799.63	-7961799.40	0.0489	0.0163
Uranus	-26504-11-08 23:45 J	-7958850.66	-7958850.51	-7958850.33	0.0138	0.0105
Uranus	-26503-11-13 17:31 J	-7958481.03	-7958480.77	-7958480.51	0.0138	0.0007
Uranus	-26502-11-18 09:35 J	-7958111.28	-7958111.10	-7958110.88	0.0137	0.0089
Saturn	-26501-11-10 16:33 J	-7957753.04	-7957752.81	-7957752.57	0.0288	0.0087
Jupiter	-26500-10-17 08:38 J	-7957412.32	-7957412.14	-7957411.94	0.0490	0.0297
Saturn	-26487-05-06 15:07 J	-7952827.91	-7952827.87	-7952827.80	0.0273	0.0266
Jupiter	-26482-04-11 12:57 J	-7951027.10	-7951026.96	-7951026.82	0.0537	0.0422
Jupiter	-26470-04-16 12:28 J	-7946639.20	-7946638.98	-7946638.76	0.0537	0.0163
Neptune	-26465-04-14 19:11 J	-7944813.88	-7944813.70	-7944813.48	0.0089	0.0054
Neptune	-26464-04-17 06:14 J	-7944446.49	-7944446.24	-7944445.98	0.0089	0.0010
Neptune	-26463-04-19 16:19 J	-7944079.03	-7944078.82	-7944078.56	0.0089	0.0035
Neptune	-26462-04-22 03:07 J	-7943711.47	-7943711.37	-7943711.23	0.0089	0.0078
Pluto	-26461-07-10 16:04 J	-7943266.03	-7943265.83	-7943265.61	0.0068	0.0039
Pluto	-26460-07-12 07:40 J	-7942899.30	-7942899.18	-7942899.02	0.0068	0.0058
Uranus	-26459-05-07 16:33 J	-7942599.90	-7942599.81	-7942599.71	0.0140	0.0128
Uranus	-26458-05-12 07:11 J	-7942230.45	-7942230.20	-7942229.96	0.0140	0.0031
Saturn	-26457-05-12 16:04 J	-7941864.07	-7941863.83	-7941863.59	0.0271	0.0033
Uranus	-26457-05-15 22:19 J	-7941860.77	-7941860.57	-7941860.34	0.0141	0.0069
Mars	-26449-03-24 22:33 J	-7938990.74	-7938990.56	-7938990.37	0.1627	0.0044
Saturn	-26442-11-12 18:43 J	-7936201.97	-7936201.72	-7936201.47	0.0288	0.0031
Jupiter	-26429-10-12 05:59 J	-7931484.46	-7931484.25	-7931484.04	0.0490	0.0216
Saturn	-26428-05-07 16:19 J	-7931276.96	-7931276.82	-7931276.67	0.0273	0.0215
Mars	-26426-09-21 18:28 J	-7930409.87	-7930409.73	-7930409.58	0.1892	0.1308
Uranus	-26420-11-09 10:33 J	-7928169.22	-7928169.06	-7928168.86	0.0138	0.0099
Uranus	-26419-11-14 04:33 J	-7927799.56	-7927799.31	-7927799.05	0.0138	0.0003

Uranus	-26418-11-18 20:52 J	-7927429.80	-7927429.63	-7927429.42	0.0137	0.0095
Jupiter	-26417-10-16 16:33 J	-7927097.02	-7927096.81	-7927096.60	0.0490	0.0239
Jupiter	-26399-04-10 16:19 J	-7920711.88	-7920711.82	-7920711.75	0.0538	0.0516
Saturn	-26398-05-14 18:57 J	-7920312.93	-7920312.71	-7920312.47	0.0271	0.0088
Jupiter	-26387-04-15 20:09 J	-7916323.89	-7916323.66	-7916323.44	0.0538	0.0091
Neptune	-26384-10-13 17:59 J	-7915046.82	-7915046.75	-7915046.64	0.0088	0.0082
Neptune	-26383-10-16 06:43 J	-7914679.44	-7914679.22	-7914678.97	0.0088	0.0039
Saturn	-26383-11-14 01:11 J	-7914650.69	-7914650.45	-7914650.20	0.0288	0.0034
Neptune	-26382-10-18 19:40 J	-7914311.94	-7914311.68	-7914311.42	0.0088	0.0004
Neptune	-26381-10-20 08:23 J	-7913944.37	-7913944.15	-7913943.93	0.0088	0.0047
Uranus	-26375-05-08 03:21 J	-7911918.48	-7911918.36	-7911918.24	0.0140	0.0122
Pluto	-26374-01-15 12:57 J	-7911666.15	-7911665.96	-7911665.78	0.0076	0.0053
Uranus	-26374-05-12 17:45 J	-7911549.00	-7911548.76	-7911548.50	0.0140	0.0026
Uranus	-26373-05-16 09:07 J	-7911179.32	-7911179.12	-7911178.90	0.0141	0.0074
Mars	-26370-03-27 23:59 J	-7910133.61	-7910133.50	-7910133.38	0.1628	0.1278
Saturn	-26369-05-08 18:57 J	-7909725.90	-7909725.71	-7909725.51	0.0273	0.0160
Saturn	-26354-11-08 08:09 J	-7904064.26	-7904064.16	-7904064.03	0.0287	0.0253
Jupiter	-26346-10-12 12:28 J	-7901169.17	-7901168.98	-7901168.78	0.0489	0.0280
Saturn	-26339-05-16 00:14 J	-7898761.69	-7898761.49	-7898761.28	0.0271	0.0147
Uranus	-26336-11-09 22:19 J	-7897487.74	-7897487.57	-7897487.36	0.0139	0.0092
Uranus	-26335-11-14 16:19 J	-7897118.07	-7897117.82	-7897117.56	0.0138	0.0006
Jupiter	-26334-10-16 22:04 J	-7896781.80	-7896781.58	-7896781.35	0.0490	0.0171
Uranus	-26334-11-19 08:52 J	-7896748.29	-7896748.13	-7896747.94	0.0137	0.0101
Saturn	-26324-11-15 11:02 J	-7893099.26	-7893099.04	-7893098.80	0.0289	0.0107
Saturn	-26310-05-11 00:28 J	-7888174.71	-7888174.48	-7888174.25	0.0273	0.0099
Jupiter	-26304-04-14 21:21 J	-7886008.84	-7886008.61	-7886008.39	0.0537	0.0017
Neptune	-26301-04-14 03:21 J	-7884913.46	-7884913.36	-7884913.21	0.0089	0.0078
Neptune	-26300-04-16 14:23 J	-7884546.13	-7884545.90	-7884545.66	0.0089	0.0034
Neptune	-26299-04-19 00:57 J	-7884178.70	-7884178.46	-7884178.20	0.0089	0.0010
Neptune	-26298-04-21 11:16 J	-7883811.22	-7883811.03	-7883810.82	0.0089	0.0054

Saturn	-26295-11-09 20:23 J	-7882512.84	-7882512.65	-7882512.45	0.0287	0.0176
Uranus	-26291-05-08 13:40 J	-7881237.06	-7881236.93	-7881236.79	0.0140	0.0117
Uranus	-26290-05-13 03:50 J	-7880867.58	-7880867.34	-7880867.08	0.0140	0.0021
Uranus	-26289-05-16 19:11 J	-7880497.91	-7880497.70	-7880497.49	0.0141	0.0078
Saturn	-26280-05-17 07:11 J	-7877210.34	-7877210.20	-7877210.04	0.0271	0.0212
Saturn	-26265-11-17 01:11 J	-7871547.62	-7871547.45	-7871547.25	0.0289	0.0188
Jupiter	-26263-10-11 16:33 J	-7870853.97	-7870853.81	-7870853.65	0.0489	0.0355
Uranus	-26252-11-10 06:43 J	-7866806.41	-7866806.22	-7866806.01	0.0139	0.0088
Saturn	-26251-05-12 07:40 J	-7866623.41	-7866623.18	-7866622.93	0.0273	0.0035
Jupiter	-26251-10-16 00:28 J	-7866466.71	-7866466.48	-7866466.24	0.0490	0.0089
Uranus	-26251-11-15 00:43 J	-7866436.72	-7866436.47	-7866436.21	0.0138	0.0010
Uranus	-26250-11-19 17:16 J	-7866066.93	-7866066.78	-7866066.59	0.0137	0.0105
Mars	-26244-03-24 05:45 J	-7864115.42	-7864115.26	-7864115.10	0.1626	0.0810
Saturn	-26236-11-11 11:02 J	-7860961.27	-7860961.04	-7860960.80	0.0288	0.0094
Saturn	-26222-05-07 14:23 J	-7856035.94	-7856035.90	-7856035.82	0.0274	0.0265
Jupiter	-26221-04-13 17:02 J	-7855694.01	-7855693.79	-7855693.57	0.0538	0.0147
Neptune	-26219-10-15 13:26 J	-7854779.10	-7854778.94	-7854778.73	0.0088	0.0062
Neptune	-26218-10-18 02:23 J	-7854411.64	-7854411.40	-7854411.13	0.0088	0.0019
Neptune	-26217-10-19 14:52 J	-7854044.12	-7854043.88	-7854043.61	0.0088	0.0025
Neptune	-26216-10-22 03:07 J	-7853676.51	-7853676.37	-7853676.17	0.0088	0.0068
Pluto	-26215-07-12 19:26 J	-7853412.90	-7853412.69	-7853412.44	0.0068	0.0033
Pluto	-26214-07-14 11:31 J	-7853046.08	-7853046.02	-7853045.92	0.0068	0.0065
Jupiter	-26209-04-18 19:26 J	-7851305.81	-7851305.69	-7851305.56	0.0537	0.0453
Uranus	-26207-05-08 23:45 J	-7850555.64	-7850555.51	-7850555.34	0.0140	0.0112
Uranus	-26206-05-13 14:23 J	-7850186.15	-7850185.90	-7850185.65	0.0140	0.0015
Saturn	-26206-11-19 18:43 J	-7849995.78	-7849995.72	-7849995.64	0.0289	0.0276
Uranus	-26205-05-17 05:02 J	-7849816.48	-7849816.29	-7849816.07	0.0141	0.0083
Saturn	-26192-05-13 17:02 J	-7845072.03	-7845071.79	-7845071.55	0.0273	0.0035
Jupiter	-26180-10-10 16:47 J	-7840538.89	-7840538.80	-7840538.70	0.0489	0.0447
Saturn	-26177-11-13 04:04 J	-7839409.58	-7839409.33	-7839409.08	0.0288	0.0007

Jupiter	-26168-10-15 04:04 J	-7836151.57	-7836151.33	-7836151.09	0.0490	0.0008
Uranus	-26168-11-10 15:21 J	-7836125.05	-7836124.86	-7836124.64	0.0139	0.0084
Uranus	-26167-11-15 09:50 J	-7835755.35	-7835755.09	-7835754.84	0.0138	0.0013
Uranus	-26166-11-20 02:09 J	-7835385.54	-7835385.41	-7835385.23	0.0138	0.0109
Mars	-26165-03-26 05:59 J	-7835258.43	-7835258.25	-7835258.07	0.1627	0.0409
Saturn	-26163-05-09 00:43 J	-7834484.64	-7834484.47	-7834484.30	0.0274	0.0194
Jupiter	-26156-10-19 13:11 J	-7831764.02	-7831763.95	-7831763.86	0.0490	0.0457
Jupiter	-26138-04-13 19:11 J	-7825378.90	-7825378.70	-7825378.49	0.0538	0.0247
Neptune	-26136-04-15 23:02 J	-7824645.71	-7824645.54	-7824645.33	0.0089	0.0058
Neptune	-26135-04-18 09:50 J	-7824278.33	-7824278.09	-7824277.83	0.0089	0.0014
Neptune	-26134-04-20 20:23 J	-7823910.88	-7823910.65	-7823910.40	0.0089	0.0030
Neptune	-26133-04-22 07:11 J	-7823543.33	-7823543.20	-7823543.05	0.0089	0.0074
Saturn	-26133-05-15 02:38 J	-7823520.61	-7823520.39	-7823520.16	0.0272	0.0105
Pluto	-26129-01-15 16:33 J	-7822179.86	-7822179.81	-7822179.68	0.0077	0.0072
Pluto	-26128-01-16 18:14 J	-7821812.86	-7821812.74	-7821812.61	0.0076	0.0067
Jupiter	-26126-04-18 19:26 J	-7820990.86	-7820990.69	-7820990.51	0.0537	0.0341
Uranus	-26123-05-09 12:14 J	-7819874.14	-7819873.99	-7819873.81	0.0140	0.0105
Uranus	-26122-05-14 02:38 J	-7819504.64	-7819504.39	-7819504.14	0.0140	0.0008
Uranus	-26121-05-17 17:16 J	-7819134.96	-7819134.78	-7819134.57	0.0141	0.0090
Saturn	-26118-11-15 20:38 J	-7817857.87	-7817857.64	-7817857.40	0.0288	0.0082
Saturn	-26104-05-10 11:31 J	-7812933.23	-7812933.02	-7812932.80	0.0273	0.0121
Saturn	-26089-11-08 23:59 J	-7807271.66	-7807271.50	-7807271.34	0.0287	0.0215
Jupiter	-26085-10-14 05:59 J	-7805836.49	-7805836.25	-7805836.02	0.0489	0.0077
Uranus	-26084-11-10 23:45 J	-7805443.72	-7805443.51	-7805443.30	0.0139	0.0080
Uranus	-26083-11-15 17:45 J	-7805074.01	-7805073.76	-7805073.50	0.0138	0.0017
Uranus	-26082-11-20 10:47 J	-7804704.19	-7804704.05	-7804703.89	0.0138	0.0111
Saturn	-26074-05-17 11:59 J	-7801969.17	-7801969.00	-7801968.81	0.0272	0.0176
Jupiter	-26073-10-18 13:26 J	-7801449.08	-7801448.94	-7801448.77	0.0490	0.0365
Mars	-26063-09-24 06:57 J	-7797821.40	-7797821.21	-7797821.01	0.1892	0.0637
Saturn	-26059-11-17 12:14 J	-7796306.19	-7796305.99	-7796305.79	0.0288	0.0168

Jupiter -26055-04-12 12:28 J -7795064.13 -7795063.98 -7795063.82 0.0538 0.0391
 Neptune -26055-10-14 22:33 J -7794878.63 -7794878.56 -7794878.47 0.0088 0.0083
 Neptune -26054-10-17 11:02 J -7794511.27 -7794511.04 -7794510.80 0.0088 0.0040
 Neptune -26053-10-18 23:45 J -7794143.77 -7794143.51 -7794143.25 0.0088 0.0003
 Neptune -26052-10-21 11:45 J -7793776.21 -7793776.01 -7793775.77 0.0088 0.0046
 Saturn -26045-05-11 21:21 J -7791381.85 -7791381.61 -7791381.37 0.0273 0.0051
 Jupiter -26043-04-17 12:14 J -7790676.20 -7790675.99 -7790675.77 0.0537 0.0194
 Uranus -26039-05-10 00:28 J -7789192.64 -7789192.48 -7789192.29 0.0140 0.0098
 Uranus -26038-05-14 14:52 J -7788823.13 -7788822.88 -7788822.63 0.0140 0.0002
 Uranus -26037-05-18 05:31 J -7788453.44 -7788453.27 -7788453.08 0.0141 0.0096
 Saturn -26030-11-11 14:52 J -7785720.09 -7785719.88 -7785719.65 0.0287 0.0132
 Saturn -26015-05-18 20:52 J -7780417.72 -7780417.63 -7780417.52 0.0271 0.0245
 Jupiter -26002-10-14 08:09 J -7775521.38 -7775521.16 -7775520.93 0.0489 0.0163

26TH MILLENNIUM BCE

This is a list of transits of Earth in the 26th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-26000-11-11 09:35 J	-7774762.30	-7774762.10	-7774761.86	0.0139	0.0075		
Saturn	-26000-11-19 00:57 J	-7774754.58	-7774754.46	-7774754.33	0.0289	0.0249		
Uranus	-25999-11-16 04:04 J	-7774392.59	-7774392.33	-7774392.08	0.0138	0.0021		
Uranus	-25998-11-20 20:52 J	-7774022.76	-7774022.63	-7774022.49	0.0138	0.0116		
Jupiter	-25990-10-18 19:55 J	-7771133.86	-7771133.67	-7771133.48	0.0490	0.0295		
Saturn	-25986-05-14 05:45 J	-7769830.50	-7769830.26	-7769830.02	0.0272	0.0017		

Jupiter -25972-04-11 11:59 J -7764749.07 -7764749.00 -7764748.92 0.0538 0.0505
 Neptune -25972-04-15 09:07 J -7764745.23 -7764745.12 -7764745.01 0.0089 0.0080
 Neptune -25971-04-17 19:26 J -7764377.90 -7764377.69 -7764377.44 0.0089 0.0037
 Saturn -25971-11-13 03:07 J -7764168.61 -7764168.37 -7764168.12 0.0288 0.0054
 Neptune -25970-04-20 06:28 J -7764010.48 -7764010.23 -7764009.97 0.0089 0.0008
 Neptune -25969-04-21 16:47 J -7763642.99 -7763642.80 -7763642.58 0.0089 0.0052
 Pluto -25969-07-14 01:11 J -7763559.68 -7763559.45 -7763559.18 0.0068 0.0019
 Mars -25960-03-25 12:57 J -7760383.14 -7760382.96 -7760382.78 0.1626 0.0440
 Jupiter -25960-04-16 16:19 J -7760361.05 -7760360.82 -7760360.60 0.0538 0.0102
 Saturn -25957-05-08 03:21 J -7759243.48 -7759243.36 -7759243.23 0.0274 0.0234
 Uranus -25955-05-10 11:59 J -7758511.17 -7758511.00 -7758510.80 0.0140 0.0092
 Uranus -25954-05-15 02:23 J -7758141.65 -7758141.40 -7758141.15 0.0140 0.0005
 Uranus -25953-05-18 17:02 J -7757771.95 -7757771.79 -7757771.61 0.0141 0.0102
 Saturn -25927-05-15 12:14 J -7748279.22 -7748278.99 -7748278.76 0.0272 0.0081
 Jupiter -25919-10-13 15:07 J -7745206.07 -7745205.87 -7745205.65 0.0489 0.0224
 Uranus -25916-11-11 19:40 J -7744080.90 -7744080.68 -7744080.46 0.0139 0.0070
 Uranus -25915-11-16 13:11 J -7743711.20 -7743710.95 -7743710.69 0.0138 0.0026
 Uranus -25914-11-21 05:59 J -7743341.36 -7743341.25 -7743341.11 0.0138 0.0120
 Saturn -25912-11-14 11:02 J -7742617.29 -7742617.04 -7742616.80 0.0288 0.0017
 Jupiter -25907-10-18 01:26 J -7740818.65 -7740818.44 -7740818.23 0.0490 0.0226
 Saturn -25898-05-10 09:21 J -7737692.29 -7737692.11 -7737691.91 0.0273 0.0171
 Neptune -25890-10-16 19:26 J -7734610.85 -7734610.69 -7734610.48 0.0088 0.0062
 Neptune -25889-10-18 08:09 J -7734243.40 -7734243.16 -7734242.89 0.0088 0.0019
 Neptune -25888-10-20 20:52 J -7733875.88 -7733875.63 -7733875.37 0.0088 0.0024
 Neptune -25887-10-23 09:35 J -7733508.27 -7733508.10 -7733507.93 0.0088 0.0067
 Pluto -25883-01-17 00:28 J -7732326.66 -7732326.48 -7732326.27 0.0077 0.0051
 Mars -25881-03-27 13:40 J -7731526.09 -7731525.93 -7731525.77 0.1627 0.0789
 Jupiter -25877-04-15 14:52 J -7730046.11 -7730045.88 -7730045.65 0.0537 0.0015
 Uranus -25871-05-10 21:50 J -7727829.78 -7727829.59 -7727829.39 0.0140 0.0087
 Uranus -25870-05-15 12:14 J -7727460.24 -7727459.99 -7727459.74 0.0140 0.0009

Uranus	-25869-05-19 02:38 J	-7727090.54	-7727090.39	-7727090.21	0.0141	0.0106
Saturn	-25868-05-16 16:04 J	-7726728.03	-7726727.83	-7726727.61	0.0272	0.0140
Saturn	-25853-11-15 14:38 J	-7721066.13	-7721065.89	-7721065.65	0.0288	0.0078
Saturn	-25839-05-11 13:40 J	-7716141.15	-7716140.93	-7716140.71	0.0273	0.0111
Jupiter	-25836-10-12 21:50 J	-7714890.78	-7714890.59	-7714890.40	0.0489	0.0288
Uranus	-25832-11-12 05:16 J	-7713399.49	-7713399.28	-7713399.04	0.0139	0.0065
Uranus	-25831-11-16 23:16 J	-7713029.78	-7713029.53	-7713029.28	0.0138	0.0031
Uranus	-25830-11-21 15:35 J	-7712659.94	-7712659.85	-7712659.72	0.0138	0.0125
Jupiter	-25824-10-17 09:35 J	-7710503.32	-7710503.10	-7710502.87	0.0490	0.0168
Saturn	-25824-11-09 08:09 J	-7710480.30	-7710480.16	-7710480.01	0.0287	0.0234
Saturn	-25809-05-17 18:14 J	-7705176.90	-7705176.74	-7705176.56	0.0272	0.0195
Neptune	-25807-04-17 05:59 J	-7704477.42	-7704477.25	-7704477.03	0.0089	0.0059
Neptune	-25806-04-19 17:16 J	-7704110.03	-7704109.78	-7704109.53	0.0089	0.0014
Neptune	-25805-04-21 03:50 J	-7703742.56	-7703742.34	-7703742.09	0.0089	0.0030
Neptune	-25804-04-23 14:09 J	-7703375.03	-7703374.91	-7703374.74	0.0089	0.0074
Jupiter	-25794-04-15 18:28 J	-7699730.95	-7699730.73	-7699730.50	0.0538	0.0107
Saturn	-25794-11-17 15:35 J	-7699515.06	-7699514.85	-7699514.62	0.0289	0.0135
Uranus	-25787-05-11 05:45 J	-7697148.44	-7697148.26	-7697148.05	0.0140	0.0085
Uranus	-25786-05-15 20:09 J	-7696778.91	-7696778.66	-7696778.41	0.0140	0.0011
Uranus	-25785-05-19 10:19 J	-7696409.21	-7696409.07	-7696408.89	0.0141	0.0109
Jupiter	-25782-04-20 22:33 J	-7695342.64	-7695342.56	-7695342.48	0.0537	0.0499
Saturn	-25780-05-12 15:21 J	-7694590.09	-7694589.86	-7694589.62	0.0272	0.0057
Mars	-25779-09-23 02:23 J	-7694091.57	-7694091.40	-7694091.22	0.1892	0.1015
Saturn	-25765-11-10 06:14 J	-7688929.42	-7688929.24	-7688929.04	0.0287	0.0185
Mars	-25755-03-24 18:57 J	-7685507.82	-7685507.71	-7685507.60	0.1627	0.1303
Jupiter	-25753-10-12 09:50 J	-7684575.26	-7684575.09	-7684574.91	0.0490	0.0327
Saturn	-25750-05-19 18:28 J	-7683625.82	-7683625.73	-7683625.61	0.0272	0.0246
Uranus	-25748-11-12 13:26 J	-7682718.16	-7682717.94	-7682717.70	0.0139	0.0062
Uranus	-25747-11-17 07:11 J	-7682348.45	-7682348.20	-7682347.95	0.0138	0.0034
Uranus	-25746-11-21 23:31 J	-7681978.60	-7681978.52	-7681978.40	0.0138	0.0127

Jupiter -25741-10-16 20:38 J -7680187.87 -7680187.64 -7680187.41 0.0490 0.0126
 Saturn -25735-11-18 13:55 J -7677964.11 -7677963.92 -7677963.73 0.0289 0.0185
 Neptune -25726-10-16 04:33 J -7674710.36 -7674710.31 -7674710.18 0.0088 0.0083
 Neptune -25725-10-17 17:59 J -7674342.98 -7674342.75 -7674342.51 0.0088 0.0039
 Neptune -25724-10-20 06:43 J -7673975.48 -7673975.22 -7673974.96 0.0088 0.0004
 Pluto -25723-07-16 04:47 J -7673706.55 -7673706.30 -7673706.04 0.0068 0.0011
 Neptune -25723-10-22 18:28 J -7673607.93 -7673607.73 -7673607.48 0.0088 0.0047
 Saturn -25721-05-13 15:50 J -7673039.08 -7673038.84 -7673038.60 0.0272 0.0005
 Jupiter -25711-04-15 05:16 J -7669415.50 -7669415.28 -7669415.06 0.0538 0.0162
 Saturn -25706-11-12 03:35 J -7667378.56 -7667378.35 -7667378.13 0.0287 0.0138
 Uranus -25703-05-11 12:43 J -7666467.15 -7666466.97 -7666466.75 0.0140 0.0083
 Uranus -25702-05-16 02:52 J -7666097.62 -7666097.38 -7666097.12 0.0140 0.0014
 Uranus -25701-05-19 17:31 J -7665727.91 -7665727.77 -7665727.60 0.0141 0.0110
 Jupiter -25699-04-20 03:35 J -7665027.48 -7665027.35 -7665027.20 0.0537 0.0417
 Saturn -25692-05-08 16:04 J -7662451.91 -7662451.83 -7662451.75 0.0275 0.0258
 Mars -25676-03-26 19:40 J -7656650.86 -7656650.68 -7656650.49 0.1627 0.0071
 Saturn -25676-11-19 11:16 J -7656413.16 -7656413.03 -7656412.87 0.0289 0.0234
 Jupiter -25670-10-12 20:38 J -7654259.79 -7654259.64 -7654259.48 0.0489 0.0371
 Uranus -25664-11-12 20:09 J -7652036.88 -7652036.66 -7652036.41 0.0139 0.0060
 Uranus -25663-11-17 14:09 J -7651667.16 -7651666.91 -7651666.66 0.0138 0.0036
 Saturn -25662-05-15 15:07 J -7651488.11 -7651487.87 -7651487.63 0.0272 0.0044
 Uranus -25662-11-22 07:11 J -7651297.28 -7651297.20 -7651297.11 0.0138 0.0129
 Jupiter -25658-10-17 06:43 J -7649872.45 -7649872.22 -7649871.98 0.0489 0.0077
 Saturn -25647-11-13 00:28 J -7645827.71 -7645827.48 -7645827.24 0.0287 0.0092
 Neptune -25643-04-16 17:31 J -7644576.87 -7644576.77 -7644576.64 0.0089 0.0080
 Neptune -25642-04-19 04:33 J -7644209.54 -7644209.31 -7644209.08 0.0089 0.0036
 Neptune -25641-04-20 14:52 J -7643842.13 -7643841.88 -7643841.62 0.0089 0.0008
 Neptune -25640-04-23 01:40 J -7643474.63 -7643474.43 -7643474.21 0.0089 0.0052
 Pluto -25637-01-19 05:02 J -7642473.49 -7642473.29 -7642473.05 0.0077 0.0041
 Saturn -25633-05-09 14:09 J -7640901.05 -7640900.91 -7640900.75 0.0275 0.0212

Jupiter	-25628-04-14 09:07 J	-7639100.32	-7639100.12	-7639099.92	0.0537	0.0250
Uranus	-25619-05-11 21:35 J	-7635785.79	-7635785.60	-7635785.38	0.0140	0.0079
Uranus	-25618-05-16 11:45 J	-7635416.26	-7635416.01	-7635415.76	0.0140	0.0017
Uranus	-25617-05-20 02:23 J	-7635046.55	-7635046.40	-7635046.25	0.0141	0.0113
Saturn	-25617-11-20 09:35 J	-7634862.14	-7634862.10	-7634862.05	0.0289	0.0283
Jupiter	-25616-04-19 08:52 J	-7634712.31	-7634712.13	-7634711.95	0.0537	0.0331
Saturn	-25603-05-16 14:23 J	-7629937.12	-7629936.90	-7629936.66	0.0272	0.0094
Mars	-25597-03-28 20:38 J	-7627793.77	-7627793.64	-7627793.51	0.1627	0.1157
Saturn	-25588-11-13 23:16 J	-7624276.77	-7624276.53	-7624276.28	0.0287	0.0042
Jupiter	-25587-10-12 07:26 J	-7623944.31	-7623944.19	-7623944.07	0.0489	0.0417
Uranus	-25580-11-13 02:23 J	-7621355.63	-7621355.40	-7621355.16	0.0139	0.0058
Uranus	-25579-11-17 19:55 J	-7620985.91	-7620985.67	-7620985.41	0.0138	0.0038
Uranus	-25578-11-22 13:11 J	-7620616.02	-7620615.95	-7620615.86	0.0138	0.0130
Jupiter	-25575-10-16 17:45 J	-7619556.99	-7619556.76	-7619556.52	0.0490	0.0034
Saturn	-25574-05-11 12:28 J	-7619350.16	-7619349.98	-7619349.78	0.0275	0.0165
Jupiter	-25563-10-21 04:47 J	-7615169.32	-7615169.30	-7615169.27	0.0490	0.0486
Neptune	-25561-10-17 03:35 J	-7614442.52	-7614442.35	-7614442.14	0.0088	0.0060
Neptune	-25560-10-19 16:19 J	-7614075.07	-7614074.82	-7614074.55	0.0088	0.0017
Neptune	-25559-10-22 05:02 J	-7613707.53	-7613707.29	-7613707.03	0.0088	0.0026
Neptune	-25558-10-24 17:45 J	-7613339.92	-7613339.76	-7613339.60	0.0088	0.0069
Jupiter	-25545-04-13 14:52 J	-7608785.05	-7608784.88	-7608784.69	0.0538	0.0332
Saturn	-25544-05-17 14:09 J	-7608386.10	-7608385.91	-7608385.69	0.0272	0.0143
Uranus	-25535-05-12 07:55 J	-7605104.37	-7605104.17	-7605103.94	0.0140	0.0074
Uranus	-25534-05-16 21:50 J	-7604734.83	-7604734.59	-7604734.34	0.0140	0.0022
Jupiter	-25533-04-18 18:43 J	-7604396.91	-7604396.72	-7604396.52	0.0537	0.0272
Uranus	-25533-05-20 12:28 J	-7604365.10	-7604364.98	-7604364.83	0.0141	0.0118
Saturn	-25529-11-15 00:14 J	-7602725.74	-7602725.49	-7602725.24	0.0287	0.0013
Saturn	-25515-05-12 12:14 J	-7597799.20	-7597798.99	-7597798.76	0.0275	0.0115
Jupiter	-25504-10-11 15:21 J	-7593628.92	-7593628.86	-7593628.80	0.0490	0.0474
Saturn	-25500-11-09 06:43 J	-7592139.27	-7592139.22	-7592139.17	0.0285	0.0279

Uranus	-25496-11-13 09:50 J	-7590674.33	-7590674.09	-7590673.86	0.0139	0.0055
Uranus	-25495-11-18 03:50 J	-7590304.59	-7590304.34	-7590304.10	0.0138	0.0040
Uranus	-25494-11-22 20:52 J	-7589934.68	-7589934.63	-7589934.56	0.0138	0.0133
Jupiter	-25492-10-16 02:38 J	-7589241.63	-7589241.39	-7589241.15	0.0490	0.0022
Saturn	-25485-05-18 15:21 J	-7586835.01	-7586834.86	-7586834.68	0.0272	0.0196
Jupiter	-25480-10-20 12:43 J	-7584854.08	-7584853.97	-7584853.85	0.0490	0.0428
Neptune	-25478-04-18 16:33 J	-7584309.00	-7584308.81	-7584308.61	0.0089	0.0057
Neptune	-25477-04-20 03:07 J	-7583941.61	-7583941.37	-7583941.11	0.0089	0.0014
Pluto	-25477-07-17 12:14 J	-7583853.24	-7583852.99	-7583852.72	0.0068	0.0008
Neptune	-25476-04-22 13:55 J	-7583574.16	-7583573.92	-7583573.68	0.0089	0.0031
Neptune	-25475-04-25 00:14 J	-7583206.61	-7583206.49	-7583206.34	0.0089	0.0075
Mars	-25471-03-26 01:55 J	-7581775.57	-7581775.42	-7581775.27	0.1627	0.0932
Saturn	-25470-11-17 05:02 J	-7581174.53	-7581174.29	-7581174.05	0.0287	0.0075
Jupiter	-25462-04-13 22:04 J	-7578469.72	-7578469.58	-7578469.42	0.0537	0.0403
Saturn	-25456-05-13 13:40 J	-7576248.17	-7576247.93	-7576247.69	0.0275	0.0061
Uranus	-25451-05-12 18:43 J	-7574422.93	-7574422.72	-7574422.50	0.0140	0.0068
Jupiter	-25450-04-18 22:19 J	-7574081.79	-7574081.57	-7574081.36	0.0537	0.0179
Uranus	-25450-05-17 08:38 J	-7574053.38	-7574053.14	-7574052.89	0.0140	0.0027
Uranus	-25449-05-20 23:31 J	-7573683.63	-7573683.52	-7573683.39	0.0141	0.0123
Saturn	-25441-11-10 12:43 J	-7570588.13	-7570587.97	-7570587.80	0.0286	0.0214
Saturn	-25426-05-20 18:57 J	-7565283.78	-7565283.71	-7565283.61	0.0272	0.0254
Mars	-25416-09-25 14:38 J	-7561503.07	-7561502.89	-7561502.72	0.1893	0.0953
Uranus	-25412-11-13 17:59 J	-7559992.97	-7559992.75	-7559992.50	0.0139	0.0052
Uranus	-25411-11-18 12:14 J	-7559623.23	-7559622.99	-7559622.74	0.0138	0.0043
Saturn	-25411-11-18 13:40 J	-7559623.14	-7559622.93	-7559622.72	0.0287	0.0145 *
Uranus	-25410-11-23 05:31 J	-7559253.30	-7559253.27	-7559253.23	0.0138	0.0136
Jupiter	-25409-10-15 09:07 J	-7558926.35	-7558926.12	-7558925.88	0.0490	0.0087
Saturn	-25397-05-14 17:31 J	-7554697.01	-7554696.77	-7554696.53	0.0275	0.0003
Neptune	-25397-10-16 12:57 J	-7554542.03	-7554541.96	-7554541.82	0.0088	0.0081
Jupiter	-25397-10-19 17:31 J	-7554538.93	-7554538.77	-7554538.60	0.0490	0.0357

Neptune -25396-10-19 02:23 J -7554174.63 -7554174.40 -7554174.15 0.0088 0.0037
 Neptune -25395-10-21 15:07 J -7553807.13 -7553806.87 -7553806.60 0.0088 0.0006
 Neptune -25394-10-24 03:35 J -7553439.55 -7553439.35 -7553439.12 0.0088 0.0049
 Mars -25392-03-28 02:38 J -7552918.57 -7552918.39 -7552918.20 0.1627 0.0305
 Pluto -25391-01-20 13:55 J -7552620.17 -7552619.92 -7552619.66 0.0077 0.0017
 Saturn -25382-11-12 23:02 J -7549036.75 -7549036.54 -7549036.32 0.0286 0.0140
 Jupiter -25379-04-12 20:23 J -7548154.69 -7548154.65 -7548154.59 0.0537 0.0523
 Saturn -25368-05-09 20:23 J -7544109.74 -7544109.65 -7544109.52 0.0275 0.0245
 Jupiter -25367-04-17 21:07 J -7543766.85 -7543766.62 -7543766.39 0.0537 0.0061
 Uranus -25367-05-13 04:19 J -7543741.52 -7543741.32 -7543741.08 0.0140 0.0064
 Uranus -25366-05-17 18:28 J -7543371.96 -7543371.73 -7543371.47 0.0140 0.0032
 Uranus -25365-05-21 09:35 J -7543002.20 -7543002.10 -7543001.99 0.0141 0.0127
 Saturn -25352-11-20 02:09 J -7538071.56 -7538071.41 -7538071.26 0.0287 0.0225
 Saturn -25338-05-16 23:59 J -7533145.74 -7533145.50 -7533145.26 0.0274 0.0064
 Uranus -25328-11-14 03:21 J -7529311.59 -7529311.36 -7529311.10 0.0139 0.0047
 Uranus -25327-11-18 21:21 J -7528941.84 -7528941.61 -7528941.35 0.0138 0.0049
 Jupiter -25326-10-15 10:47 J -7528611.27 -7528611.05 -7528610.82 0.0490 0.0173
 Saturn -25323-11-14 12:14 J -7527485.23 -7527484.99 -7527484.74 0.0286 0.0059
 Neptune -25314-04-18 04:33 J -7524408.41 -7524408.31 -7524408.16 0.0089 0.0078
 Jupiter -25314-10-19 22:19 J -7524223.77 -7524223.57 -7524223.38 0.0490 0.0282
 Mars -25313-03-30 03:21 J -7524061.42 -7524061.36 -7524061.30 0.1627 0.1530
 Neptune -25313-04-19 15:21 J -7524041.08 -7524040.86 -7524040.61 0.0089 0.0034
 Neptune -25312-04-22 02:09 J -7523673.66 -7523673.41 -7523673.15 0.0089 0.0010
 Neptune -25311-04-24 12:28 J -7523306.17 -7523305.98 -7523305.76 0.0089 0.0054
 Saturn -25309-05-11 05:02 J -7522558.47 -7522558.29 -7522558.10 0.0275 0.0175
 Jupiter -25284-04-17 00:43 J -7513451.70 -7513451.47 -7513451.25 0.0537 0.0034
 Uranus -25283-05-13 13:11 J -7513060.18 -7513059.95 -7513059.73 0.0140 0.0060
 Uranus -25282-05-18 03:07 J -7512690.61 -7512690.37 -7512690.12 0.0140 0.0034
 Uranus -25281-05-21 17:59 J -7512320.83 -7512320.75 -7512320.65 0.0141 0.0130
 Saturn -25279-05-18 08:23 J -7511594.35 -7511594.15 -7511593.93 0.0274 0.0134

Saturn	-25264-11-16 03:50 J	-7505933.59	-7505933.34	-7505933.09	0.0286	0.0028
Saturn	-25250-05-13 15:21 J	-7501007.07	-7501006.86	-7501006.62	0.0275	0.0103
Uranus	-25245-11-09 17:16 J	-7498999.79	-7498999.78	-7498999.73	0.0139	0.0138
Uranus	-25244-11-14 12:28 J	-7498630.21	-7498629.98	-7498629.72	0.0139	0.0043
Jupiter	-25243-10-14 13:55 J	-7498296.12	-7498295.92	-7498295.72	0.0490	0.0251
Uranus	-25243-11-19 06:43 J	-7498260.45	-7498260.22	-7498259.97	0.0138	0.0052
Saturn	-25235-11-10 08:38 J	-7495347.22	-7495347.14	-7495347.06	0.0285	0.0268
Neptune	-25232-10-18 12:14 J	-7494274.16	-7494273.99	-7494273.77	0.0088	0.0058
Pluto	-25231-07-19 17:59 J	-7493999.97	-7493999.75	-7493999.48	0.0068	0.0024
Jupiter	-25231-10-18 23:59 J	-7493908.72	-7493908.50	-7493908.28	0.0490	0.0197
Neptune	-25231-10-21 01:40 J	-7493906.69	-7493906.43	-7493906.17	0.0088	0.0014
Neptune	-25230-10-23 14:09 J	-7493539.14	-7493538.91	-7493538.64	0.0088	0.0029
Neptune	-25229-10-25 02:52 J	-7493171.52	-7493171.38	-7493171.22	0.0088	0.0072
Saturn	-25220-05-19 18:57 J	-7490042.86	-7490042.71	-7490042.55	0.0274	0.0208
Saturn	-25205-11-17 20:52 J	-7484381.85	-7484381.63	-7484381.40	0.0287	0.0118
Jupiter	-25201-04-15 17:45 J	-7483136.97	-7483136.76	-7483136.54	0.0537	0.0176
Uranus	-25199-05-13 19:40 J	-7482378.89	-7482378.68	-7482378.44	0.0140	0.0059
Uranus	-25198-05-18 09:50 J	-7482009.33	-7482009.09	-7482008.84	0.0140	0.0036
Uranus	-25197-05-22 00:28 J	-7481639.55	-7481639.48	-7481639.38	0.0141	0.0131
Saturn	-25191-05-15 02:52 J	-7479455.62	-7479455.38	-7479455.14	0.0275	0.0026
Jupiter	-25189-04-20 17:16 J	-7478748.93	-7478748.78	-7478748.63	0.0537	0.0401
Mars	-25187-03-27 09:07 J	-7478043.29	-7478043.12	-7478042.94	0.1628	0.0550
Saturn	-25176-11-12 01:55 J	-7473795.61	-7473795.42	-7473795.22	0.0285	0.0179
Uranus	-25161-11-10 01:26 J	-7468318.49	-7468318.44	-7468318.36	0.0139	0.0134
Jupiter	-25160-10-13 13:11 J	-7467981.11	-7467980.95	-7467980.78	0.0490	0.0347
Uranus	-25160-11-14 20:52 J	-7467948.88	-7467948.63	-7467948.38	0.0139	0.0039
Uranus	-25159-11-19 14:52 J	-7467579.11	-7467578.88	-7467578.63	0.0138	0.0055
Neptune	-25149-04-19 04:19 J	-7464140.51	-7464140.32	-7464140.11	0.0089	0.0054
Neptune	-25148-04-21 14:52 J	-7463773.13	-7463772.88	-7463772.62	0.0089	0.0010
Jupiter	-25148-10-17 23:59 J	-7463593.73	-7463593.50	-7463593.27	0.0490	0.0102

Neptune -25147-04-24 00:57 J -7463405.68 -7463405.46 -7463405.21 0.0089 0.0033
 Neptune -25146-04-26 11:31 J -7463038.13 -7463038.02 -7463037.88 0.0089 0.0077
 Saturn -25146-11-20 12:57 J -7462830.13 -7462829.96 -7462829.78 0.0287 0.0206
 Pluto -25145-01-22 21:21 J -7462766.87 -7462766.61 -7462766.35 0.0077 0.0005
 Saturn -25132-05-16 14:23 J -7457904.14 -7457903.90 -7457903.66 0.0274 0.0049
 Mars -25132-09-24 11:02 J -7457773.24 -7457773.04 -7457772.85 0.1891 0.0646
 Jupiter -25118-04-15 15:50 J -7452822.02 -7452821.84 -7452821.64 0.0537 0.0295
 Saturn -25117-11-13 18:14 J -7452243.97 -7452243.74 -7452243.50 0.0286 0.0092
 Uranus -25115-05-14 02:23 J -7451697.62 -7451697.40 -7451697.16 0.0140 0.0057
 Uranus -25114-05-18 16:04 J -7451328.06 -7451327.83 -7451327.57 0.0140 0.0038
 Uranus -25113-05-22 06:43 J -7450958.29 -7450958.22 -7450958.12 0.0141 0.0132
 Mars -25108-03-29 09:50 J -7449186.26 -7449186.09 -7449185.92 0.1627 0.0679
 Jupiter -25106-04-20 19:11 J -7448433.88 -7448433.70 -7448433.50 0.0537 0.0302
 Saturn -25103-05-11 11:59 J -7447317.15 -7447317.00 -7447316.84 0.0276 0.0208
 Jupiter -25077-10-12 18:43 J -7437665.85 -7437665.72 -7437665.60 0.0490 0.0415
 Uranus -25077-11-10 07:40 J -7437637.23 -7437637.18 -7437637.07 0.0139 0.0133
 Uranus -25076-11-15 03:35 J -7437267.60 -7437267.35 -7437267.10 0.0139 0.0037
 Uranus -25075-11-19 21:50 J -7436897.82 -7436897.59 -7436897.35 0.0138 0.0057
 Saturn -25073-05-17 23:59 J -7436352.71 -7436352.50 -7436352.27 0.0274 0.0122
 Neptune -25068-10-17 22:19 J -7434373.66 -7434373.57 -7434373.42 0.0088 0.0079
 Neptune -25067-10-20 11:16 J -7434006.25 -7434006.03 -7434005.77 0.0088 0.0035
 Neptune -25066-10-23 00:14 J -7433638.75 -7433638.49 -7433638.22 0.0088 0.0009
 Jupiter -25065-10-17 04:47 J -7433278.53 -7433278.30 -7433278.06 0.0490 0.0033
 Neptune -25065-10-24 12:43 J -7433271.16 -7433270.97 -7433270.74 0.0088 0.0052
 Saturn -25058-11-16 07:26 J -7430692.44 -7430692.19 -7430691.94 0.0286 0.0010
 Jupiter -25053-10-21 14:52 J -7428890.92 -7428890.88 -7428890.82 0.0490 0.0478
 Saturn -25044-05-12 21:35 J -7425765.80 -7425765.60 -7425765.38 0.0275 0.0135
 Jupiter -25035-04-14 19:26 J -7422506.84 -7422506.69 -7422506.53 0.0537 0.0388
 Uranus -25031-05-14 10:47 J -7421016.28 -7421016.05 -7421015.82 0.0140 0.0054
 Uranus -25030-05-19 00:28 J -7420646.72 -7420646.48 -7420646.24 0.0140 0.0039

Uranus	-25029-05-22 14:52 J	-7420276.95	-7420276.88	-7420276.80	0.0141	0.0134
Jupiter	-25023-04-19 15:21 J	-7418119.07	-7418118.86	-7418118.64	0.0537	0.0173
Saturn	-25014-05-20 08:09 J	-7414801.33	-7414801.16	-7414800.99	0.0273	0.0190

25TH MILLENNIUM BCE

This is a list of transits of Earth in the 25th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-24999-11-17 16:47 J	-7409141.04	-7409140.80	-7409140.55	0.0287	0.0064		
Jupiter	-24994-10-13 00:14 J	-7407350.53	-7407350.49	-7407350.46	0.0489	0.0483		
Uranus	-24993-11-10 14:52 J	-7406955.96	-7406955.88	-7406955.78	0.0139	0.0129		
Uranus	-24992-11-15 10:19 J	-7406586.31	-7406586.07	-7406585.81	0.0139	0.0035		
Uranus	-24991-11-20 04:33 J	-7406216.53	-7406216.31	-7406216.07	0.0138	0.0059		
Pluto	-24986-07-20 11:31 J	-7404513.17	-7404513.02	-7404512.81	0.0068	0.0049		
Neptune	-24985-04-18 16:33 J	-7404239.93	-7404239.81	-7404239.65	0.0089	0.0075		
Saturn	-24985-05-14 05:02 J	-7404214.53	-7404214.29	-7404214.06	0.0275	0.0068		
Pluto	-24985-07-21 03:21 J	-7404146.51	-7404146.36	-7404146.16	0.0068	0.0050		
Neptune	-24984-04-21 03:21 J	-7403872.59	-7403872.36	-7403872.12	0.0089	0.0031		
Neptune	-24983-04-23 14:09 J	-7403505.16	-7403504.91	-7403504.66	0.0089	0.0013		
Mars	-24982-03-26 14:52 J	-7403167.97	-7403167.88	-7403167.79	0.1629	0.1418		
Neptune	-24982-04-25 23:59 J	-7403137.67	-7403137.50	-7403137.28	0.0089	0.0057		
Jupiter	-24982-10-17 08:52 J	-7402963.37	-7402963.13	-7402962.89	0.0490	0.0044		
Jupiter	-24970-10-21 20:09 J	-7398575.78	-7398575.66	-7398575.52	0.0490	0.0407		
Saturn	-24970-11-11 15:07 J	-7398554.99	-7398554.87	-7398554.73	0.0285	0.0241		

Saturn	-24955-05-21 13:11 J	-7393250.04	-7393249.95	-7393249.86	0.0273	0.0252
Jupiter	-24952-04-13 16:04 J	-7392191.89	-7392191.83	-7392191.75	0.0537	0.0511
Uranus	-24947-05-14 20:23 J	-7390334.87	-7390334.65	-7390334.40	0.0140	0.0050
Uranus	-24946-05-19 10:04 J	-7389965.31	-7389965.08	-7389964.83	0.0140	0.0044
Uranus	-24945-05-23 00:28 J	-7389595.51	-7389595.48	-7389595.42	0.0141	0.0138
Jupiter	-24940-04-18 17:02 J	-7387804.02	-7387803.79	-7387803.56	0.0537	0.0071
Saturn	-24940-11-18 21:35 J	-7387589.82	-7387589.60	-7387589.37	0.0287	0.0129
Saturn	-24926-05-16 09:50 J	-7382663.33	-7382663.09	-7382662.85	0.0274	0.0006
Saturn	-24911-11-12 17:02 J	-7377003.97	-7377003.79	-7377003.59	0.0285	0.0184
Uranus	-24909-11-10 23:16 J	-7376274.63	-7376274.53	-7376274.42	0.0139	0.0126
Uranus	-24908-11-15 18:43 J	-7375904.97	-7375904.72	-7375904.47	0.0139	0.0031
Uranus	-24907-11-20 12:43 J	-7375535.19	-7375534.97	-7375534.73	0.0138	0.0063
Mars	-24903-03-28 16:33 J	-7374311.00	-7374310.81	-7374310.63	0.1628	0.0166
Neptune	-24903-10-19 21:50 J	-7374105.78	-7374105.59	-7374105.37	0.0088	0.0055
Neptune	-24902-10-22 10:47 J	-7373738.31	-7373738.05	-7373737.79	0.0088	0.0012
Neptune	-24901-10-23 23:31 J	-7373370.77	-7373370.52	-7373370.28	0.0088	0.0031
Neptune	-24900-10-26 11:45 J	-7373003.12	-7373003.01	-7373002.85	0.0088	0.0075
Pluto	-24899-01-24 10:04 J	-7372913.29	-7372913.08	-7372912.86	0.0076	0.0042
Jupiter	-24899-10-16 19:11 J	-7372647.93	-7372647.70	-7372647.46	0.0490	0.0090
Saturn	-24897-05-10 10:33 J	-7372076.12	-7372076.06	-7372075.97	0.0276	0.0263
Jupiter	-24887-10-21 06:14 J	-7368260.40	-7368260.24	-7368260.08	0.0490	0.0359
Saturn	-24881-11-19 22:33 J	-7366038.73	-7366038.56	-7366038.36	0.0287	0.0186
Saturn	-24867-05-17 11:31 J	-7361112.25	-7361112.02	-7361111.78	0.0274	0.0050
Uranus	-24864-05-10 17:16 J	-7360022.81	-7360022.78	-7360022.71	0.0139	0.0136
Uranus	-24863-05-15 06:28 J	-7359653.46	-7359653.23	-7359652.99	0.0140	0.0045
Uranus	-24862-05-19 19:55 J	-7359283.89	-7359283.67	-7359283.42	0.0140	0.0048
Jupiter	-24857-04-18 02:23 J	-7357488.63	-7357488.40	-7357488.17	0.0537	0.0010
Saturn	-24852-11-13 15:35 J	-7355453.07	-7355452.85	-7355452.63	0.0285	0.0134
Saturn	-24838-05-12 11:31 J	-7350525.17	-7350525.02	-7350524.86	0.0276	0.0209
Uranus	-24825-11-11 08:52 J	-7345593.25	-7345593.13	-7345592.99	0.0139	0.0121

Mars -24824-03-30 17:16 J -7345453.92 -7345453.78 -7345453.64 0.1628 0.1070
 Uranus -24824-11-16 04:04 J -7345223.57 -7345223.33 -7345223.06 0.0139 0.0027
 Uranus -24823-11-20 22:19 J -7344853.79 -7344853.57 -7344853.34 0.0138 0.0067
 Saturn -24822-11-21 20:52 J -7344487.76 -7344487.63 -7344487.48 0.0287 0.0236
 Neptune -24820-04-20 15:35 J -7343972.05 -7343971.85 -7343971.64 0.0089 0.0052
 Neptune -24819-04-23 01:55 J -7343604.66 -7343604.42 -7343604.16 0.0089 0.0009
 Neptune -24818-04-25 12:28 J -7343237.20 -7343236.98 -7343236.74 0.0089 0.0036
 Neptune -24817-04-26 22:33 J -7342869.65 -7342869.56 -7342869.42 0.0089 0.0080
 Jupiter -24816-10-16 05:31 J -7342332.50 -7342332.27 -7342332.04 0.0490 0.0137
 Saturn -24808-05-18 11:31 J -7339561.24 -7339561.02 -7339560.79 0.0274 0.0102
 Jupiter -24804-10-20 15:35 J -7337945.03 -7337944.85 -7337944.66 0.0490 0.0308
 Saturn -24793-11-14 12:14 J -7333902.22 -7333901.99 -7333901.75 0.0285 0.0088
 Uranus -24780-05-11 02:23 J -7329341.45 -7329341.40 -7329341.29 0.0139 0.0133
 Saturn -24779-05-13 09:50 J -7328974.27 -7328974.09 -7328973.88 0.0276 0.0161
 Uranus -24779-05-15 15:50 J -7328972.07 -7328971.84 -7328971.60 0.0140 0.0041
 Uranus -24778-05-20 05:16 J -7328602.50 -7328602.28 -7328602.04 0.0140 0.0052
 Jupiter -24774-04-18 05:45 J -7327173.48 -7327173.26 -7327173.03 0.0537 0.0082
 Mars -24769-09-26 23:31 J -7325184.67 -7325184.52 -7325184.37 0.1891 0.1324
 Saturn -24763-11-22 17:02 J -7322936.81 -7322936.79 -7322936.73 0.0287 0.0284
 Jupiter -24762-04-23 05:31 J -7322785.35 -7322785.27 -7322785.18 0.0537 0.0495
 Saturn -24749-05-19 10:33 J -7318010.25 -7318010.06 -7318009.85 0.0274 0.0152
 Uranus -24741-11-11 19:11 J -7314911.83 -7314911.70 -7314911.54 0.0139 0.0115
 Pluto -24740-07-21 18:57 J -7314659.92 -7314659.71 -7314659.45 0.0068 0.0030
 Uranus -24740-11-16 14:23 J -7314542.15 -7314541.90 -7314541.64 0.0139 0.0021
 Neptune -24739-10-19 07:26 J -7314205.29 -7314205.19 -7314205.02 0.0088 0.0076
 Uranus -24739-11-21 08:23 J -7314172.36 -7314172.15 -7314171.92 0.0138 0.0071
 Neptune -24738-10-21 20:38 J -7313837.88 -7313837.64 -7313837.39 0.0088 0.0032
 Neptune -24737-10-23 09:21 J -7313470.36 -7313470.11 -7313469.84 0.0088 0.0011
 Neptune -24736-10-25 21:35 J -7313102.78 -7313102.60 -7313102.37 0.0088 0.0054
 Saturn -24734-11-16 07:55 J -7312351.41 -7312351.17 -7312350.92 0.0285 0.0044

Jupiter	-24733-10-15 16:33 J	-7312017.03	-7312016.81	-7312016.58	0.0490	0.0181
Jupiter	-24721-10-20 03:35 J	-7307629.55	-7307629.35	-7307629.15	0.0490	0.0269
Saturn	-24720-05-14 07:55 J	-7307423.39	-7307423.17	-7307422.95	0.0276	0.0113
Mars	-24698-03-27 22:19 J	-7299435.71	-7299435.57	-7299435.43	0.1630	0.1025
Uranus	-24696-05-11 10:19 J	-7298660.15	-7298660.07	-7298659.97	0.0139	0.0129
Uranus	-24695-05-15 23:16 J	-7298290.76	-7298290.53	-7298290.28	0.0140	0.0039
Uranus	-24694-05-20 12:57 J	-7297921.18	-7297920.96	-7297920.72	0.0140	0.0054
Jupiter	-24691-04-17 13:11 J	-7296858.16	-7296857.95	-7296857.73	0.0537	0.0155
Saturn	-24690-05-21 09:07 J	-7296459.27	-7296459.12	-7296458.94	0.0274	0.0201
Jupiter	-24679-04-22 17:02 J	-7292469.91	-7292469.79	-7292469.66	0.0537	0.0442
Saturn	-24675-11-17 04:47 J	-7290800.54	-7290800.30	-7290800.05	0.0285	0.0006
Saturn	-24661-05-15 05:45 J	-7285872.49	-7285872.26	-7285872.02	0.0276	0.0066
Uranus	-24657-11-12 05:31 J	-7284230.43	-7284230.27	-7284230.11	0.0139	0.0110
Neptune	-24656-04-20 03:21 J	-7284071.50	-7284071.36	-7284071.21	0.0089	0.0073
Uranus	-24656-11-17 00:14 J	-7283860.74	-7283860.49	-7283860.23	0.0139	0.0017
Neptune	-24655-04-22 13:55 J	-7283704.14	-7283703.92	-7283703.66	0.0089	0.0030
Uranus	-24655-11-21 17:45 J	-7283490.95	-7283490.76	-7283490.52	0.0138	0.0077
Pluto	-24654-01-24 17:59 J	-7283426.81	-7283426.75	-7283426.62	0.0077	0.0072
Neptune	-24654-04-25 00:43 J	-7283336.71	-7283336.47	-7283336.21	0.0089	0.0015
Pluto	-24653-01-26 19:11 J	-7283059.79	-7283059.70	-7283059.58	0.0076	0.0070
Neptune	-24653-04-26 10:47 J	-7282969.22	-7282969.05	-7282968.83	0.0089	0.0059
Jupiter	-24650-10-16 02:23 J	-7281701.60	-7281701.40	-7281701.18	0.0490	0.0229
Jupiter	-24638-10-20 14:09 J	-7277314.12	-7277313.91	-7277313.69	0.0490	0.0222
Saturn	-24631-05-22 08:52 J	-7274908.22	-7274908.13	-7274908.03	0.0274	0.0251
Mars	-24619-03-29 23:45 J	-7270578.70	-7270578.51	-7270578.33	0.1629	0.0219
Saturn	-24616-11-18 04:47 J	-7269249.54	-7269249.30	-7269249.05	0.0285	0.0056
Uranus	-24612-05-11 17:02 J	-7267978.88	-7267978.79	-7267978.69	0.0139	0.0127
Uranus	-24611-05-16 05:59 J	-7267609.49	-7267609.25	-7267609.01	0.0140	0.0037
Uranus	-24610-05-20 19:26 J	-7267239.92	-7267239.69	-7267239.46	0.0140	0.0056
Jupiter	-24608-04-16 22:19 J	-7266542.78	-7266542.57	-7266542.36	0.0536	0.0217

Saturn	-24602-05-17 04:47 J	-7264321.54	-7264321.30	-7264321.05	0.0276	0.0016
Jupiter	-24596-04-21 22:19 J	-7262154.74	-7262154.57	-7262154.40	0.0536	0.0359
Saturn	-24587-11-12 11:16 J	-7258663.15	-7258663.03	-7258662.88	0.0284	0.0237
Neptune	-24574-10-21 06:14 J	-7253937.44	-7253937.24	-7253937.02	0.0088	0.0053
Saturn	-24573-05-11 02:09 J	-7253734.43	-7253734.41	-7253734.38	0.0277	0.0276
Neptune	-24573-10-22 18:57 J	-7253569.97	-7253569.71	-7253569.44	0.0088	0.0010
Uranus	-24573-11-12 13:40 J	-7253549.08	-7253548.93	-7253548.75	0.0139	0.0106
Neptune	-24572-10-25 07:11 J	-7253202.42	-7253202.20	-7253201.94	0.0088	0.0033
Uranus	-24572-11-17 08:52 J	-7253179.39	-7253179.13	-7253178.87	0.0139	0.0013
Neptune	-24571-10-27 19:40 J	-7252834.79	-7252834.68	-7252834.53	0.0088	0.0076
Uranus	-24571-11-22 02:52 J	-7252809.59	-7252809.38	-7252809.16	0.0138	0.0079
Jupiter	-24567-10-15 11:31 J	-7251386.21	-7251386.02	-7251385.83	0.0490	0.0281
Saturn	-24557-11-19 07:55 J	-7247698.40	-7247698.17	-7247697.94	0.0285	0.0116
Jupiter	-24555-10-19 23:16 J	-7246998.75	-7246998.53	-7246998.31	0.0490	0.0168
Saturn	-24543-05-18 05:59 J	-7242770.49	-7242770.25	-7242770.01	0.0276	0.0040
Mars	-24540-04-01 00:43 J	-7241721.54	-7241721.47	-7241721.39	0.1629	0.1465
Uranus	-24528-05-11 23:45 J	-7237297.61	-7237297.51	-7237297.40	0.0139	0.0126
Saturn	-24528-11-13 16:47 J	-7237111.99	-7237111.80	-7237111.60	0.0284	0.0172
Uranus	-24527-05-16 12:28 J	-7236928.22	-7236927.98	-7236927.74	0.0140	0.0035
Uranus	-24526-05-21 01:40 J	-7236558.65	-7236558.43	-7236558.19	0.0140	0.0057
Jupiter	-24525-04-15 23:45 J	-7236227.69	-7236227.51	-7236227.32	0.0536	0.0320
Saturn	-24514-05-13 04:47 J	-7232183.43	-7232183.30	-7232183.14	0.0277	0.0218
Jupiter	-24513-04-21 00:28 J	-7231839.67	-7231839.48	-7231839.27	0.0537	0.0261
Saturn	-24498-11-21 15:35 J	-7226147.04	-7226146.85	-7226146.66	0.0286	0.0186
Pluto	-24494-07-24 05:02 J	-7224806.54	-7224806.29	-7224806.02	0.0068	0.0004
Neptune	-24491-04-22 01:26 J	-7223803.65	-7223803.44	-7223803.23	0.0089	0.0051
Neptune	-24490-04-24 11:45 J	-7223436.26	-7223436.01	-7223435.75	0.0089	0.0008
Neptune	-24489-04-25 22:19 J	-7223068.79	-7223068.57	-7223068.33	0.0089	0.0037
Uranus	-24489-11-12 20:52 J	-7222867.79	-7222867.63	-7222867.44	0.0139	0.0104
Neptune	-24488-04-28 08:23 J	-7222701.23	-7222701.15	-7222701.00	0.0089	0.0081

Uranus	-24488-11-17 16:19 J	-7222498.08	-7222497.82	-7222497.56	0.0139	0.0010
Uranus	-24487-11-22 10:19 J	-7222128.26	-7222128.07	-7222127.85	0.0138	0.0082
Mars	-24485-09-25 21:35 J	-7221454.80	-7221454.60	-7221454.39	0.1889	0.0196
Saturn	-24484-05-19 08:52 J	-7221219.35	-7221219.13	-7221218.90	0.0276	0.0100
Jupiter	-24484-10-14 15:50 J	-7221070.99	-7221070.84	-7221070.67	0.0491	0.0355
Jupiter	-24472-10-19 03:21 J	-7216683.60	-7216683.36	-7216683.13	0.0491	0.0093
Saturn	-24469-11-15 01:40 J	-7215560.66	-7215560.43	-7215560.19	0.0284	0.0100
Saturn	-24455-05-14 10:19 J	-7210632.27	-7210632.07	-7210631.87	0.0277	0.0153
Uranus	-24444-05-12 08:52 J	-7206616.24	-7206616.13	-7206615.99	0.0139	0.0121
Uranus	-24443-05-16 21:35 J	-7206246.83	-7206246.60	-7206246.34	0.0140	0.0032
Jupiter	-24442-04-16 03:50 J	-7205912.48	-7205912.34	-7205912.19	0.0537	0.0409
Uranus	-24442-05-21 11:02 J	-7205877.25	-7205877.04	-7205876.80	0.0140	0.0061
Saturn	-24439-11-23 03:07 J	-7204595.45	-7204595.37	-7204595.27	0.0286	0.0265
Jupiter	-24430-04-21 06:14 J	-7201524.45	-7201524.24	-7201524.02	0.0536	0.0178
Saturn	-24425-05-20 14:52 J	-7199668.07	-7199667.88	-7199667.68	0.0276	0.0166
Mars	-24414-03-29 05:31 J	-7195703.44	-7195703.27	-7195703.10	0.1632	0.0641
Neptune	-24410-10-20 14:38 J	-7194036.99	-7194036.89	-7194036.72	0.0088	0.0076
Saturn	-24410-11-17 14:38 J	-7194009.13	-7194008.89	-7194008.64	0.0284	0.0019
Neptune	-24409-10-22 04:04 J	-7193669.57	-7193669.33	-7193669.08	0.0088	0.0031
Pluto	-24408-01-26 07:11 J	-7193573.42	-7193573.20	-7193572.95	0.0077	0.0033
Neptune	-24408-10-24 16:33 J	-7193302.06	-7193301.81	-7193301.54	0.0088	0.0012
Neptune	-24407-10-27 05:02 J	-7192934.48	-7192934.29	-7192934.07	0.0088	0.0055
Uranus	-24405-11-13 04:33 J	-7192186.47	-7192186.31	-7192186.11	0.0139	0.0101
Uranus	-24404-11-17 23:59 J	-7191816.75	-7191816.50	-7191816.24	0.0139	0.0007
Uranus	-24403-11-22 18:28 J	-7191446.92	-7191446.73	-7191446.52	0.0138	0.0086
Jupiter	-24401-10-13 21:07 J	-7190755.73	-7190755.62	-7190755.50	0.0490	0.0425
Saturn	-24396-05-15 17:59 J	-7189080.98	-7189080.75	-7189080.52	0.0277	0.0083
Jupiter	-24389-10-18 07:40 J	-7186368.42	-7186368.18	-7186367.94	0.0490	0.0020
Jupiter	-24377-10-22 17:59 J	-7181980.81	-7181980.75	-7181980.67	0.0490	0.0465
Saturn	-24366-05-22 22:47 J	-7178116.66	-7178116.55	-7178116.42	0.0276	0.0237

Uranus	-24360-05-12 19:11 J	-7175934.82	-7175934.70	-7175934.55	0.0139	0.0116
Jupiter	-24359-04-15 05:59 J	-7175597.32	-7175597.25	-7175597.18	0.0536	0.0508
Uranus	-24359-05-17 08:09 J	-7175565.41	-7175565.16	-7175564.91	0.0140	0.0026
Uranus	-24358-05-21 21:50 J	-7175195.81	-7175195.59	-7175195.37	0.0140	0.0065
Saturn	-24351-11-19 05:59 J	-7172457.49	-7172457.25	-7172457.01	0.0284	0.0069
Jupiter	-24347-04-20 01:26 J	-7171209.67	-7171209.44	-7171209.21	0.0536	0.0044
Saturn	-24337-05-17 04:19 J	-7167529.56	-7167529.32	-7167529.08	0.0277	0.0008
Mars	-24335-03-31 06:57 J	-7166846.38	-7166846.21	-7166846.04	0.1631	0.0609
Neptune	-24327-04-21 12:14 J	-7163903.12	-7163902.99	-7163902.83	0.0089	0.0073
Neptune	-24326-04-23 22:47 J	-7163535.78	-7163535.55	-7163535.30	0.0089	0.0029
Neptune	-24325-04-25 09:21 J	-7163168.36	-7163168.11	-7163167.86	0.0089	0.0015
Neptune	-24324-04-27 19:40 J	-7162800.85	-7162800.68	-7162800.47	0.0089	0.0058
Saturn	-24322-11-13 12:57 J	-7161871.10	-7161870.96	-7161870.80	0.0283	0.0225
Uranus	-24321-11-13 14:38 J	-7161505.07	-7161504.89	-7161504.69	0.0139	0.0095
Uranus	-24320-11-18 10:19 J	-7161135.33	-7161135.07	-7161134.81	0.0139	0.0002
Uranus	-24319-11-23 04:33 J	-7160765.49	-7160765.31	-7160765.10	0.0138	0.0090
Saturn	-24308-05-11 23:16 J	-7156942.53	-7156942.53	-7156942.51	0.0279	0.0278
Jupiter	-24306-10-18 06:43 J	-7156053.45	-7156053.22	-7156052.98	0.0490	0.0078
Jupiter	-24294-10-22 17:31 J	-7151665.92	-7151665.77	-7151665.61	0.0491	0.0368
Saturn	-24292-11-20 22:33 J	-7150905.75	-7150905.56	-7150905.34	0.0285	0.0160
Saturn	-24278-05-19 15:21 J	-7145978.09	-7145977.86	-7145977.62	0.0276	0.0070
Uranus	-24276-05-13 06:28 J	-7145253.37	-7145253.23	-7145253.06	0.0139	0.0110
Uranus	-24275-05-17 19:40 J	-7144883.92	-7144883.68	-7144883.43	0.0140	0.0020
Uranus	-24274-05-22 09:21 J	-7144514.32	-7144514.11	-7144513.89	0.0140	0.0071
Jupiter	-24264-04-18 23:31 J	-7140894.75	-7140894.52	-7140894.30	0.0537	0.0076
Saturn	-24263-11-15 06:14 J	-7140319.45	-7140319.24	-7140319.01	0.0283	0.0135
Jupiter	-24252-04-24 01:55 J	-7136506.48	-7136506.42	-7136506.35	0.0536	0.0511
Saturn	-24249-05-13 11:59 J	-7135391.17	-7135391.00	-7135390.83	0.0278	0.0197
Pluto	-24248-07-25 12:14 J	-7134953.23	-7134952.99	-7134952.73	0.0068	0.0016
Neptune	-24245-10-21 11:16 J	-7133769.21	-7133769.03	-7133768.80	0.0088	0.0054

Neptune	-24244-10-24 00:14 J	-7133401.74	-7133401.49	-7133401.21	0.0088	0.0012
Neptune	-24243-10-26 12:57 J	-7133034.18	-7133033.96	-7133033.70	0.0088	0.0033
Neptune	-24242-10-29 01:26 J	-7132666.54	-7132666.44	-7132666.28	0.0088	0.0076
Uranus	-24237-11-14 02:09 J	-7130823.59	-7130823.41	-7130823.19	0.0139	0.0088
Uranus	-24236-11-18 21:50 J	-7130453.85	-7130453.59	-7130453.33	0.0139	0.0005
Uranus	-24235-11-23 16:19 J	-7130084.00	-7130083.82	-7130083.63	0.0138	0.0097
Saturn	-24233-11-22 15:21 J	-7129353.98	-7129353.86	-7129353.74	0.0285	0.0250
Jupiter	-24223-10-17 10:19 J	-7125738.29	-7125738.07	-7125737.84	0.0490	0.0154
Saturn	-24219-05-21 03:07 J	-7124426.56	-7124426.37	-7124426.15	0.0276	0.0148
Jupiter	-24211-10-21 20:38 J	-7121350.83	-7121350.64	-7121350.45	0.0490	0.0291
Mars	-24209-03-27 10:47 J	-7120828.11	-7120828.05	-7120827.99	0.1634	0.1531
Saturn	-24204-11-16 23:02 J	-7118767.78	-7118767.54	-7118767.29	0.0284	0.0046
Mars	-24201-09-24 19:40 J	-7117724.77	-7117724.68	-7117724.59	0.1886	0.1679
Uranus	-24192-05-13 16:33 J	-7114571.96	-7114571.81	-7114571.63	0.0139	0.0105
Uranus	-24191-05-18 05:45 J	-7114202.51	-7114202.26	-7114202.01	0.0140	0.0015
Saturn	-24190-05-16 00:14 J	-7113839.71	-7113839.49	-7113839.27	0.0277	0.0117
Uranus	-24190-05-22 19:26 J	-7113832.90	-7113832.69	-7113832.48	0.0140	0.0076
Jupiter	-24181-04-18 00:57 J	-7110579.67	-7110579.46	-7110579.24	0.0537	0.0177
Jupiter	-24169-04-22 20:09 J	-7106191.82	-7106191.66	-7106191.50	0.0536	0.0374
Pluto	-24162-01-28 16:33 J	-7103720.07	-7103719.81	-7103719.55	0.0077	0.0006
Neptune	-24162-04-23 09:07 J	-7103635.31	-7103635.12	-7103634.90	0.0089	0.0052
Neptune	-24161-04-24 19:55 J	-7103267.92	-7103267.67	-7103267.41	0.0089	0.0008
Neptune	-24160-04-27 06:14 J	-7102900.47	-7102900.24	-7102900.00	0.0089	0.0036
Saturn	-24160-05-22 14:23 J	-7102875.02	-7102874.90	-7102874.74	0.0276	0.0225
Neptune	-24159-04-29 16:04 J	-7102532.91	-7102532.83	-7102532.68	0.0089	0.0080
Uranus	-24153-11-14 14:38 J	-7100142.08	-7100141.89	-7100141.66	0.0139	0.0081
Uranus	-24152-11-19 10:19 J	-7099772.33	-7099772.07	-7099771.81	0.0139	0.0012
Uranus	-24151-11-24 04:33 J	-7099402.46	-7099402.31	-7099402.12	0.0138	0.0104
Saturn	-24145-11-18 12:43 J	-7097216.22	-7097215.97	-7097215.72	0.0284	0.0038
Jupiter	-24140-10-16 13:11 J	-7095423.16	-7095422.95	-7095422.74	0.0490	0.0232

Saturn	-24131-05-17 11:31 J	-7092288.25	-7092288.02	-7092287.78	0.0277	0.0040
Mars	-24130-03-30 11:59 J	-7091971.18	-7091971.00	-7091970.82	0.1633	0.0263
Jupiter	-24128-10-20 21:21 J	-7091035.82	-7091035.61	-7091035.39	0.0490	0.0203
Mars	-24122-09-29 10:04 J	-7088866.14	-7088866.08	-7088866.01	0.1888	0.1769
Saturn	-24116-11-12 17:31 J	-7086629.87	-7086629.77	-7086629.67	0.0282	0.0256
Uranus	-24108-05-14 02:38 J	-7083890.57	-7083890.39	-7083890.22	0.0139	0.0101
Uranus	-24107-05-18 15:21 J	-7083521.11	-7083520.86	-7083520.61	0.0140	0.0011
Uranus	-24106-05-23 04:33 J	-7083151.50	-7083151.31	-7083151.09	0.0140	0.0080
Jupiter	-24098-04-17 18:57 J	-7080264.89	-7080264.71	-7080264.52	0.0536	0.0312
Jupiter	-24086-04-22 18:57 J	-7075876.90	-7075876.71	-7075876.50	0.0537	0.0260
Saturn	-24086-11-20 22:33 J	-7075664.79	-7075664.56	-7075664.33	0.0285	0.0113
Neptune	-24081-10-20 18:43 J	-7073868.84	-7073868.72	-7073868.58	0.0088	0.0077
Neptune	-24080-10-23 07:40 J	-7073501.41	-7073501.18	-7073500.93	0.0088	0.0033
Neptune	-24079-10-25 20:38 J	-7073133.90	-7073133.64	-7073133.37	0.0088	0.0010
Neptune	-24078-10-28 09:07 J	-7072766.31	-7072766.12	-7072765.90	0.0088	0.0053
Saturn	-24072-05-18 20:52 J	-7070736.87	-7070736.63	-7070736.39	0.0276	0.0034
Uranus	-24069-11-15 02:52 J	-7069460.59	-7069460.38	-7069460.16	0.0139	0.0074
Uranus	-24068-11-19 22:19 J	-7069090.82	-7069090.57	-7069090.31	0.0139	0.0019
Uranus	-24067-11-24 17:02 J	-7068720.95	-7068720.79	-7068720.64	0.0138	0.0110
Jupiter	-24057-10-15 17:02 J	-7065107.97	-7065107.79	-7065107.60	0.0490	0.0307
Saturn	-24057-11-13 23:45 J	-7065078.69	-7065078.51	-7065078.32	0.0283	0.0189
Mars	-24051-04-01 13:26 J	-7063114.08	-7063113.94	-7063113.79	0.1632	0.0987
Jupiter	-24045-10-20 05:16 J	-7060720.51	-7060720.28	-7060720.05	0.0491	0.0145
Saturn	-24043-05-13 22:47 J	-7060149.68	-7060149.55	-7060149.41	0.0278	0.0227
Saturn	-24027-11-22 04:47 J	-7054113.49	-7054113.30	-7054113.11	0.0285	0.0181
Uranus	-24024-05-14 09:50 J	-7053209.25	-7053209.09	-7053208.90	0.0139	0.0098
Uranus	-24023-05-18 22:33 J	-7052839.80	-7052839.56	-7052839.30	0.0140	0.0010
Uranus	-24022-05-23 11:59 J	-7052470.19	-7052470.00	-7052469.79	0.0140	0.0081
Jupiter	-24015-04-16 23:16 J	-7049949.68	-7049949.53	-7049949.38	0.0537	0.0400
Saturn	-24013-05-20 03:21 J	-7049185.58	-7049185.36	-7049185.13	0.0276	0.0100

Jupiter -24003-04-22 01:55 J -7045561.63 -7045561.42 -7045561.20 0.0537 0.0185

Pluto -24003-07-26 05:59 J -7045466.38 -7045466.25 -7045466.10 0.0068 0.0056

Pluto -24002-07-27 21:21 J -7045099.78 -7045099.61 -7045099.38 0.0068 0.0043

24TH MILLENNIUM BCE

This is a list of transits of Earth in the 24th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Neptune	-23998-04-22 18:43 J	-7043734.83	-7043734.72	-7043734.55	0.0089	0.0075		
Saturn	-23998-11-16 02:38 J	-7043527.61	-7043527.39	-7043527.17	0.0283	0.0130		
Neptune	-23997-04-24 05:31 J	-7043367.50	-7043367.27	-7043367.03	0.0089	0.0031		
Neptune	-23996-04-26 15:50 J	-7043000.08	-7042999.84	-7042999.58	0.0089	0.0013		
Neptune	-23995-04-29 01:55 J	-7042632.60	-7042632.42	-7042632.21	0.0089	0.0056		
Uranus	-23985-11-15 13:55 J	-7038779.14	-7038778.92	-7038778.69	0.0139	0.0068		
Saturn	-23984-05-15 03:21 J	-7038598.55	-7038598.36	-7038598.16	0.0278	0.0164		
Uranus	-23984-11-20 09:35 J	-7038409.35	-7038409.10	-7038408.84	0.0139	0.0025		
Uranus	-23983-11-25 03:50 J	-7038039.46	-7038039.34	-7038039.18	0.0138	0.0116		
Jupiter	-23974-10-16 02:09 J	-7034792.57	-7034792.41	-7034792.24	0.0491	0.0356		
Saturn	-23968-11-23 06:14 J	-7032562.36	-7032562.24	-7032562.09	0.0285	0.0241		
Jupiter	-23962-10-20 13:40 J	-7030405.16	-7030404.93	-7030404.70	0.0490	0.0090		
Saturn	-23954-05-22 06:57 J	-7027634.40	-7027634.21	-7027634.01	0.0276	0.0161		
Uranus	-23940-05-14 19:26 J	-7022527.85	-7022527.69	-7022527.49	0.0139	0.0094		
Uranus	-23939-05-19 08:23 J	-7022158.40	-7022158.15	-7022157.90	0.0140	0.0005		
Saturn	-23939-11-17 02:09 J	-7021976.65	-7021976.41	-7021976.17	0.0283	0.0078		

Uranus	-23938-05-23 21:07 J	-7021788.80	-7021788.62	-7021788.40	0.0140	0.0086
Jupiter	-23932-04-16 03:35 J	-7019634.45	-7019634.35	-7019634.25	0.0536	0.0482
Mars	-23925-03-28 16:47 J	-7017095.92	-7017095.80	-7017095.67	0.1636	0.1166
Saturn	-23925-05-16 05:16 J	-7017047.50	-7017047.28	-7017047.05	0.0278	0.0107
Jupiter	-23920-04-21 03:35 J	-7015246.58	-7015246.35	-7015246.13	0.0536	0.0087
Pluto	-23916-01-30 04:47 J	-7013866.52	-7013866.30	-7013866.06	0.0076	0.0034
Neptune	-23916-10-22 13:11 J	-7013601.13	-7013600.95	-7013600.73	0.0088	0.0057
Neptune	-23915-10-25 02:09 J	-7013233.66	-7013233.41	-7013233.14	0.0088	0.0014
Neptune	-23914-10-27 15:07 J	-7012866.11	-7012865.87	-7012865.62	0.0088	0.0029
Neptune	-23913-10-29 03:21 J	-7012498.47	-7012498.36	-7012498.18	0.0088	0.0073
Uranus	-23901-11-15 23:16 J	-7008097.75	-7008097.53	-7008097.29	0.0139	0.0063
Uranus	-23900-11-20 19:26 J	-7007727.95	-7007727.69	-7007727.44	0.0139	0.0029
Uranus	-23899-11-25 13:40 J	-7007358.04	-7007357.93	-7007357.79	0.0138	0.0120
Saturn	-23895-05-23 07:40 J	-7006083.33	-7006083.18	-7006083.03	0.0275	0.0215
Jupiter	-23891-10-15 11:45 J	-7004477.14	-7004477.01	-7004476.88	0.0490	0.0406
Saturn	-23880-11-17 22:47 J	-7000425.79	-7000425.55	-7000425.30	0.0283	0.0031
Jupiter	-23879-10-19 23:59 J	-7000089.73	-7000089.50	-7000089.26	0.0490	0.0044
Saturn	-23866-05-18 04:04 J	-6995496.56	-6995496.33	-6995496.09	0.0278	0.0057
Uranus	-23856-05-15 06:14 J	-6991846.41	-6991846.24	-6991846.03	0.0139	0.0089
Uranus	-23855-05-19 18:57 J	-6991476.96	-6991476.71	-6991476.46	0.0139	0.0001
Uranus	-23854-05-24 07:55 J	-6991107.36	-6991107.17	-6991106.97	0.0140	0.0089
Mars	-23846-03-31 18:28 J	-6988238.91	-6988238.73	-6988238.54	0.1635	0.0119
Mars	-23838-09-28 08:23 J	-6985136.35	-6985136.15	-6985135.95	0.1885	0.0288
Jupiter	-23837-04-20 11:16 J	-6984931.26	-6984931.03	-6984930.80	0.0536	0.0016
Saturn	-23836-05-24 06:43 J	-6984532.28	-6984532.22	-6984532.16	0.0275	0.0266
Neptune	-23833-04-23 14:23 J	-6983467.08	-6983466.90	-6983466.68	0.0089	0.0054
Neptune	-23832-04-26 01:11 J	-6983099.70	-6983099.45	-6983099.20	0.0089	0.0011
Neptune	-23831-04-28 11:31 J	-6982732.25	-6982732.02	-6982731.78	0.0089	0.0033
Neptune	-23830-04-30 21:21 J	-6982364.72	-6982364.61	-6982364.45	0.0089	0.0076
Saturn	-23821-11-18 18:57 J	-6978874.96	-6978874.71	-6978874.47	0.0283	0.0016

Uranus	-23817-11-16 10:19 J	-6977416.29	-6977416.07	-6977415.82	0.0140	0.0058
Uranus	-23816-11-21 06:14 J	-6977046.48	-6977046.24	-6977045.98	0.0139	0.0035
Uranus	-23815-11-26 00:43 J	-6976676.56	-6976676.47	-6976676.34	0.0138	0.0126
Jupiter	-23808-10-14 22:33 J	-6974161.64	-6974161.56	-6974161.46	0.0491	0.0449
Saturn	-23807-05-19 01:11 J	-6973945.69	-6973945.45	-6973945.21	0.0278	0.0009
Jupiter	-23796-10-19 11:02 J	-6969774.28	-6969774.04	-6969773.80	0.0491	0.0006
Jupiter	-23784-10-23 22:47 J	-6965386.63	-6965386.55	-6965386.44	0.0491	0.0450
Uranus	-23772-05-15 19:55 J	-6961164.86	-6961164.67	-6961164.45	0.0139	0.0081
Uranus	-23771-05-20 08:38 J	-6960795.39	-6960795.14	-6960794.89	0.0139	0.0007
Uranus	-23770-05-24 21:21 J	-6960425.77	-6960425.61	-6960425.41	0.0140	0.0097
Mars	-23767-04-02 19:26 J	-6959381.79	-6959381.69	-6959381.58	0.1634	0.1359
Saturn	-23762-11-20 14:38 J	-6957324.13	-6957323.89	-6957323.65	0.0283	0.0060
Pluto	-23757-07-27 12:57 J	-6955613.15	-6955612.96	-6955612.71	0.0068	0.0036
Pluto	-23756-07-29 04:33 J	-6955246.36	-6955246.31	-6955246.19	0.0068	0.0065
Jupiter	-23754-04-20 21:21 J	-6954615.84	-6954615.61	-6954615.39	0.0536	0.0043
Neptune	-23752-10-21 18:28 J	-6953700.81	-6953700.73	-6953700.61	0.0088	0.0081
Neptune	-23751-10-24 07:11 J	-6953333.42	-6953333.20	-6953332.95	0.0088	0.0038
Neptune	-23750-10-26 20:23 J	-6952965.91	-6952965.65	-6952965.39	0.0088	0.0005
Neptune	-23749-10-28 09:07 J	-6952598.34	-6952598.12	-6952597.90	0.0088	0.0048
Saturn	-23748-05-19 22:04 J	-6952394.82	-6952394.58	-6952394.34	0.0278	0.0038
Jupiter	-23742-04-25 21:07 J	-6950227.66	-6950227.62	-6950227.59	0.0535	0.0527
Saturn	-23733-11-13 21:07 J	-6946737.74	-6946737.62	-6946737.47	0.0281	0.0235
Uranus	-23733-11-16 23:31 J	-6946734.76	-6946734.52	-6946734.27	0.0140	0.0050
Uranus	-23732-11-21 19:11 J	-6946364.94	-6946364.70	-6946364.45	0.0139	0.0042
Uranus	-23731-11-26 13:40 J	-6945995.00	-6945994.93	-6945994.84	0.0138	0.0132
Jupiter	-23725-10-14 10:19 J	-6943846.07	-6943846.07	-6943846.07	0.0491	0.0491
Saturn	-23719-05-14 14:52 J	-6941808.00	-6941807.88	-6941807.75	0.0279	0.0238
Jupiter	-23713-10-18 21:50 J	-6939458.83	-6939458.59	-6939458.36	0.0491	0.0045
Saturn	-23703-11-21 12:43 J	-6935773.20	-6935772.97	-6935772.74	0.0283	0.0110
Jupiter	-23701-10-23 10:04 J	-6935071.21	-6935071.08	-6935070.95	0.0491	0.0405

Saturn	-23689-05-20 19:11 J	-6930843.93	-6930843.70	-6930843.47	0.0278	0.0086
Uranus	-23688-05-16 08:23 J	-6930483.34	-6930483.15	-6930482.92	0.0139	0.0075
Uranus	-23687-05-20 20:52 J	-6930113.87	-6930113.63	-6930113.37	0.0139	0.0014
Uranus	-23686-05-25 09:50 J	-6929744.24	-6929744.09	-6929743.91	0.0140	0.0103
Saturn	-23674-11-15 20:09 J	-6925186.84	-6925186.66	-6925186.46	0.0281	0.0182
Jupiter	-23671-04-20 01:40 J	-6924300.65	-6924300.43	-6924300.20	0.0536	0.0130
Pluto	-23670-02-01 13:26 J	-6924013.07	-6924012.94	-6924012.76	0.0076	0.0061
Neptune	-23669-04-22 22:04 J	-6923566.68	-6923566.58	-6923566.44	0.0089	0.0079
Neptune	-23668-04-25 08:38 J	-6923199.36	-6923199.14	-6923198.89	0.0089	0.0035
Neptune	-23667-04-27 19:26 J	-6922831.94	-6922831.69	-6922831.44	0.0089	0.0008
Neptune	-23666-04-30 05:16 J	-6922464.46	-6922464.28	-6922464.05	0.0089	0.0053
Saturn	-23660-05-15 13:40 J	-6920257.10	-6920256.93	-6920256.74	0.0279	0.0187
Jupiter	-23659-04-25 02:38 J	-6919912.51	-6919912.39	-6919912.26	0.0536	0.0445
Uranus	-23650-11-13 17:02 J	-6916422.84	-6916422.79	-6916422.69	0.0140	0.0134
Uranus	-23649-11-17 14:23 J	-6916053.15	-6916052.90	-6916052.65	0.0140	0.0041
Uranus	-23648-11-22 09:50 J	-6915683.33	-6915683.09	-6915682.85	0.0139	0.0050
Saturn	-23644-11-22 13:26 J	-6914222.13	-6914221.94	-6914221.73	0.0283	0.0167
Mars	-23641-03-29 22:33 J	-6913363.72	-6913363.56	-6913363.40	0.1638	0.0805
Saturn	-23630-05-22 18:14 J	-6909292.95	-6909292.74	-6909292.53	0.0278	0.0139
Jupiter	-23630-10-19 04:47 J	-6909143.53	-6909143.30	-6909143.06	0.0491	0.0106
Jupiter	-23618-10-23 16:33 J	-6904755.97	-6904755.81	-6904755.63	0.0491	0.0342
Saturn	-23615-11-16 23:02 J	-6903635.76	-6903635.54	-6903635.31	0.0282	0.0122
Uranus	-23604-05-16 21:50 J	-6899801.80	-6899801.59	-6899801.36	0.0139	0.0067
Uranus	-23603-05-21 10:19 J	-6899432.32	-6899432.07	-6899431.82	0.0139	0.0021
Uranus	-23602-05-25 23:16 J	-6899062.67	-6899062.53	-6899062.37	0.0140	0.0110
Saturn	-23601-05-16 14:38 J	-6898706.09	-6898705.89	-6898705.67	0.0279	0.0130
Jupiter	-23588-04-19 09:07 J	-6893985.33	-6893985.12	-6893984.91	0.0536	0.0202
Neptune	-23587-10-23 11:16 J	-6893433.18	-6893433.03	-6893432.82	0.0088	0.0064
Neptune	-23586-10-26 00:28 J	-6893065.73	-6893065.48	-6893065.22	0.0088	0.0020
Neptune	-23585-10-27 13:26 J	-6892698.19	-6892697.94	-6892697.69	0.0088	0.0023

Saturn	-23585-11-23 18:14 J	-6892670.87	-6892670.74	-6892670.59	0.0284	0.0232
Neptune	-23584-10-30 01:26 J	-6892330.58	-6892330.44	-6892330.24	0.0088	0.0067
Jupiter	-23576-04-24 10:47 J	-6889597.20	-6889597.05	-6889596.88	0.0535	0.0377
Saturn	-23571-05-23 19:55 J	-6887741.83	-6887741.67	-6887741.49	0.0278	0.0199
Uranus	-23566-11-14 08:09 J	-6885741.27	-6885741.16	-6885741.03	0.0140	0.0124
Uranus	-23565-11-18 05:02 J	-6885371.54	-6885371.29	-6885371.04	0.0140	0.0032
Uranus	-23564-11-23 00:14 J	-6885001.71	-6885001.49	-6885001.25	0.0139	0.0059
Mars	-23562-04-02 00:43 J	-6884506.65	-6884506.47	-6884506.29	0.1636	0.0487
Saturn	-23556-11-18 05:31 J	-6882084.51	-6882084.27	-6882084.02	0.0282	0.0054
Mars	-23554-09-27 08:52 J	-6881406.30	-6881406.13	-6881405.97	0.1881	0.1093
Jupiter	-23547-10-18 12:14 J	-6878828.21	-6878827.99	-6878827.76	0.0491	0.0166
Saturn	-23542-05-18 18:57 J	-6877154.94	-6877154.71	-6877154.47	0.0279	0.0066
Jupiter	-23535-10-22 23:31 J	-6874440.72	-6874440.52	-6874440.33	0.0491	0.0278
Uranus	-23520-05-17 08:09 J	-6869120.37	-6869120.16	-6869119.93	0.0139	0.0063
Uranus	-23519-05-21 20:23 J	-6868750.89	-6868750.65	-6868750.39	0.0139	0.0026
Uranus	-23518-05-26 09:35 J	-6868381.24	-6868381.10	-6868380.95	0.0140	0.0114
Saturn	-23512-05-25 00:43 J	-6866190.53	-6866190.47	-6866190.39	0.0278	0.0264
Pluto	-23511-07-29 22:47 J	-6865759.80	-6865759.55	-6865759.29	0.0068	0.0010
Jupiter	-23505-04-18 13:40 J	-6863670.12	-6863669.93	-6863669.73	0.0535	0.0288
Neptune	-23504-04-24 16:19 J	-6863299.01	-6863298.82	-6863298.63	0.0089	0.0060
Neptune	-23503-04-27 02:38 J	-6862931.63	-6862931.39	-6862931.13	0.0089	0.0017
Neptune	-23502-04-29 12:57 J	-6862564.19	-6862563.96	-6862563.71	0.0089	0.0027
Neptune	-23501-04-30 23:16 J	-6862196.67	-6862196.53	-6862196.36	0.0089	0.0070
Saturn	-23497-11-19 16:19 J	-6860533.07	-6860532.82	-6860532.57	0.0282	0.0025
Jupiter	-23493-04-23 09:21 J	-6859282.31	-6859282.11	-6859281.91	0.0535	0.0259
Saturn	-23483-05-20 02:09 J	-6855603.65	-6855603.41	-6855603.16	0.0279	0.0007
Uranus	-23482-11-14 22:04 J	-6855059.70	-6855059.58	-6855059.42	0.0140	0.0117
Uranus	-23481-11-18 19:11 J	-6854689.95	-6854689.70	-6854689.44	0.0140	0.0024
Uranus	-23480-11-23 14:23 J	-6854320.11	-6854319.90	-6854319.66	0.0139	0.0067
Saturn	-23468-11-13 23:16 J	-6849946.58	-6849946.53	-6849946.45	0.0280	0.0270

Jupiter	-23464-10-17 16:19 J	-6848513.02	-6848512.82	-6848512.61	0.0491	0.0240
Saturn	-23454-05-14 18:43 J	-6845016.76	-6845016.72	-6845016.69	0.0281	0.0278
Jupiter	-23452-10-21 23:59 J	-6844125.72	-6844125.50	-6844125.28	0.0491	0.0187
Saturn	-23438-11-22 06:43 J	-6838981.44	-6838981.22	-6838980.98	0.0282	0.0112
Uranus	-23436-05-17 19:26 J	-6838438.91	-6838438.69	-6838438.45	0.0139	0.0057
Uranus	-23435-05-22 07:26 J	-6838069.43	-6838069.19	-6838068.94	0.0139	0.0031
Uranus	-23434-05-26 20:52 J	-6837699.76	-6837699.63	-6837699.50	0.0140	0.0119
Pluto	-23425-02-02 00:57 J	-6834526.65	-6834526.46	-6834526.22	0.0077	0.0044
Saturn	-23424-05-21 12:28 J	-6834052.21	-6834051.98	-6834051.75	0.0279	0.0082
Neptune	-23423-10-22 15:21 J	-6833532.86	-6833532.86	-6833532.84	0.0088	0.0088
Jupiter	-23422-04-18 08:38 J	-6833355.27	-6833355.14	-6833354.99	0.0535	0.0420
Neptune	-23422-10-25 03:50 J	-6833165.55	-6833165.34	-6833165.09	0.0088	0.0045
Neptune	-23421-10-26 16:47 J	-6832798.06	-6832797.80	-6832797.53	0.0088	0.0003
Neptune	-23420-10-29 05:02 J	-6832430.50	-6832430.29	-6832430.04	0.0088	0.0041
Neptune	-23419-10-31 17:45 J	-6832062.82	-6832062.76	-6832062.66	0.0088	0.0084
Jupiter	-23410-04-23 09:07 J	-6828967.34	-6828967.12	-6828966.90	0.0536	0.0149
Saturn	-23409-11-15 16:04 J	-6828395.01	-6828394.83	-6828394.63	0.0281	0.0180
Uranus	-23398-11-15 10:19 J	-6824378.22	-6824378.07	-6824377.90	0.0140	0.0110
Uranus	-23397-11-19 07:11 J	-6824008.45	-6824008.20	-6824007.94	0.0140	0.0017
Uranus	-23396-11-24 02:52 J	-6823638.59	-6823638.38	-6823638.15	0.0139	0.0074
Saturn	-23395-05-16 05:45 J	-6823465.42	-6823465.26	-6823465.08	0.0281	0.0197
Jupiter	-23381-10-16 15:07 J	-6818198.04	-6818197.87	-6818197.70	0.0491	0.0339
Saturn	-23379-11-23 23:02 J	-6817429.70	-6817429.54	-6817429.35	0.0283	0.0202
Jupiter	-23369-10-21 03:35 J	-6813810.59	-6813810.35	-6813810.12	0.0491	0.0110
Saturn	-23365-05-23 00:28 J	-6812500.68	-6812500.48	-6812500.29	0.0279	0.0163
Mars	-23357-03-31 04:19 J	-6809631.50	-6809631.32	-6809631.14	0.1640	0.0440
Uranus	-23353-05-13 19:26 J	-6808126.72	-6808126.69	-6808126.65	0.0138	0.0137
Uranus	-23352-05-18 06:28 J	-6807757.45	-6807757.23	-6807756.99	0.0139	0.0052
Uranus	-23351-05-22 18:43 J	-6807387.96	-6807387.72	-6807387.48	0.0139	0.0036
Uranus	-23350-05-27 07:11 J	-6807018.29	-6807018.20	-6807018.06	0.0140	0.0124

Saturn	-23350-11-18 10:04 J	-6806843.31	-6806843.08	-6806842.84	0.0281	0.0089
Neptune	-23340-04-23 21:50 J	-6803398.65	-6803398.59	-6803398.51	0.0089	0.0086
Jupiter	-23339-04-17 10:04 J	-6803040.12	-6803040.08	-6803040.03	0.0536	0.0522
Neptune	-23339-04-26 08:09 J	-6803031.36	-6803031.16	-6803030.92	0.0089	0.0043
Neptune	-23338-04-28 19:11 J	-6802663.95	-6802663.70	-6802663.45	0.0089	0.0001
Neptune	-23337-04-30 05:45 J	-6802296.47	-6802296.26	-6802296.04	0.0089	0.0045
Neptune	-23336-05-02 15:35 J	-6801928.86	-6801928.85	-6801928.78	0.0089	0.0088
Saturn	-23336-05-17 19:26 J	-6801913.91	-6801913.69	-6801913.47	0.0280	0.0112
Jupiter	-23327-04-22 10:19 J	-6798652.29	-6798652.07	-6798651.84	0.0535	0.0048
Uranus	-23314-11-15 20:52 J	-6793696.79	-6793696.63	-6793696.44	0.0140	0.0105
Uranus	-23313-11-19 18:14 J	-6793326.99	-6793326.74	-6793326.48	0.0140	0.0012
Uranus	-23312-11-24 14:09 J	-6792957.11	-6792956.91	-6792956.69	0.0139	0.0079
Saturn	-23306-05-25 12:57 J	-6790949.06	-6790948.96	-6790948.84	0.0278	0.0245
Jupiter	-23298-10-16 18:14 J	-6787882.86	-6787882.74	-6787882.61	0.0491	0.0414
Saturn	-23291-11-20 03:21 J	-6785291.61	-6785291.36	-6785291.11	0.0282	0.0003
Jupiter	-23286-10-21 05:02 J	-6783495.53	-6783495.29	-6783495.06	0.0491	0.0027
Mars	-23278-04-03 06:28 J	-6780774.38	-6780774.23	-6780774.07	0.1638	0.0859
Saturn	-23277-05-19 08:52 J	-6780362.37	-6780362.13	-6780361.89	0.0280	0.0028
Jupiter	-23274-10-25 12:43 J	-6779108.05	-6779107.97	-6779107.87	0.0491	0.0454
Uranus	-23269-05-14 10:19 J	-6777445.16	-6777445.07	-6777444.97	0.0138	0.0128
Uranus	-23268-05-18 21:35 J	-6777075.83	-6777075.60	-6777075.36	0.0139	0.0043
Uranus	-23267-05-23 09:21 J	-6776706.34	-6776706.11	-6776705.86	0.0139	0.0044
Uranus	-23266-05-27 22:19 J	-6776336.63	-6776336.57	-6776336.47	0.0140	0.0132
Pluto	-23265-07-31 05:16 J	-6775906.52	-6775906.28	-6775906.01	0.0068	0.0010
Saturn	-23262-11-14 13:55 J	-6774704.92	-6774704.92	-6774704.88	0.0280	0.0279
Neptune	-23258-10-24 07:40 J	-6773265.33	-6773265.18	-6773265.01	0.0088	0.0070
Neptune	-23257-10-25 20:23 J	-6772897.90	-6772897.65	-6772897.40	0.0088	0.0027
Neptune	-23256-10-28 08:52 J	-6772530.38	-6772530.13	-6772529.86	0.0088	0.0016
Neptune	-23255-10-30 21:35 J	-6772162.79	-6772162.60	-6772162.40	0.0088	0.0058
Jupiter	-23244-04-21 02:52 J	-6768337.60	-6768337.38	-6768337.15	0.0535	0.0096

Jupiter	-23232-04-26 01:55 J	-6763949.52	-6763949.42	-6763949.30	0.0536	0.0466
Saturn	-23232-11-21 18:14 J	-6763739.97	-6763739.74	-6763739.50	0.0282	0.0090
Uranus	-23230-11-16 09:50 J	-6763015.27	-6763015.09	-6763014.90	0.0140	0.0097
Uranus	-23229-11-20 06:57 J	-6762645.47	-6762645.21	-6762644.95	0.0140	0.0005
Uranus	-23228-11-25 02:52 J	-6762275.57	-6762275.38	-6762275.16	0.0139	0.0087
Saturn	-23218-05-21 21:07 J	-6758810.85	-6758810.62	-6758810.38	0.0279	0.0054
Jupiter	-23203-10-20 05:31 J	-6753180.50	-6753180.27	-6753180.03	0.0491	0.0063
Saturn	-23203-11-16 02:09 J	-6753153.58	-6753153.41	-6753153.24	0.0280	0.0201
Mars	-23191-09-29 21:50 J	-6748817.77	-6748817.59	-6748817.41	0.1879	0.0876
Jupiter	-23191-10-24 17:45 J	-6748792.90	-6748792.76	-6748792.61	0.0491	0.0387
Saturn	-23189-05-15 23:02 J	-6748223.70	-6748223.54	-6748223.38	0.0281	0.0213
Uranus	-23185-05-15 00:57 J	-6746763.57	-6746763.46	-6746763.32	0.0138	0.0119
Uranus	-23184-05-19 12:14 J	-6746394.22	-6746393.99	-6746393.74	0.0139	0.0035
Uranus	-23183-05-24 00:14 J	-6746024.71	-6746024.49	-6746024.25	0.0139	0.0052
Uranus	-23182-05-28 13:11 J	-6745654.95	-6745654.95	-6745654.93	0.0140	0.0139
Pluto	-23179-02-03 09:07 J	-6744673.37	-6744673.12	-6744672.86	0.0077	0.0019
Neptune	-23175-04-25 13:26 J	-6743131.08	-6743130.94	-6743130.76	0.0089	0.0069
Neptune	-23174-04-28 00:14 J	-6742763.73	-6742763.49	-6742763.24	0.0089	0.0025
Neptune	-23173-04-29 10:47 J	-6742396.29	-6742396.05	-6742395.79	0.0089	0.0018
Saturn	-23173-11-23 05:02 J	-6742188.48	-6742188.29	-6742188.08	0.0283	0.0169
Neptune	-23172-05-01 21:21 J	-6742028.78	-6742028.61	-6742028.41	0.0089	0.0062
Jupiter	-23161-04-20 04:33 J	-6738022.52	-6738022.31	-6738022.10	0.0536	0.0196
Saturn	-23159-05-23 07:40 J	-6737259.38	-6737259.18	-6737258.96	0.0278	0.0131
Mars	-23152-03-30 07:26 J	-6734756.29	-6734756.19	-6734756.08	0.1644	0.1368
Jupiter	-23149-04-25 06:14 J	-6733634.40	-6733634.24	-6733634.08	0.0536	0.0378
Uranus	-23146-11-16 23:45 J	-6732333.70	-6732333.51	-6732333.30	0.0140	0.0089
Uranus	-23145-11-20 21:07 J	-6731963.87	-6731963.62	-6731963.36	0.0140	0.0005
Saturn	-23144-11-17 09:50 J	-6731602.31	-6731602.09	-6731601.87	0.0281	0.0131
Uranus	-23144-11-25 17:16 J	-6731593.95	-6731593.78	-6731593.57	0.0139	0.0095
Saturn	-23130-05-18 07:55 J	-6726672.37	-6726672.17	-6726671.95	0.0281	0.0140

Jupiter	-23120-10-19 12:14 J	-6722865.22	-6722864.99	-6722864.76	0.0491	0.0123
Saturn	-23114-11-25 12:14 J	-6720637.12	-6720636.99	-6720636.85	0.0283	0.0238
Jupiter	-23108-10-23 23:16 J	-6718477.70	-6718477.53	-6718477.34	0.0491	0.0320
Uranus	-23101-05-15 17:02 J	-6716081.93	-6716081.79	-6716081.63	0.0138	0.0109
Uranus	-23100-05-20 04:33 J	-6715712.56	-6715712.31	-6715712.07	0.0139	0.0025
Saturn	-23100-05-24 15:21 J	-6715708.02	-6715707.86	-6715707.69	0.0278	0.0201
Uranus	-23099-05-24 16:04 J	-6715343.04	-6715342.83	-6715342.59	0.0139	0.0062
Neptune	-23093-10-24 23:02 J	-6712997.74	-6712997.54	-6712997.32	0.0088	0.0053
Neptune	-23092-10-27 11:45 J	-6712630.27	-6712630.01	-6712629.75	0.0088	0.0010
Neptune	-23091-10-30 00:14 J	-6712262.72	-6712262.49	-6712262.23	0.0088	0.0033
Neptune	-23090-11-01 12:43 J	-6711895.09	-6711894.97	-6711894.82	0.0088	0.0075
Saturn	-23085-11-18 12:57 J	-6710051.20	-6710050.96	-6710050.72	0.0281	0.0070
Jupiter	-23078-04-20 05:45 J	-6707707.46	-6707707.26	-6707707.07	0.0535	0.0292
Mars	-23073-04-01 09:50 J	-6705899.27	-6705899.09	-6705898.90	0.1642	0.0074
Saturn	-23071-05-19 13:55 J	-6705121.15	-6705120.92	-6705120.68	0.0280	0.0073
Jupiter	-23066-04-25 04:33 J	-6703319.50	-6703319.31	-6703319.10	0.0535	0.0268
Uranus	-23062-11-17 15:36 J	-6701652.05	-6701651.85	-6701651.62	0.0140	0.0079
Uranus	-23061-11-21 13:11 J	-6701282.20	-6701281.95	-6701281.69	0.0140	0.0014
Uranus	-23060-11-26 09:21 J	-6700912.26	-6700912.11	-6700911.92	0.0139	0.0104
Saturn	-23041-05-25 19:55 J	-6694156.73	-6694156.67	-6694156.59	0.0277	0.0265
Jupiter	-23037-10-18 18:57 J	-6692549.93	-6692549.71	-6692549.49	0.0491	0.0183
Saturn	-23026-11-20 12:57 J	-6688500.21	-6688499.96	-6688499.71	0.0281	0.0016
Jupiter	-23025-10-23 07:11 J	-6688162.40	-6688162.20	-6688162.00	0.0491	0.0262
Pluto	-23019-08-02 11:02 J	-6686053.26	-6686053.04	-6686052.78	0.0068	0.0027
Uranus	-23017-05-16 06:57 J	-6685400.36	-6685400.21	-6685400.03	0.0138	0.0102
Uranus	-23016-05-20 18:14 J	-6685030.98	-6685030.74	-6685030.49	0.0139	0.0018
Uranus	-23015-05-25 06:00 J	-6684661.46	-6684661.25	-6684661.02	0.0139	0.0069
Saturn	-23012-05-20 16:19 J	-6683570.06	-6683569.82	-6683569.57	0.0280	0.0014
Neptune	-23010-04-27 04:48 J	-6682863.48	-6682863.30	-6682863.07	0.0089	0.0053
Neptune	-23009-04-28 15:50 J	-6682496.09	-6682495.84	-6682495.58	0.0089	0.0009

Neptune -23008-05-01 02:23 J -6682128.63 -6682128.40 -6682128.17 0.0089 0.0035

Neptune -23007-05-03 12:28 J -6681761.08 -6681760.98 -6681760.84 0.0089 0.0078

23RD MILLENNIUM BCE

This is a list of transits of Earth in the 23rd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-22995-04-19 09:07 J	-6677392.28	-6677392.12	-6677391.96	0.0535	0.0383		
Mars	-22994-04-04 12:43 J	-6677042.09	-6677041.97	-6677041.85	0.1641	0.1238		
Jupiter	-22983-04-24 11:02 J	-6673004.25	-6673004.04	-6673003.82	0.0536	0.0189		
Uranus	-22978-11-18 06:28 J	-6670970.44	-6670970.23	-6670969.99	0.0140	0.0070		
Uranus	-22977-11-22 04:19 J	-6670600.57	-6670600.32	-6670600.06	0.0140	0.0023		
Uranus	-22976-11-27 00:28 J	-6670230.61	-6670230.48	-6670230.31	0.0139	0.0113		
Saturn	-22967-11-21 09:36 J	-6666949.34	-6666949.10	-6666948.85	0.0281	0.0031		
Jupiter	-22954-10-19 05:02 J	-6662234.50	-6662234.29	-6662234.08	0.0492	0.0229		
Saturn	-22953-05-21 16:33 J	-6662019.05	-6662018.81	-6662018.57	0.0280	0.0042		
Jupiter	-22942-10-23 17:45 J	-6657846.97	-6657846.76	-6657846.55	0.0492	0.0218		
Saturn	-22938-11-15 17:16 J	-6656362.86	-6656362.78	-6656362.69	0.0279	0.0263		
Pluto	-22933-02-05 18:14 J	-6654819.99	-6654819.74	-6654819.48	0.0077	0.0010		
Uranus	-22933-05-16 20:09 J	-6654718.83	-6654718.66	-6654718.47	0.0138	0.0094		
Uranus	-22932-05-21 07:26 J	-6654349.44	-6654349.19	-6654348.94	0.0139	0.0010		
Uranus	-22931-05-25 18:43 J	-6653979.92	-6653979.72	-6653979.50	0.0139	0.0075		
Neptune	-22929-10-24 01:55 J	-6653097.51	-6653097.42	-6653097.29	0.0088	0.0079		
Neptune	-22928-10-26 14:52 J	-6652730.10	-6652729.88	-6652729.63	0.0088	0.0036		

Neptune	-22927-10-29 03:36 J	-6652362.61	-6652362.35	-6652362.08	0.0088	0.0007
Neptune	-22926-10-31 15:50 J	-6651995.04	-6651994.84	-6651994.60	0.0088	0.0050
Saturn	-22924-05-16 06:43 J	-6651432.34	-6651432.22	-6651432.11	0.0281	0.0246
Jupiter	-22912-04-18 20:09 J	-6647076.79	-6647076.66	-6647076.53	0.0535	0.0436
Saturn	-22908-11-22 05:16 J	-6645398.52	-6645398.28	-6645398.04	0.0281	0.0076
Mars	-22907-09-29 00:00 J	-6645087.70	-6645087.50	-6645087.30	0.1874	0.0418
Jupiter	-22900-04-23 20:09 J	-6642688.89	-6642688.66	-6642688.44	0.0535	0.0128
Saturn	-22894-05-23 14:23 J	-6640468.12	-6640467.90	-6640467.67	0.0280	0.0093
Uranus	-22894-11-18 21:21 J	-6640288.83	-6640288.61	-6640288.36	0.0140	0.0060
Uranus	-22893-11-22 19:11 J	-6639918.95	-6639918.70	-6639918.45	0.0140	0.0031
Uranus	-22892-11-27 15:07 J	-6639548.97	-6639548.87	-6639548.72	0.0139	0.0122
Saturn	-22879-11-16 12:28 J	-6634812.12	-6634811.98	-6634811.81	0.0279	0.0219
Jupiter	-22871-10-18 17:02 J	-6631918.99	-6631918.79	-6631918.59	0.0492	0.0270
Mars	-22868-03-31 13:11 J	-6631024.10	-6631023.95	-6631023.81	0.1646	0.1004
Saturn	-22865-05-17 04:48 J	-6629881.47	-6629881.30	-6629881.12	0.0281	0.0195
Jupiter	-22859-10-23 05:02 J	-6627531.51	-6627531.29	-6627531.07	0.0491	0.0175
Uranus	-22849-05-17 07:55 J	-6624037.34	-6624037.17	-6624036.96	0.0138	0.0089
Saturn	-22849-11-23 01:11 J	-6623847.67	-6623847.45	-6623847.22	0.0281	0.0122
Uranus	-22848-05-21 18:57 J	-6623667.96	-6623667.71	-6623667.46	0.0138	0.0005
Uranus	-22847-05-26 06:00 J	-6623298.44	-6623298.25	-6623298.03	0.0139	0.0081
Neptune	-22846-04-26 09:21 J	-6622963.20	-6622963.11	-6622962.97	0.0089	0.0080
Neptune	-22845-04-27 19:55 J	-6622595.89	-6622595.67	-6622595.42	0.0089	0.0036
Neptune	-22844-04-30 06:43 J	-6622228.47	-6622228.22	-6622227.96	0.0089	0.0008
Neptune	-22843-05-02 17:16 J	-6621860.99	-6621860.78	-6621860.57	0.0089	0.0051
Saturn	-22835-05-24 11:16 J	-6618917.23	-6618917.03	-6618916.81	0.0280	0.0142
Jupiter	-22829-04-18 04:33 J	-6616761.38	-6616761.31	-6616761.23	0.0534	0.0500
Saturn	-22820-11-17 09:21 J	-6613261.30	-6613261.11	-6613260.91	0.0279	0.0170
Jupiter	-22817-04-23 02:23 J	-6612373.63	-6612373.40	-6612373.18	0.0535	0.0050
Uranus	-22810-11-19 08:09 J	-6609607.39	-6609607.16	-6609606.92	0.0141	0.0055
Uranus	-22809-11-23 05:45 J	-6609237.50	-6609237.26	-6609237.00	0.0140	0.0037

Uranus	-22808-11-28 02:09 J	-6608867.49	-6608867.41	-6608867.28	0.0139	0.0127
Saturn	-22806-05-19 02:09 J	-6608330.61	-6608330.41	-6608330.20	0.0282	0.0145
Saturn	-22790-11-24 22:04 J	-6602296.77	-6602296.58	-6602296.37	0.0281	0.0171
Mars	-22789-04-02 15:36 J	-6602167.03	-6602166.85	-6602166.66	0.1645	0.0307
Jupiter	-22788-10-18 04:33 J	-6601603.49	-6601603.31	-6601603.13	0.0492	0.0312
Saturn	-22776-05-25 08:23 J	-6597366.32	-6597366.15	-6597365.97	0.0280	0.0191
Jupiter	-22776-10-22 14:09 J	-6597216.14	-6597215.91	-6597215.68	0.0492	0.0123
Pluto	-22774-08-02 22:04 J	-6596566.62	-6596566.58	-6596566.51	0.0068	0.0066
Pluto	-22773-08-03 13:55 J	-6596200.15	-6596199.92	-6596199.70	0.0068	0.0034
Uranus	-22765-05-17 21:36 J	-6593355.79	-6593355.60	-6593355.38	0.0138	0.0081
Uranus	-22764-05-22 08:23 J	-6592986.39	-6592986.15	-6592985.89	0.0138	0.0004
Neptune	-22764-10-25 17:45 J	-6592829.92	-6592829.76	-6592829.55	0.0088	0.0062
Uranus	-22763-05-26 19:26 J	-6592616.87	-6592616.69	-6592616.48	0.0139	0.0087
Neptune	-22763-10-28 06:43 J	-6592462.46	-6592462.22	-6592461.95	0.0088	0.0019
Neptune	-22762-10-30 19:26 J	-6592094.93	-6592094.69	-6592094.43	0.0088	0.0024
Neptune	-22761-11-01 07:55 J	-6591727.32	-6591727.17	-6591726.98	0.0088	0.0067
Saturn	-22761-11-18 07:55 J	-6591710.39	-6591710.17	-6591709.93	0.0279	0.0118
Saturn	-22747-05-20 00:43 J	-6586779.70	-6586779.47	-6586779.24	0.0282	0.0093
Jupiter	-22734-04-23 12:28 J	-6582058.21	-6582057.98	-6582057.75	0.0535	0.0011
Saturn	-22731-11-25 22:33 J	-6580745.70	-6580745.56	-6580745.41	0.0281	0.0227
Uranus	-22726-11-19 19:26 J	-6578925.93	-6578925.69	-6578925.44	0.0141	0.0049
Uranus	-22725-11-23 17:16 J	-6578556.02	-6578555.78	-6578555.53	0.0140	0.0042
Uranus	-22724-11-28 13:55 J	-6578185.99	-6578185.92	-6578185.83	0.0140	0.0132
Saturn	-22717-05-26 06:14 J	-6575815.35	-6575815.24	-6575815.12	0.0280	0.0244
Mars	-22710-04-05 18:14 J	-6573309.77	-6573309.74	-6573309.70	0.1643	0.1612
Jupiter	-22705-10-17 10:48 J	-6571288.19	-6571288.05	-6571287.89	0.0492	0.0377
Saturn	-22702-11-20 09:36 J	-6570159.34	-6570159.10	-6570158.85	0.0279	0.0059
Jupiter	-22693-10-22 00:00 J	-6566900.73	-6566900.50	-6566900.26	0.0492	0.0073
Saturn	-22688-05-21 00:28 J	-6565228.72	-6565228.48	-6565228.24	0.0282	0.0037
Pluto	-22687-02-06 20:23 J	-6564966.89	-6564966.65	-6564966.39	0.0076	0.0016

Neptune	-22681-04-27 00:57 J	-6562695.62	-6562695.46	-6562695.26	0.0089	0.0063
Uranus	-22681-05-18 13:11 J	-6562674.16	-6562673.95	-6562673.74	0.0138	0.0072
Neptune	-22680-04-29 11:45 J	-6562328.25	-6562328.01	-6562327.76	0.0089	0.0019
Uranus	-22680-05-22 23:31 J	-6562304.77	-6562304.52	-6562304.27	0.0138	0.0011
Neptune	-22679-05-01 22:04 J	-6561960.81	-6561960.58	-6561960.32	0.0089	0.0024
Uranus	-22679-05-27 10:19 J	-6561935.23	-6561935.07	-6561934.87	0.0139	0.0095
Neptune	-22678-05-04 08:23 J	-6561593.29	-6561593.15	-6561592.96	0.0089	0.0068
Jupiter	-22651-04-22 19:55 J	-6551742.90	-6551742.67	-6551742.44	0.0534	0.0083
Uranus	-22643-11-15 06:57 J	-6548614.26	-6548614.21	-6548614.12	0.0141	0.0136
Saturn	-22643-11-21 15:07 J	-6548608.12	-6548607.87	-6548607.62	0.0279	0.0009
Uranus	-22642-11-20 06:28 J	-6548244.47	-6548244.23	-6548243.98	0.0141	0.0043
Uranus	-22641-11-24 04:04 J	-6547874.56	-6547874.33	-6547874.08	0.0140	0.0048
Uranus	-22640-11-29 00:57 J	-6547504.50	-6547504.46	-6547504.40	0.0140	0.0137
Jupiter	-22639-04-27 15:50 J	-6547354.95	-6547354.84	-6547354.72	0.0534	0.0458
Saturn	-22629-05-22 02:38 J	-6543677.63	-6543677.39	-6543677.14	0.0282	0.0026
Mars	-22623-09-28 03:50 J	-6541357.44	-6541357.34	-6541357.24	0.1869	0.1614
Jupiter	-22622-10-17 18:43 J	-6540972.83	-6540972.72	-6540972.61	0.0492	0.0433
Jupiter	-22610-10-22 06:43 J	-6536585.45	-6536585.22	-6536584.98	0.0492	0.0014
Saturn	-22600-05-16 14:38 J	-6533090.95	-6533090.89	-6533090.83	0.0284	0.0274
Neptune	-22600-10-24 21:36 J	-6532929.62	-6532929.60	-6532929.54	0.0088	0.0087
Neptune	-22599-10-27 10:19 J	-6532562.28	-6532562.07	-6532561.83	0.0088	0.0044
Jupiter	-22598-10-26 14:52 J	-6532197.99	-6532197.88	-6532197.77	0.0492	0.0436
Neptune	-22598-10-29 23:16 J	-6532194.79	-6532194.53	-6532194.26	0.0088	0.0002
Uranus	-22597-05-19 04:48 J	-6531992.52	-6531992.30	-6531992.08	0.0138	0.0063
Neptune	-22597-10-31 11:45 J	-6531827.22	-6531827.01	-6531826.76	0.0088	0.0042
Uranus	-22596-05-23 15:21 J	-6531623.11	-6531622.86	-6531622.61	0.0138	0.0020
Neptune	-22596-11-03 00:28 J	-6531459.54	-6531459.48	-6531459.40	0.0088	0.0084
Uranus	-22595-05-28 02:09 J	-6531253.56	-6531253.41	-6531253.23	0.0139	0.0104
Mars	-22584-04-01 18:00 J	-6527291.92	-6527291.75	-6527291.58	0.1649	0.0650
Saturn	-22584-11-23 00:00 J	-6527056.74	-6527056.50	-6527056.26	0.0280	0.0083

Saturn	-22570-05-24 08:38 J	-6522126.36	-6522126.14	-6522125.91	0.0282	0.0095
Jupiter	-22568-04-21 18:14 J	-6521427.95	-6521427.74	-6521427.52	0.0534	0.0198
Uranus	-22559-11-15 21:36 J	-6517932.69	-6517932.60	-6517932.46	0.0141	0.0127
Uranus	-22558-11-20 21:07 J	-6517562.87	-6517562.62	-6517562.37	0.0141	0.0034
Uranus	-22557-11-24 18:43 J	-6517192.95	-6517192.72	-6517192.48	0.0140	0.0056
Jupiter	-22556-04-26 18:28 J	-6517039.89	-6517039.73	-6517039.56	0.0535	0.0364
Saturn	-22555-11-17 09:50 J	-6516470.25	-6516470.09	-6516469.92	0.0278	0.0207
Mars	-22544-10-01 14:38 J	-6512499.00	-6512498.89	-6512498.79	0.1873	0.1594
Saturn	-22541-05-17 22:04 J	-6511539.75	-6511539.58	-6511539.41	0.0284	0.0200
Pluto	-22528-08-03 21:50 J	-6506713.60	-6506713.59	-6506713.52	0.0068	0.0067
Pluto	-22527-08-05 13:40 J	-6506347.15	-6506346.93	-6506346.70	0.0068	0.0033
Jupiter	-22527-10-21 06:43 J	-6506270.46	-6506270.22	-6506269.99	0.0492	0.0083
Saturn	-22525-11-24 12:57 J	-6505505.15	-6505504.96	-6505504.75	0.0280	0.0167
Neptune	-22517-04-26 06:14 J	-6502795.24	-6502795.24	-6502795.21	0.0089	0.0089
Neptune	-22516-04-28 16:33 J	-6502428.01	-6502427.81	-6502427.57	0.0089	0.0046
Neptune	-22515-05-01 03:36 J	-6502060.60	-6502060.35	-6502060.09	0.0089	0.0003
Jupiter	-22515-10-25 19:26 J	-6501882.84	-6501882.69	-6501882.52	0.0492	0.0364
Neptune	-22514-05-03 13:40 J	-6501693.14	-6501692.93	-6501692.69	0.0089	0.0041
Uranus	-22514-05-16 10:04 J	-6501680.10	-6501680.08	-6501680.02	0.0137	0.0135
Neptune	-22513-05-05 00:28 J	-6501325.56	-6501325.48	-6501325.39	0.0089	0.0084
Uranus	-22513-05-19 19:55 J	-6501310.89	-6501310.67	-6501310.43	0.0138	0.0055
Uranus	-22512-05-24 06:28 J	-6500941.47	-6500941.23	-6500940.98	0.0138	0.0029
Saturn	-22511-05-25 17:31 J	-6500574.96	-6500574.77	-6500574.57	0.0281	0.0172
Uranus	-22511-05-28 17:45 J	-6500571.90	-6500571.76	-6500571.61	0.0139	0.0112
Mars	-22505-04-03 21:07 J	-6498434.79	-6498434.62	-6498434.45	0.1648	0.0680
Saturn	-22496-11-19 00:28 J	-6494918.71	-6494918.48	-6494918.26	0.0278	0.0122
Jupiter	-22485-04-20 21:36 J	-6491112.79	-6491112.60	-6491112.41	0.0534	0.0290
Saturn	-22482-05-20 08:52 J	-6489988.34	-6489988.13	-6489987.90	0.0283	0.0118
Uranus	-22475-11-16 10:48 J	-6487251.16	-6487251.05	-6487250.88	0.0141	0.0119
Uranus	-22474-11-21 10:04 J	-6486881.33	-6486881.08	-6486880.82	0.0141	0.0027

Jupiter	-22473-04-25 21:21 J	-6486724.81	-6486724.61	-6486724.41	0.0534	0.0267
Uranus	-22473-11-25 07:26 J	-6486511.41	-6486511.19	-6486510.95	0.0140	0.0064
Saturn	-22466-11-27 04:19 J	-6483953.41	-6483953.32	-6483953.21	0.0280	0.0256
Saturn	-22452-05-27 05:31 J	-6479023.36	-6479023.27	-6479023.16	0.0281	0.0254
Jupiter	-22444-10-20 09:50 J	-6475955.31	-6475955.09	-6475954.86	0.0492	0.0159
Pluto	-22441-02-08 20:09 J	-6475113.90	-6475113.66	-6475113.39	0.0077	0.0017
Saturn	-22437-11-20 17:31 J	-6473367.02	-6473366.77	-6473366.53	0.0279	0.0031
Neptune	-22435-10-26 14:38 J	-6472662.02	-6472661.89	-6472661.70	0.0088	0.0069
Neptune	-22434-10-29 03:50 J	-6472294.58	-6472294.34	-6472294.08	0.0088	0.0026
Neptune	-22433-10-30 16:33 J	-6471927.06	-6471926.81	-6471926.55	0.0088	0.0017
Jupiter	-22432-10-24 20:52 J	-6471567.82	-6471567.63	-6471567.43	0.0492	0.0280
Neptune	-22432-11-02 04:48 J	-6471559.47	-6471559.30	-6471559.08	0.0088	0.0060
Uranus	-22430-05-17 00:00 J	-6470998.58	-6470998.50	-6470998.40	0.0137	0.0128
Uranus	-22429-05-20 09:36 J	-6470629.33	-6470629.10	-6470628.86	0.0138	0.0047
Uranus	-22428-05-24 19:55 J	-6470259.90	-6470259.67	-6470259.41	0.0138	0.0037
Uranus	-22427-05-29 06:57 J	-6469890.31	-6469890.21	-6469890.06	0.0139	0.0120
Saturn	-22423-05-21 22:19 J	-6468436.81	-6468436.57	-6468436.33	0.0282	0.0032
Jupiter	-22402-04-20 16:04 J	-6460797.96	-6460797.83	-6460797.68	0.0534	0.0419
Uranus	-22391-11-17 01:40 J	-6456569.58	-6456569.43	-6456569.25	0.0141	0.0110
Jupiter	-22390-04-25 13:40 J	-6456410.15	-6456409.93	-6456409.70	0.0534	0.0127
Uranus	-22390-11-22 00:43 J	-6456199.73	-6456199.47	-6456199.21	0.0141	0.0018
Uranus	-22389-11-25 21:50 J	-6455829.79	-6455829.59	-6455829.35	0.0140	0.0072
Mars	-22379-03-31 19:26 J	-6452416.70	-6452416.69	-6452416.68	0.1654	0.1648
Saturn	-22378-11-23 10:04 J	-6451815.32	-6451815.08	-6451814.84	0.0279	0.0060
Saturn	-22364-05-23 13:26 J	-6446885.17	-6446884.94	-6446884.70	0.0282	0.0058
Jupiter	-22361-10-19 08:09 J	-6445640.36	-6445640.16	-6445639.95	0.0492	0.0255
Neptune	-22352-04-27 23:02 J	-6442527.68	-6442527.54	-6442527.38	0.0089	0.0072
Neptune	-22351-04-30 09:21 J	-6442160.34	-6442160.11	-6442159.86	0.0089	0.0029
Neptune	-22350-05-02 20:09 J	-6441792.91	-6441792.66	-6441792.41	0.0089	0.0015
Neptune	-22349-05-04 06:00 J	-6441425.41	-6441425.25	-6441425.03	0.0089	0.0059

Jupiter	-22349-10-23 19:26 J	-6441252.90	-6441252.69	-6441252.46	0.0492	0.0183
Saturn	-22349-11-17 00:00 J	-6441228.65	-6441228.50	-6441228.35	0.0277	0.0218
Uranus	-22346-05-17 12:00 J	-6440317.10	-6440317.00	-6440316.87	0.0137	0.0121
Uranus	-22345-05-20 21:36 J	-6439947.82	-6439947.60	-6439947.35	0.0138	0.0041
Uranus	-22344-05-25 08:09 J	-6439578.39	-6439578.16	-6439577.91	0.0138	0.0042
Uranus	-22343-05-29 19:26 J	-6439208.79	-6439208.69	-6439208.58	0.0139	0.0125
Saturn	-22335-05-18 13:55 J	-6436298.06	-6436297.92	-6436297.76	0.0284	0.0218
Saturn	-22319-11-25 00:57 J	-6430263.66	-6430263.46	-6430263.23	0.0280	0.0148
Jupiter	-22307-04-24 13:55 J	-6426095.15	-6426094.92	-6426094.69	0.0535	0.0022
Uranus	-22307-11-17 12:14 J	-6425888.16	-6425887.99	-6425887.81	0.0141	0.0104
Uranus	-22306-11-22 11:02 J	-6425518.29	-6425518.04	-6425517.78	0.0141	0.0013
Saturn	-22305-05-25 03:50 J	-6425333.54	-6425333.34	-6425333.13	0.0281	0.0146
Uranus	-22305-11-26 08:23 J	-6425148.36	-6425148.15	-6425147.92	0.0140	0.0077
Mars	-22300-04-02 22:48 J	-6423559.74	-6423559.55	-6423559.37	0.1652	0.0295
Saturn	-22290-11-19 12:14 J	-6419677.20	-6419676.99	-6419676.77	0.0278	0.0138
Pluto	-22281-08-06 10:19 J	-6416494.31	-6416494.07	-6416493.82	0.0068	0.0024
Jupiter	-22278-10-19 12:00 J	-6415325.17	-6415325.00	-6415324.82	0.0493	0.0327
Saturn	-22276-05-20 04:04 J	-6414746.54	-6414746.33	-6414746.11	0.0283	0.0131
Neptune	-22270-10-28 08:52 J	-6412394.33	-6412394.13	-6412393.90	0.0088	0.0050
Neptune	-22269-10-29 21:50 J	-6412026.86	-6412026.59	-6412026.33	0.0088	0.0007
Neptune	-22268-11-01 09:50 J	-6411659.31	-6411659.09	-6411658.83	0.0088	0.0036
Neptune	-22267-11-03 22:48 J	-6411291.66	-6411291.55	-6411291.42	0.0088	0.0078
Jupiter	-22266-10-23 23:45 J	-6410937.74	-6410937.51	-6410937.27	0.0492	0.0114
Uranus	-22262-05-17 23:31 J	-6409635.64	-6409635.52	-6409635.38	0.0137	0.0115
Uranus	-22261-05-21 09:07 J	-6409266.36	-6409266.12	-6409265.88	0.0138	0.0035
Uranus	-22260-05-25 19:11 J	-6408896.93	-6408896.70	-6408896.46	0.0138	0.0047
Mars	-22260-09-30 18:57 J	-6408768.90	-6408768.71	-6408768.51	0.1868	0.0413
Saturn	-22260-11-26 13:40 J	-6408712.06	-6408711.93	-6408711.78	0.0280	0.0230
Uranus	-22259-05-30 06:14 J	-6408527.31	-6408527.24	-6408527.14	0.0139	0.0130
Saturn	-22246-05-27 16:33 J	-6403781.94	-6403781.81	-6403781.66	0.0281	0.0229

Saturn	-22231-11-20 21:21 J	-6398125.85	-6398125.61	-6398125.36	0.0278	0.0065
Jupiter	-22224-04-23 11:45 J	-6395780.23	-6395780.01	-6395779.78	0.0534	0.0091
Uranus	-22223-11-17 21:21 J	-6395206.78	-6395206.61	-6395206.42	0.0141	0.0100
Uranus	-22222-11-22 20:23 J	-6394836.90	-6394836.65	-6394836.39	0.0141	0.0009
Mars	-22221-04-05 01:40 J	-6394702.57	-6394702.43	-6394702.28	0.1650	0.1040
Uranus	-22221-11-26 18:14 J	-6394466.94	-6394466.74	-6394466.52	0.0140	0.0082
Saturn	-22217-05-21 14:52 J	-6393195.11	-6393194.88	-6393194.64	0.0283	0.0051
Jupiter	-22212-04-28 09:50 J	-6391392.20	-6391392.09	-6391391.97	0.0534	0.0457
Pluto	-22195-02-09 14:23 J	-6385261.15	-6385260.90	-6385260.63	0.0077	0.0006
Jupiter	-22195-10-18 17:02 J	-6385009.92	-6385009.79	-6385009.64	0.0492	0.0395
Neptune	-22187-04-29 16:33 J	-6382260.00	-6382259.81	-6382259.60	0.0089	0.0054
Neptune	-22186-05-02 03:07 J	-6381892.61	-6381892.37	-6381892.11	0.0089	0.0011
Neptune	-22185-05-03 13:26 J	-6381525.16	-6381524.94	-6381524.69	0.0089	0.0033
Neptune	-22184-05-05 23:45 J	-6381157.61	-6381157.51	-6381157.35	0.0089	0.0077
Jupiter	-22183-10-23 03:36 J	-6380622.59	-6380622.35	-6380622.11	0.0492	0.0040
Uranus	-22178-05-18 12:14 J	-6378954.13	-6378953.99	-6378953.82	0.0137	0.0108
Uranus	-22177-05-21 22:04 J	-6378584.83	-6378584.58	-6378584.34	0.0138	0.0028
Uranus	-22176-05-26 08:23 J	-6378215.38	-6378215.15	-6378214.92	0.0138	0.0054
Uranus	-22175-05-30 19:26 J	-6377845.73	-6377845.69	-6377845.65	0.0139	0.0136
Saturn	-22172-11-22 02:23 J	-6376574.65	-6376574.40	-6376574.15	0.0279	0.0004
Jupiter	-22171-10-27 15:21 J	-6376234.90	-6376234.86	-6376234.80	0.0492	0.0480
Saturn	-22158-05-23 22:48 J	-6371643.78	-6371643.55	-6371643.30	0.0283	0.0023
Jupiter	-22141-04-22 12:28 J	-6365465.19	-6365464.98	-6365464.76	0.0534	0.0193
Uranus	-22139-11-18 04:19 J	-6364525.50	-6364525.32	-6364525.12	0.0141	0.0097
Uranus	-22138-11-23 03:50 J	-6364155.60	-6364155.34	-6364155.08	0.0141	0.0006
Uranus	-22137-11-27 01:40 J	-6363785.63	-6363785.43	-6363785.22	0.0140	0.0085
Jupiter	-22129-04-27 13:55 J	-6361077.08	-6361076.92	-6361076.75	0.0535	0.0370
Saturn	-22129-05-17 11:45 J	-6361057.06	-6361057.01	-6361056.94	0.0284	0.0275
Saturn	-22113-11-23 03:07 J	-6355023.61	-6355023.37	-6355023.12	0.0279	0.0056
Jupiter	-22112-10-18 00:00 J	-6354694.58	-6354694.50	-6354694.40	0.0492	0.0453

Neptune	-22106-10-27 15:21 J	-6352493.99	-6352493.86	-6352493.70	0.0088	0.0073
Neptune	-22105-10-29 03:50 J	-6352126.57	-6352126.34	-6352126.08	0.0088	0.0031
Neptune	-22104-10-31 16:48 J	-6351759.06	-6351758.80	-6351758.54	0.0088	0.0012
Neptune	-22103-11-03 05:02 J	-6351391.47	-6351391.29	-6351391.07	0.0088	0.0055
Jupiter	-22100-10-22 11:45 J	-6350307.25	-6350307.01	-6350306.77	0.0493	0.0014
Saturn	-22099-05-25 02:23 J	-6350092.63	-6350092.40	-6350092.17	0.0282	0.0085
Mars	-22095-04-01 22:48 J	-6348684.66	-6348684.55	-6348684.44	0.1658	0.1322
Uranus	-22094-05-19 01:55 J	-6348272.57	-6348272.42	-6348272.23	0.0137	0.0101
Uranus	-22093-05-22 11:45 J	-6347903.25	-6347903.01	-6347902.76	0.0137	0.0021
Uranus	-22092-05-26 21:50 J	-6347533.80	-6347533.59	-6347533.35	0.0138	0.0061
Jupiter	-22088-10-27 00:14 J	-6345919.59	-6345919.49	-6345919.36	0.0492	0.0430
Saturn	-22084-11-17 13:40 J	-6344437.05	-6344436.93	-6344436.79	0.0277	0.0233
Saturn	-22070-05-19 14:52 J	-6339506.03	-6339505.88	-6339505.72	0.0284	0.0213
Jupiter	-22058-04-22 21:50 J	-6335149.79	-6335149.59	-6335149.39	0.0534	0.0253
Uranus	-22055-11-18 15:07 J	-6333844.06	-6333843.87	-6333843.66	0.0141	0.0091
Uranus	-22054-11-23 14:23 J	-6333474.16	-6333473.90	-6333473.64	0.0141	0.0002
Saturn	-22054-11-25 00:43 J	-6333472.69	-6333472.47	-6333472.23	0.0279	0.0105
Uranus	-22053-11-27 12:28 J	-6333104.18	-6333103.98	-6333103.78	0.0140	0.0090
Jupiter	-22046-04-27 20:38 J	-6330761.82	-6330761.64	-6330761.44	0.0534	0.0299
Saturn	-22040-05-26 02:09 J	-6328541.61	-6328541.41	-6328541.19	0.0282	0.0142
Pluto	-22035-08-08 05:31 J	-6326641.51	-6326641.27	-6326641.00	0.0068	0.0011
Saturn	-22025-11-18 10:19 J	-6322886.24	-6322886.07	-6322885.88	0.0277	0.0186
Neptune	-22023-04-29 00:14 J	-6322359.61	-6322359.49	-6322359.36	0.0089	0.0078
Neptune	-22022-05-01 11:02 J	-6321992.27	-6321992.04	-6321991.80	0.0089	0.0035
Neptune	-22021-05-02 21:50 J	-6321624.84	-6321624.59	-6321624.34	0.0089	0.0009
Neptune	-22020-05-05 08:09 J	-6321257.36	-6321257.16	-6321256.95	0.0089	0.0052
Jupiter	-22017-10-21 22:33 J	-6319991.79	-6319991.56	-6319991.32	0.0493	0.0059
Mars	-22016-04-04 02:38 J	-6319827.58	-6319827.39	-6319827.21	0.1656	0.0051
Saturn	-22011-05-20 14:09 J	-6317955.11	-6317954.91	-6317954.71	0.0284	0.0158
Uranus	-22010-05-19 16:33 J	-6317591.00	-6317590.81	-6317590.63	0.0137	0.0092

Uranus -22009-05-23 01:55 J -6317221.67 -6317221.42 -6317221.17 0.0138 0.0013

Uranus -22008-05-27 12:14 J -6316852.20 -6316851.99 -6316851.77 0.0138 0.0068

Jupiter -22005-10-26 10:48 J -6315604.20 -6315604.05 -6315603.90 0.0492 0.0382

22ND MILLENNIUM BCE

This is a list of transits of Earth in the 22nd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
	TRANSIT							
	TIME							
Saturn	-21995-11-25 19:55 J	-6311921.88	-6311921.67	-6311921.46	0.0279	0.0149		
Saturn	-21981-05-27 00:00 J	-6306990.67	-6306990.50	-6306990.32	0.0282	0.0193		
Mars	-21976-09-30 01:26 J	-6305038.63	-6305038.44	-6305038.25	0.1862	0.0676		
Jupiter	-21975-04-22 05:31 J	-6304834.45	-6304834.27	-6304834.09	0.0533	0.0320		
Uranus	-21971-11-19 01:40 J	-6303162.63	-6303162.43	-6303162.22	0.0141	0.0085		
Uranus	-21970-11-24 00:57 J	-6302792.72	-6302792.46	-6302792.20	0.0141	0.0006		
Uranus	-21969-11-27 22:48 J	-6302422.72	-6302422.55	-6302422.34	0.0140	0.0096		
Saturn	-21966-11-20 05:16 J	-6301335.49	-6301335.28	-6301335.06	0.0277	0.0141		
Jupiter	-21963-04-27 03:07 J	-6300446.58	-6300446.37	-6300446.16	0.0534	0.0221		
Saturn	-21952-05-21 11:31 J	-6296404.24	-6296404.02	-6296403.80	0.0284	0.0107		
Pluto	-21949-02-11 08:52 J	-6295408.37	-6295408.13	-6295407.88	0.0077	0.0026		
Neptune	-21941-10-28 10:48 J	-6292226.25	-6292226.05	-6292225.83	0.0088	0.0053		
Neptune	-21940-10-30 23:31 J	-6291858.77	-6291858.52	-6291858.25	0.0088	0.0011		
Neptune	-21939-11-02 12:00 J	-6291491.23	-6291491.00	-6291490.74	0.0088	0.0032		
Neptune	-21938-11-05 00:14 J	-6291123.60	-6291123.49	-6291123.32	0.0088	0.0075		
Mars	-21937-04-06 06:00 J	-6290970.34	-6290970.25	-6290970.15	0.1654	0.1399		

Saturn	-21936-11-26 14:23 J	-6290371.07	-6290370.90	-6290370.71	0.0279	0.0194
Jupiter	-21934-10-22 10:19 J	-6289676.30	-6289676.07	-6289675.83	0.0493	0.0099
Uranus	-21926-05-20 04:48 J	-6286909.47	-6286909.30	-6286909.09	0.0137	0.0086
Uranus	-21925-05-23 14:52 J	-6286540.13	-6286539.88	-6286539.63	0.0138	0.0006
Uranus	-21924-05-28 00:43 J	-6286170.66	-6286170.47	-6286170.24	0.0138	0.0075
Saturn	-21922-05-28 19:40 J	-6285439.80	-6285439.68	-6285439.55	0.0282	0.0241
Jupiter	-21922-10-26 20:38 J	-6285288.81	-6285288.64	-6285288.46	0.0493	0.0335
Saturn	-21907-11-21 00:00 J	-6279784.72	-6279784.50	-6279784.26	0.0277	0.0097
Saturn	-21893-05-22 07:55 J	-6274853.40	-6274853.17	-6274852.93	0.0284	0.0058
Jupiter	-21892-04-21 12:43 J	-6274519.12	-6274518.97	-6274518.81	0.0533	0.0392
Uranus	-21887-11-19 14:09 J	-6272481.11	-6272480.91	-6272480.68	0.0141	0.0078
Uranus	-21886-11-24 13:40 J	-6272111.19	-6272110.93	-6272110.67	0.0141	0.0013
Uranus	-21885-11-28 11:16 J	-6271741.18	-6271741.03	-6271740.83	0.0140	0.0103
Jupiter	-21880-04-26 14:38 J	-6270131.10	-6270130.89	-6270130.67	0.0534	0.0170
Saturn	-21877-11-27 09:50 J	-6268820.20	-6268820.09	-6268819.95	0.0279	0.0240
Neptune	-21858-04-30 19:40 J	-6262091.85	-6262091.68	-6262091.46	0.0089	0.0059
Neptune	-21857-05-02 06:43 J	-6261724.47	-6261724.22	-6261723.97	0.0089	0.0015
Neptune	-21856-05-04 17:16 J	-6261357.01	-6261356.78	-6261356.53	0.0089	0.0029
Neptune	-21855-05-07 03:50 J	-6260989.48	-6260989.34	-6260989.18	0.0089	0.0072
Jupiter	-21851-10-21 18:57 J	-6259360.94	-6259360.71	-6259360.49	0.0493	0.0155
Saturn	-21848-11-21 21:07 J	-6258233.87	-6258233.62	-6258233.37	0.0277	0.0047
Uranus	-21842-05-20 16:33 J	-6256228.01	-6256227.81	-6256227.60	0.0137	0.0080
Uranus	-21841-05-24 02:09 J	-6255858.66	-6255858.41	-6255858.16	0.0138	0.0001
Uranus	-21840-05-28 12:00 J	-6255489.19	-6255489.00	-6255488.78	0.0138	0.0080
Jupiter	-21839-10-26 08:38 J	-6254973.32	-6254973.14	-6254972.94	0.0493	0.0293
Saturn	-21834-05-24 04:48 J	-6253302.54	-6253302.30	-6253302.06	0.0284	0.0008
Mars	-21811-04-03 01:55 J	-6244952.57	-6244952.42	-6244952.27	0.1661	0.0999
Jupiter	-21809-04-21 00:57 J	-6244203.58	-6244203.46	-6244203.33	0.0533	0.0441
Uranus	-21803-11-20 00:57 J	-6241799.68	-6241799.46	-6241799.23	0.0141	0.0072
Uranus	-21802-11-25 00:14 J	-6241429.75	-6241429.49	-6241429.23	0.0141	0.0018

Uranus	-21801-11-28 22:19 J	-6241059.73	-6241059.57	-6241059.40	0.0140	0.0107
Jupiter	-21797-04-26 00:43 J	-6239815.69	-6239815.47	-6239815.25	0.0533	0.0110
Pluto	-21789-08-08 23:31 J	-6236788.78	-6236788.52	-6236788.26	0.0068	0.0009
Saturn	-21789-11-22 20:23 J	-6236682.90	-6236682.65	-6236682.40	0.0277	0.0008
Neptune	-21777-10-27 18:28 J	-6232325.84	-6232325.73	-6232325.57	0.0088	0.0075
Neptune	-21776-10-30 07:26 J	-6231958.43	-6231958.19	-6231957.94	0.0088	0.0032
Saturn	-21775-05-25 03:36 J	-6231751.58	-6231751.35	-6231751.11	0.0284	0.0049
Neptune	-21775-11-01 20:09 J	-6231590.92	-6231590.66	-6231590.39	0.0088	0.0010
Neptune	-21774-11-04 08:23 J	-6231223.34	-6231223.15	-6231222.93	0.0088	0.0053
Jupiter	-21768-10-21 05:31 J	-6229045.49	-6229045.27	-6229045.05	0.0493	0.0201
Uranus	-21758-05-21 01:11 J	-6225546.64	-6225546.45	-6225546.22	0.0137	0.0078
Uranus	-21757-05-24 11:02 J	-6225177.29	-6225177.04	-6225176.79	0.0138	0.0003
Uranus	-21756-05-28 21:07 J	-6224807.82	-6224807.62	-6224807.42	0.0138	0.0083
Jupiter	-21756-10-25 18:14 J	-6224657.94	-6224657.74	-6224657.53	0.0493	0.0243
Saturn	-21746-05-19 10:48 J	-6221165.12	-6221165.05	-6221164.96	0.0287	0.0268
Mars	-21732-04-05 05:31 J	-6216095.46	-6216095.27	-6216095.09	0.1659	0.0372
Saturn	-21730-11-24 23:31 J	-6215131.76	-6215131.52	-6215131.27	0.0277	0.0071
Jupiter	-21726-04-21 04:33 J	-6213888.33	-6213888.31	-6213888.28	0.0533	0.0528
Uranus	-21719-11-20 09:50 J	-6211118.31	-6211118.09	-6211117.86	0.0141	0.0068
Uranus	-21718-11-25 09:07 J	-6210748.37	-6210748.12	-6210747.86	0.0141	0.0022
Uranus	-21717-11-29 06:57 J	-6210378.35	-6210378.21	-6210378.03	0.0140	0.0111
Saturn	-21716-05-26 05:02 J	-6210200.51	-6210200.29	-6210200.07	0.0284	0.0111
Jupiter	-21714-04-26 03:07 J	-6209500.59	-6209500.37	-6209500.14	0.0533	0.0018
Pluto	-21703-02-11 22:04 J	-6205555.72	-6205555.58	-6205555.42	0.0077	0.0062
Saturn	-21701-11-18 09:21 J	-6204545.26	-6204545.11	-6204544.96	0.0275	0.0219
Neptune	-21694-04-30 05:31 J	-6202191.36	-6202191.27	-6202191.14	0.0089	0.0081
Neptune	-21693-05-01 16:19 J	-6201824.03	-6201823.82	-6201823.57	0.0089	0.0038
Neptune	-21692-05-04 02:52 J	-6201456.62	-6201456.38	-6201456.12	0.0089	0.0007
Mars	-21692-09-29 08:38 J	-6201308.22	-6201308.14	-6201308.06	0.1856	0.1694
Neptune	-21691-05-06 13:11 J	-6201089.13	-6201088.95	-6201088.71	0.0089	0.0050

Saturn	-21687-05-20 13:40 J	-6199614.09	-6199613.93	-6199613.75	0.0287	0.0202
Jupiter	-21685-10-20 08:23 J	-6198730.34	-6198730.15	-6198729.95	0.0493	0.0280
Uranus	-21674-05-21 10:33 J	-6194865.26	-6194865.06	-6194864.84	0.0137	0.0073
Uranus	-21673-05-24 19:55 J	-6194495.92	-6194495.67	-6194495.42	0.0138	0.0006
Jupiter	-21673-10-24 20:38 J	-6194342.86	-6194342.64	-6194342.41	0.0493	0.0161
Uranus	-21672-05-29 05:45 J	-6194126.45	-6194126.26	-6194126.06	0.0138	0.0086
Saturn	-21671-11-26 07:11 J	-6193580.40	-6193580.20	-6193579.97	0.0277	0.0145
Saturn	-21657-05-27 10:19 J	-6188649.25	-6188649.07	-6188648.88	0.0284	0.0181
Saturn	-21642-11-20 19:26 J	-6182993.89	-6182993.69	-6182993.46	0.0275	0.0143
Uranus	-21635-11-20 15:07 J	-6180437.08	-6180436.87	-6180436.63	0.0141	0.0067
Uranus	-21634-11-25 14:38 J	-6180067.14	-6180066.89	-6180066.63	0.0141	0.0024
Uranus	-21633-11-29 12:43 J	-6179697.11	-6179696.97	-6179696.80	0.0140	0.0112
Jupiter	-21631-04-25 09:36 J	-6179185.32	-6179185.10	-6179184.87	0.0533	0.0063
Saturn	-21628-05-21 20:23 J	-6178062.86	-6178062.65	-6178062.43	0.0286	0.0127
Jupiter	-21619-04-30 09:07 J	-6174797.22	-6174797.12	-6174797.03	0.0533	0.0485
Mars	-21613-10-02 16:04 J	-6172449.97	-6172449.83	-6172449.68	0.1859	0.1297
Neptune	-21612-10-29 15:36 J	-6172058.03	-6172057.85	-6172057.62	0.0088	0.0054
Saturn	-21612-11-27 18:57 J	-6172028.84	-6172028.71	-6172028.55	0.0277	0.0227
Neptune	-21611-11-01 04:33 J	-6171690.56	-6171690.31	-6171690.04	0.0088	0.0011
Neptune	-21610-11-03 17:02 J	-6171323.01	-6171322.79	-6171322.52	0.0088	0.0032
Neptune	-21609-11-05 06:00 J	-6170955.38	-6170955.25	-6170955.10	0.0088	0.0074
Jupiter	-21602-10-20 13:26 J	-6168415.10	-6168414.94	-6168414.77	0.0494	0.0349
Saturn	-21598-05-29 18:28 J	-6167097.82	-6167097.73	-6167097.62	0.0284	0.0258
Uranus	-21590-05-21 20:23 J	-6164183.85	-6164183.65	-6164183.42	0.0137	0.0069
Jupiter	-21590-10-25 01:55 J	-6164027.65	-6164027.42	-6164027.19	0.0493	0.0092
Uranus	-21589-05-25 06:00 J	-6163814.50	-6163814.25	-6163814.00	0.0137	0.0010
Uranus	-21588-05-29 15:36 J	-6163445.03	-6163444.85	-6163444.65	0.0138	0.0089
Saturn	-21583-11-22 09:36 J	-6161442.34	-6161442.10	-6161441.85	0.0276	0.0057
Saturn	-21569-05-23 07:11 J	-6156511.43	-6156511.20	-6156510.95	0.0286	0.0044
Uranus	-21551-11-20 21:21 J	-6149755.82	-6149755.61	-6149755.36	0.0141	0.0065

Uranus	-21550-11-25 21:07 J	-6149385.88	-6149385.62	-6149385.37	0.0141	0.0025
Uranus	-21549-11-29 19:11 J	-6149015.85	-6149015.70	-6149015.55	0.0140	0.0113
Jupiter	-21548-04-24 06:28 J	-6148870.45	-6148870.23	-6148870.02	0.0533	0.0181
Pluto	-21543-08-10 13:26 J	-6146936.14	-6146935.94	-6146935.71	0.0068	0.0038
Pluto	-21542-08-12 04:48 J	-6146569.37	-6146569.30	-6146569.18	0.0068	0.0064
Jupiter	-21536-04-29 03:21 J	-6144482.52	-6144482.36	-6144482.18	0.0533	0.0355
Neptune	-21529-05-01 03:50 J	-6141923.53	-6141923.34	-6141923.15	0.0089	0.0059
Neptune	-21528-05-03 14:23 J	-6141556.15	-6141555.90	-6141555.65	0.0089	0.0016
Mars	-21527-04-04 04:33 J	-6141220.48	-6141220.31	-6141220.14	0.1665	0.0684
Neptune	-21527-05-06 00:43 J	-6141188.70	-6141188.47	-6141188.22	0.0089	0.0027
Neptune	-21526-05-08 10:48 J	-6140821.18	-6140821.05	-6140820.87	0.0089	0.0071
Saturn	-21524-11-24 01:55 J	-6139890.66	-6139890.42	-6139890.17	0.0276	0.0033
Jupiter	-21519-10-19 15:36 J	-6138099.96	-6138099.85	-6138099.73	0.0494	0.0429
Saturn	-21510-05-25 20:52 J	-6134959.87	-6134959.63	-6134959.40	0.0285	0.0046
Jupiter	-21507-10-23 23:45 J	-6133712.75	-6133712.51	-6133712.27	0.0493	0.0008
Uranus	-21506-05-22 07:26 J	-6133502.39	-6133502.19	-6133501.95	0.0137	0.0064
Uranus	-21505-05-25 17:02 J	-6133133.04	-6133132.79	-6133132.54	0.0137	0.0015
Uranus	-21504-05-30 02:38 J	-6132763.56	-6132763.39	-6132763.20	0.0138	0.0094
Jupiter	-21495-10-28 11:02 J	-6129325.15	-6129325.04	-6129324.92	0.0493	0.0429
Saturn	-21495-11-18 20:23 J	-6129303.77	-6129303.65	-6129303.52	0.0274	0.0234
Saturn	-21481-05-19 18:14 J	-6124372.85	-6124372.74	-6124372.60	0.0287	0.0244
Uranus	-21467-11-21 05:31 J	-6119074.50	-6119074.27	-6119074.04	0.0141	0.0061
Uranus	-21466-11-26 04:33 J	-6118704.56	-6118704.31	-6118704.05	0.0141	0.0028
Jupiter	-21465-04-23 02:23 J	-6118555.59	-6118555.40	-6118555.21	0.0533	0.0304
Saturn	-21465-11-25 18:57 J	-6118338.93	-6118338.71	-6118338.49	0.0277	0.0124
Uranus	-21465-11-30 02:23 J	-6118334.53	-6118334.40	-6118334.24	0.0140	0.0116
Pluto	-21456-02-14 11:16 J	-6115336.22	-6115336.03	-6115335.80	0.0076	0.0045
Jupiter	-21453-04-28 03:36 J	-6114167.56	-6114167.35	-6114167.15	0.0534	0.0249
Saturn	-21451-05-27 12:00 J	-6113408.21	-6113408.00	-6113407.79	0.0284	0.0137
Mars	-21448-04-06 08:38 J	-6112363.31	-6112363.14	-6112362.97	0.1663	0.0709

Neptune	-21448-10-29 00:00 J	-6112157.61	-6112157.50	-6112157.34	0.0088	0.0075
Neptune	-21447-10-31 13:26 J	-6111790.18	-6111789.94	-6111789.69	0.0088	0.0032
Neptune	-21446-11-03 02:23 J	-6111422.66	-6111422.40	-6111422.14	0.0088	0.0010
Neptune	-21445-11-04 14:38 J	-6111055.08	-6111054.89	-6111054.67	0.0088	0.0053
Saturn	-21436-11-20 11:31 J	-6107752.23	-6107752.02	-6107751.81	0.0275	0.0149
Jupiter	-21424-10-23 01:55 J	-6103397.65	-6103397.42	-6103397.19	0.0494	0.0084
Uranus	-21423-05-18 09:36 J	-6103190.11	-6103190.10	-6103190.05	0.0137	0.0136
Saturn	-21422-05-22 10:04 J	-6102821.28	-6102821.08	-6102820.87	0.0287	0.0151
Uranus	-21422-05-22 18:14 J	-6102820.95	-6102820.74	-6102820.50	0.0137	0.0059 *
Uranus	-21421-05-26 03:50 J	-6102451.58	-6102451.34	-6102451.09	0.0138	0.0020
Uranus	-21420-05-30 13:26 J	-6102082.09	-6102081.94	-6102081.75	0.0138	0.0099
Jupiter	-21412-10-27 13:55 J	-6099010.09	-6099009.92	-6099009.76	0.0493	0.0352
Saturn	-21406-11-28 10:19 J	-6096787.22	-6096787.07	-6096786.90	0.0277	0.0213
Saturn	-21392-05-29 03:50 J	-6091856.48	-6091856.34	-6091856.20	0.0284	0.0229
Uranus	-21383-11-21 15:07 J	-6088393.10	-6088392.87	-6088392.63	0.0141	0.0056
Jupiter	-21382-04-23 03:36 J	-6088240.49	-6088240.35	-6088240.19	0.0533	0.0401
Uranus	-21382-11-26 14:09 J	-6088023.16	-6088022.91	-6088022.65	0.0141	0.0033
Uranus	-21381-11-30 12:00 J	-6087653.12	-6087653.00	-6087652.86	0.0140	0.0120
Saturn	-21377-11-22 00:28 J	-6086200.72	-6086200.48	-6086200.24	0.0275	0.0069
Jupiter	-21370-04-27 23:02 J	-6083852.76	-6083852.54	-6083852.31	0.0533	0.0128
Neptune	-21365-04-30 15:36 J	-6082022.95	-6082022.85	-6082022.73	0.0089	0.0080
Neptune	-21364-05-03 02:09 J	-6081655.63	-6081655.41	-6081655.17	0.0089	0.0037
Neptune	-21363-05-05 12:43 J	-6081288.22	-6081287.97	-6081287.72	0.0089	0.0006
Saturn	-21363-05-24 01:26 J	-6081269.67	-6081269.44	-6081269.20	0.0286	0.0059
Neptune	-21362-05-07 22:48 J	-6080920.74	-6080920.55	-6080920.32	0.0089	0.0050
Jupiter	-21341-10-22 04:19 J	-6073082.54	-6073082.32	-6073082.09	0.0493	0.0163
Uranus	-21339-05-18 20:09 J	-6072508.73	-6072508.66	-6072508.59	0.0137	0.0131
Uranus	-21338-05-23 04:33 J	-6072139.53	-6072139.31	-6072139.07	0.0137	0.0054
Uranus	-21337-05-26 14:09 J	-6071770.16	-6071769.91	-6071769.66	0.0138	0.0024
Uranus	-21336-05-31 00:00 J	-6071400.66	-6071400.50	-6071400.33	0.0138	0.0103

Mars	-21329-10-02 00:28 J	-6068719.68	-6068719.48	-6068719.28	0.1853	0.0295
Jupiter	-21329-10-26 14:09 J	-6068695.10	-6068694.91	-6068694.71	0.0493	0.0266
Saturn	-21318-11-24 10:04 J	-6064649.33	-6064649.08	-6064648.83	0.0276	0.0006
Saturn	-21304-05-25 14:38 J	-6059718.13	-6059717.89	-6059717.65	0.0286	0.0028
Uranus	-21300-11-17 01:11 J	-6058081.48	-6058081.45	-6058081.40	0.0142	0.0140
Jupiter	-21299-04-21 23:31 J	-6057925.56	-6057925.52	-6057925.47	0.0532	0.0519
Uranus	-21299-11-22 00:57 J	-6057711.69	-6057711.46	-6057711.21	0.0141	0.0052
Uranus	-21298-11-26 23:45 J	-6057341.75	-6057341.51	-6057341.25	0.0141	0.0037
Uranus	-21297-11-30 21:50 J	-6056971.70	-6056971.59	-6056971.46	0.0140	0.0124
Pluto	-21296-08-12 16:33 J	-6056717.03	-6056716.81	-6056716.55	0.0068	0.0027
Saturn	-21289-11-18 02:23 J	-6054062.42	-6054062.40	-6054062.34	0.0274	0.0271
Jupiter	-21287-04-26 20:38 J	-6053537.87	-6053537.64	-6053537.41	0.0533	0.0013
Neptune	-21283-10-30 22:48 J	-6051889.74	-6051889.55	-6051889.32	0.0088	0.0053
Neptune	-21282-11-02 11:45 J	-6051522.26	-6051522.01	-6051521.74	0.0088	0.0010
Neptune	-21281-11-04 00:43 J	-6051154.71	-6051154.47	-6051154.23	0.0088	0.0032
Neptune	-21280-11-06 13:11 J	-6050787.07	-6050786.95	-6050786.80	0.0088	0.0075
Saturn	-21275-05-20 03:21 J	-6049131.41	-6049131.36	-6049131.29	0.0287	0.0277
Saturn	-21259-11-25 16:04 J	-6043098.07	-6043097.83	-6043097.59	0.0276	0.0073
Jupiter	-21258-10-22 07:40 J	-6042767.38	-6042767.18	-6042766.97	0.0493	0.0236
Uranus	-21255-05-19 04:04 J	-6041827.40	-6041827.33	-6041827.23	0.0137	0.0128
Uranus	-21254-05-23 12:57 J	-6041458.19	-6041457.96	-6041457.73	0.0137	0.0051
Uranus	-21253-05-26 22:19 J	-6041088.81	-6041088.57	-6041088.32	0.0138	0.0027
Uranus	-21252-05-31 08:09 J	-6040719.30	-6040719.16	-6040718.98	0.0138	0.0106
Jupiter	-21246-10-26 19:40 J	-6038379.90	-6038379.68	-6038379.46	0.0494	0.0202
Saturn	-21245-05-27 00:14 J	-6038166.71	-6038166.49	-6038166.26	0.0285	0.0106
Mars	-21243-04-05 06:57 J	-6037488.39	-6037488.21	-6037488.02	0.1669	0.0367
Saturn	-21230-11-20 06:43 J	-6032511.38	-6032511.22	-6032511.06	0.0274	0.0208
Saturn	-21216-05-21 12:14 J	-6027580.15	-6027579.99	-6027579.81	0.0287	0.0200
Uranus	-21216-11-17 10:04 J	-6027400.14	-6027400.08	-6027399.99	0.0142	0.0136
Uranus	-21215-11-22 10:19 J	-6027030.32	-6027030.07	-6027029.83	0.0141	0.0047

Uranus	-21214-11-27 08:52 J	-6026660.37	-6026660.13	-6026659.87	0.0141	0.0041
Uranus	-21213-12-01 06:43 J	-6026290.31	-6026290.22	-6026290.10	0.0140	0.0128
Pluto	-21210-02-15 18:43 J	-6025483.97	-6025483.72	-6025483.46	0.0077	0.0014
Jupiter	-21204-04-26 02:52 J	-6023222.60	-6023222.38	-6023222.15	0.0533	0.0062
Neptune	-21200-05-02 14:09 J	-6021755.09	-6021754.91	-6021754.70	0.0089	0.0057
Saturn	-21200-11-26 17:45 J	-6021546.98	-6021546.76	-6021546.54	0.0277	0.0131
Neptune	-21199-05-05 00:57 J	-6021387.71	-6021387.46	-6021387.21	0.0089	0.0014
Neptune	-21198-05-07 11:16 J	-6021020.26	-6021020.03	-6021019.78	0.0089	0.0029
Neptune	-21197-05-08 21:36 J	-6020652.74	-6020652.60	-6020652.44	0.0089	0.0072
Jupiter	-21192-05-01 00:28 J	-6018834.57	-6018834.48	-6018834.37	0.0533	0.0476
Saturn	-21186-05-29 06:14 J	-6016615.42	-6016615.24	-6016615.05	0.0285	0.0177
Jupiter	-21175-10-21 14:52 J	-6012452.06	-6012451.88	-6012451.68	0.0494	0.0295
Uranus	-21171-05-19 11:16 J	-6011146.11	-6011146.03	-6011145.92	0.0137	0.0126
Saturn	-21171-11-21 07:40 J	-6010960.39	-6010960.18	-6010959.97	0.0275	0.0152
Uranus	-21170-05-23 19:55 J	-6010776.89	-6010776.67	-6010776.43	0.0137	0.0049
Uranus	-21169-05-27 05:31 J	-6010407.51	-6010407.27	-6010407.02	0.0138	0.0029
Uranus	-21168-05-31 15:36 J	-6010038.00	-6010037.85	-6010037.69	0.0138	0.0107
Mars	-21164-04-07 11:45 J	-6008631.15	-6008631.01	-6008630.87	0.1667	0.1047
Jupiter	-21163-10-26 04:19 J	-6008064.55	-6008064.32	-6008064.09	0.0494	0.0147
Saturn	-21157-05-22 17:16 J	-6006028.99	-6006028.78	-6006028.56	0.0286	0.0131
Saturn	-21141-11-27 16:19 J	-5999996.01	-5999995.82	-5999995.63	0.0277	0.0183
Uranus	-21132-11-17 16:19 J	-5996718.88	-5996718.82	-5996718.71	0.0142	0.0134
Uranus	-21131-11-22 16:48 J	-5996349.04	-5996348.80	-5996348.55	0.0141	0.0045
Uranus	-21130-11-27 15:36 J	-5995979.09	-5995978.85	-5995978.60	0.0141	0.0043
Uranus	-21129-12-01 13:40 J	-5995609.01	-5995608.93	-5995608.82	0.0140	0.0130
Saturn	-21127-05-30 07:55 J	-5995064.29	-5995064.17	-5995064.03	0.0285	0.0238
Jupiter	-21121-04-25 08:09 J	-5992907.38	-5992907.16	-5992906.94	0.0532	0.0140
Neptune	-21119-10-30 08:23 J	-5991989.28	-5991989.15	-5991988.99	0.0088	0.0074
Neptune	-21118-11-01 21:07 J	-5991621.85	-5991621.62	-5991621.36	0.0088	0.0031
Neptune	-21117-11-03 10:04 J	-5991254.33	-5991254.08	-5991253.81	0.0088	0.0012

Neptune	-21116-11-05 22:33 J	-5990886.74	-5990886.56	-5990886.33	0.0088	0.0055
Saturn	-21112-11-22 05:02 J	-5989409.52	-5989409.29	-5989409.06	0.0275	0.0102
Jupiter	-21109-04-30 05:02 J	-5988519.43	-5988519.29	-5988519.13	0.0533	0.0393
Saturn	-21098-05-24 18:14 J	-5984477.97	-5984477.74	-5984477.50	0.0286	0.0071
Jupiter	-21092-10-21 01:11 J	-5982136.62	-5982136.45	-5982136.27	0.0494	0.0339
Uranus	-21087-05-19 18:57 J	-5980464.81	-5980464.71	-5980464.60	0.0136	0.0123
Uranus	-21086-05-24 03:21 J	-5980095.59	-5980095.36	-5980095.12	0.0137	0.0047
Uranus	-21085-05-27 12:43 J	-5979726.21	-5979725.97	-5979725.72	0.0137	0.0031
Uranus	-21084-05-31 22:33 J	-5979356.70	-5979356.56	-5979356.39	0.0138	0.0109
Saturn	-21082-11-29 12:28 J	-5978445.11	-5978444.98	-5978444.84	0.0277	0.0231
Jupiter	-21080-10-25 14:38 J	-5977749.12	-5977748.89	-5977748.65	0.0493	0.0102
Saturn	-21053-11-23 00:43 J	-5967858.71	-5967858.47	-5967858.22	0.0274	0.0056
Pluto	-21050-08-14 00:43 J	-5966864.71	-5966864.47	-5966864.22	0.0068	0.0022
Uranus	-21048-11-17 20:52 J	-5966037.70	-5966037.63	-5966037.52	0.0142	0.0133
Uranus	-21047-11-22 21:21 J	-5965667.85	-5965667.61	-5965667.36	0.0141	0.0044
Uranus	-21046-11-27 20:23 J	-5965297.89	-5965297.65	-5965297.40	0.0141	0.0044
Mars	-21045-10-01 11:02 J	-5964989.23	-5964989.04	-5964988.85	0.1846	0.0592
Uranus	-21045-12-01 18:43 J	-5964927.80	-5964927.72	-5964927.61	0.0140	0.0130
Saturn	-21039-05-25 15:50 J	-5962927.08	-5962926.84	-5962926.59	0.0287	0.0019
Mars	-21038-04-04 03:36 J	-5962613.43	-5962613.35	-5962613.27	0.1676	0.1498
Jupiter	-21038-04-25 15:07 J	-5962592.07	-5962591.87	-5962591.65	0.0532	0.0212
Neptune	-21036-05-02 02:52 J	-5961854.48	-5961854.38	-5961854.23	0.0089	0.0078
Neptune	-21035-05-04 13:40 J	-5961487.16	-5961486.93	-5961486.69	0.0089	0.0035
Neptune	-21034-05-07 00:28 J	-5961119.73	-5961119.48	-5961119.23	0.0089	0.0008
Neptune	-21033-05-08 10:19 J	-5960752.26	-5960752.07	-5960751.84	0.0089	0.0052
Jupiter	-21026-04-30 16:33 J	-5958203.98	-5958203.81	-5958203.63	0.0533	0.0341
Saturn	-21023-11-30 07:40 J	-5956894.19	-5956894.18	-5956894.16	0.0277	0.0276
Jupiter	-21009-10-20 09:50 J	-5951821.22	-5951821.09	-5951820.94	0.0495	0.0394
Uranus	-21003-05-20 04:04 J	-5949783.45	-5949783.33	-5949783.21	0.0136	0.0119
Uranus	-21002-05-24 12:28 J	-5949414.21	-5949413.98	-5949413.73	0.0137	0.0043

Uranus -21001-05-27 22:04 J -5949044.82 -5949044.58 -5949044.34 0.0137 0.0034

21ST MILLENNIUM BCE

This is a list of transits of Earth in the 21st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-21000-06-01 07:40 J	-5948675.31	-5948675.18	-5948675.02	0.0138	0.0112		
Jupiter	-20997-10-24 23:45 J	-5947433.75	-5947433.51	-5947433.27	0.0494	0.0049		
Saturn	-20994-11-24 19:40 J	-5946307.93	-5946307.68	-5946307.43	0.0274	0.0010		
Jupiter	-20985-10-29 14:09 J	-5943045.92	-5943045.91	-5943045.90	0.0494	0.0493		
Saturn	-20980-05-26 12:28 J	-5941376.22	-5941375.98	-5941375.74	0.0287	0.0034		
Uranus	-20964-11-18 02:23 J	-5935356.48	-5935356.40	-5935356.28	0.0142	0.0131		
Pluto	-20963-02-17 22:48 J	-5935264.67	-5935264.55	-5935264.39	0.0076	0.0064		
Uranus	-20963-11-23 02:52 J	-5934986.62	-5934986.38	-5934986.13	0.0141	0.0042		
Uranus	-20962-11-28 01:55 J	-5934616.65	-5934616.42	-5934616.16	0.0141	0.0046		
Uranus	-20961-12-02 00:28 J	-5934246.55	-5934246.48	-5934246.37	0.0140	0.0132		
Mars	-20959-04-06 09:21 J	-5933756.30	-5933756.11	-5933755.92	0.1673	0.0048		
Jupiter	-20955-04-25 04:04 J	-5932276.53	-5932276.33	-5932276.13	0.0532	0.0257		
Neptune	-20954-11-01 07:11 J	-5931721.39	-5931721.20	-5931720.96	0.0088	0.0051		
Neptune	-20953-11-02 20:38 J	-5931353.90	-5931353.64	-5931353.38	0.0088	0.0008		
Neptune	-20952-11-05 09:07 J	-5930986.35	-5930986.12	-5930985.87	0.0088	0.0034		
Neptune	-20951-11-07 21:21 J	-5930618.71	-5930618.61	-5930618.46	0.0088	0.0078		
Jupiter	-20943-04-30 03:50 J	-5927888.54	-5927888.34	-5927888.15	0.0532	0.0285		
Saturn	-20935-11-25 15:50 J	-5924757.09	-5924756.84	-5924756.59	0.0274	0.0039		

Jupiter	-20926-10-20 22:19 J	-5921505.68	-5921505.57	-5921505.46	0.0495	0.0433
Saturn	-20921-05-27 07:55 J	-5919825.40	-5919825.17	-5919824.94	0.0287	0.0083
Uranus	-20919-05-20 13:40 J	-5919102.05	-5919101.93	-5919101.78	0.0136	0.0115
Uranus	-20918-05-24 22:33 J	-5918732.79	-5918732.56	-5918732.31	0.0137	0.0039
Uranus	-20917-05-28 07:55 J	-5918363.40	-5918363.17	-5918362.92	0.0137	0.0038
Uranus	-20916-06-01 17:31 J	-5917993.88	-5917993.77	-5917993.61	0.0138	0.0116
Jupiter	-20914-10-25 12:00 J	-5917118.23	-5917118.00	-5917117.76	0.0494	0.0015
Saturn	-20906-11-19 22:48 J	-5914170.62	-5914170.55	-5914170.45	0.0272	0.0257
Jupiter	-20902-10-30 01:26 J	-5912730.53	-5912730.44	-5912730.34	0.0494	0.0451
Saturn	-20892-05-21 10:33 J	-5909239.16	-5909239.06	-5909238.93	0.0289	0.0251
Mars	-20880-04-08 14:09 J	-5904899.01	-5904898.91	-5904898.80	0.1671	0.1381
Uranus	-20880-11-18 10:33 J	-5904675.15	-5904675.06	-5904674.92	0.0142	0.0127
Uranus	-20879-11-23 11:02 J	-5904305.28	-5904305.04	-5904304.78	0.0141	0.0038
Uranus	-20878-11-28 10:19 J	-5903935.30	-5903935.07	-5903934.82	0.0141	0.0049
Uranus	-20877-12-02 08:52 J	-5903565.19	-5903565.13	-5903565.05	0.0140	0.0135
Saturn	-20876-11-26 13:55 J	-5903206.15	-5903205.92	-5903205.68	0.0274	0.0092
Jupiter	-20872-04-24 10:48 J	-5901961.22	-5901961.05	-5901960.87	0.0531	0.0329
Neptune	-20871-05-04 01:55 J	-5901586.60	-5901586.42	-5901586.20	0.0089	0.0055
Neptune	-20870-05-06 12:43 J	-5901219.21	-5901218.97	-5901218.71	0.0089	0.0012
Neptune	-20869-05-07 23:16 J	-5900851.76	-5900851.53	-5900851.29	0.0089	0.0031
Neptune	-20868-05-10 09:36 J	-5900484.23	-5900484.10	-5900483.95	0.0089	0.0074
Saturn	-20862-05-29 05:02 J	-5898274.50	-5898274.29	-5898274.08	0.0287	0.0136
Jupiter	-20860-04-29 09:36 J	-5897573.31	-5897573.10	-5897572.89	0.0532	0.0207
Saturn	-20847-11-20 22:48 J	-5892619.71	-5892619.55	-5892619.37	0.0272	0.0200
Jupiter	-20843-10-20 08:52 J	-5891190.18	-5891190.13	-5891190.07	0.0495	0.0479
Uranus	-20835-05-21 00:14 J	-5888420.63	-5888420.49	-5888420.34	0.0136	0.0110
Uranus	-20834-05-25 08:52 J	-5888051.37	-5888051.13	-5888050.89	0.0137	0.0034
Saturn	-20833-05-22 08:09 J	-5887688.33	-5887688.16	-5887687.98	0.0289	0.0195
Uranus	-20833-05-28 18:14 J	-5887681.97	-5887681.74	-5887681.50	0.0137	0.0042
Uranus	-20832-06-02 04:04 J	-5887312.44	-5887312.33	-5887312.20	0.0138	0.0120

Jupiter	-20831-10-24 17:45 J	-5886803.00	-5886802.76	-5886802.52	0.0495	0.0058
Jupiter	-20819-10-29 06:57 J	-5882415.36	-5882415.21	-5882415.06	0.0494	0.0381
Saturn	-20817-11-27 14:52 J	-5881655.08	-5881654.88	-5881654.66	0.0274	0.0151
Saturn	-20803-05-30 04:33 J	-5876723.48	-5876723.31	-5876723.13	0.0287	0.0196
Pluto	-20803-08-15 21:07 J	-5876645.85	-5876645.62	-5876645.36	0.0068	0.0023
Uranus	-20796-11-18 20:52 J	-5873993.75	-5873993.63	-5873993.48	0.0142	0.0121
Uranus	-20795-11-23 21:07 J	-5873623.86	-5873623.62	-5873623.36	0.0141	0.0034
Uranus	-20794-11-28 20:23 J	-5873253.88	-5873253.65	-5873253.40	0.0141	0.0054
Uranus	-20793-12-02 18:43 J	-5872883.73	-5872883.72	-5872883.67	0.0140	0.0139
Neptune	-20790-10-31 17:31 J	-5871820.89	-5871820.77	-5871820.58	0.0088	0.0071
Jupiter	-20789-04-23 17:45 J	-5871645.90	-5871645.76	-5871645.61	0.0532	0.0402
Neptune	-20789-11-02 06:43 J	-5871453.46	-5871453.22	-5871452.96	0.0088	0.0028
Neptune	-20788-11-04 19:26 J	-5871085.94	-5871085.69	-5871085.42	0.0088	0.0014
Saturn	-20788-11-22 02:23 J	-5871068.61	-5871068.40	-5871068.18	0.0273	0.0137
Neptune	-20787-11-07 07:40 J	-5870718.36	-5870718.18	-5870717.96	0.0088	0.0057
Jupiter	-20777-04-28 19:26 J	-5867257.91	-5867257.69	-5867257.47	0.0532	0.0146
Saturn	-20774-05-24 09:07 J	-5866137.32	-5866137.12	-5866136.90	0.0289	0.0131
Mars	-20761-10-01 00:00 J	-5861258.64	-5861258.50	-5861258.37	0.1840	0.1370
Saturn	-20758-11-29 20:09 J	-5860103.80	-5860103.66	-5860103.50	0.0274	0.0220
Mars	-20754-04-05 04:48 J	-5858881.42	-5858881.30	-5858881.17	0.1680	0.1207
Uranus	-20751-05-21 09:21 J	-5857739.26	-5857739.11	-5857738.95	0.0137	0.0106
Uranus	-20750-05-25 18:00 J	-5857369.99	-5857369.75	-5857369.50	0.0137	0.0031
Uranus	-20749-05-29 03:21 J	-5857000.59	-5857000.36	-5857000.12	0.0138	0.0046
Uranus	-20748-06-02 12:57 J	-5856631.05	-5856630.96	-5856630.83	0.0138	0.0123
Jupiter	-20748-10-24 01:40 J	-5856487.66	-5856487.43	-5856487.19	0.0495	0.0115
Saturn	-20744-05-31 07:11 J	-5855172.28	-5855172.20	-5855172.09	0.0287	0.0263
Jupiter	-20736-10-28 14:52 J	-5852100.05	-5852099.88	-5852099.70	0.0494	0.0325
Saturn	-20729-11-23 10:04 J	-5849517.32	-5849517.08	-5849516.84	0.0273	0.0065
Pluto	-20717-02-18 21:50 J	-5845412.82	-5845412.59	-5845412.33	0.0077	0.0025
Saturn	-20715-05-25 14:38 J	-5844586.12	-5844585.89	-5844585.65	0.0289	0.0058

Uranus	-20712-11-19 07:40 J	-5843312.31	-5843312.18	-5843312.01	0.0142	0.0115
Uranus	-20711-11-24 07:55 J	-5842942.42	-5842942.17	-5842941.91	0.0141	0.0027
Uranus	-20710-11-29 07:11 J	-5842572.43	-5842572.20	-5842571.96	0.0141	0.0059
Neptune	-20707-05-03 14:23 J	-5841686.01	-5841685.90	-5841685.74	0.0089	0.0075
Jupiter	-20706-04-24 01:11 J	-5841330.55	-5841330.45	-5841330.35	0.0531	0.0472
Neptune	-20706-05-06 01:11 J	-5841318.67	-5841318.45	-5841318.20	0.0089	0.0033
Neptune	-20705-05-07 12:00 J	-5840951.25	-5840951.00	-5840950.74	0.0089	0.0011
Neptune	-20704-05-09 22:19 J	-5840583.76	-5840583.57	-5840583.35	0.0089	0.0054
Jupiter	-20694-04-28 20:09 J	-5836942.89	-5836942.66	-5836942.43	0.0532	0.0046
Mars	-20682-10-05 04:33 J	-5832400.44	-5832400.31	-5832400.18	0.1844	0.1417
Mars	-20675-04-07 10:48 J	-5830024.23	-5830024.05	-5830023.86	0.1677	0.0258
Saturn	-20670-11-25 22:04 J	-5827965.83	-5827965.58	-5827965.33	0.0273	0.0017
Uranus	-20667-05-21 17:31 J	-5827057.93	-5827057.77	-5827057.61	0.0137	0.0103
Uranus	-20666-05-26 01:55 J	-5826688.66	-5826688.42	-5826688.17	0.0137	0.0028
Uranus	-20665-05-29 11:16 J	-5826319.26	-5826319.03	-5826318.80	0.0138	0.0048
Jupiter	-20665-10-23 06:14 J	-5826172.46	-5826172.24	-5826172.02	0.0495	0.0186
Uranus	-20664-06-02 20:52 J	-5825949.72	-5825949.63	-5825949.51	0.0138	0.0125
Saturn	-20656-05-27 00:28 J	-5823034.72	-5823034.48	-5823034.24	0.0288	0.0025
Jupiter	-20653-10-27 14:23 J	-5821785.10	-5821784.90	-5821784.69	0.0494	0.0233
Saturn	-20641-11-19 18:57 J	-5817378.81	-5817378.71	-5817378.59	0.0271	0.0245
Uranus	-20628-11-19 17:16 J	-5812630.93	-5812630.78	-5812630.60	0.0142	0.0110
Saturn	-20627-05-21 17:16 J	-5812447.84	-5812447.78	-5812447.73	0.0290	0.0282
Uranus	-20627-11-24 17:45 J	-5812261.01	-5812260.76	-5812260.50	0.0141	0.0023
Uranus	-20626-11-29 16:33 J	-5811891.02	-5811890.81	-5811890.56	0.0141	0.0064
Neptune	-20625-11-01 17:02 J	-5811553.00	-5811552.79	-5811552.57	0.0088	0.0048
Neptune	-20624-11-04 05:45 J	-5811185.52	-5811185.26	-5811185.00	0.0088	0.0006
Neptune	-20623-11-06 18:28 J	-5810817.97	-5810817.73	-5810817.49	0.0088	0.0037
Neptune	-20622-11-09 06:28 J	-5810450.31	-5810450.23	-5810450.09	0.0088	0.0080
Jupiter	-20611-04-27 18:28 J	-5806627.96	-5806627.73	-5806627.50	0.0532	0.0066
Saturn	-20611-11-27 12:28 J	-5806414.21	-5806413.98	-5806413.75	0.0274	0.0103

Jupiter	-20599-05-02 19:11 J	-5802239.80	-5802239.70	-5802239.60	0.0532	0.0477
Saturn	-20597-05-28 14:09 J	-5801483.13	-5801482.91	-5801482.69	0.0288	0.0117
Uranus	-20583-05-21 23:31 J	-5796376.67	-5796376.52	-5796376.33	0.0137	0.0102
Uranus	-20582-05-26 08:09 J	-5796007.39	-5796007.16	-5796006.90	0.0137	0.0027
Jupiter	-20582-10-23 03:36 J	-5795857.54	-5795857.35	-5795857.15	0.0495	0.0284
Saturn	-20582-11-22 09:36 J	-5795827.30	-5795827.10	-5795826.90	0.0272	0.0160
Uranus	-20581-05-29 17:16 J	-5795638.00	-5795637.78	-5795637.54	0.0138	0.0049
Uranus	-20580-06-03 03:21 J	-5795268.46	-5795268.36	-5795268.26	0.0138	0.0126
Jupiter	-20570-10-27 17:02 J	-5791470.02	-5791469.79	-5791469.56	0.0494	0.0156
Saturn	-20568-05-23 08:52 J	-5790896.31	-5790896.13	-5790895.94	0.0290	0.0186
Pluto	-20557-08-15 22:48 J	-5786793.73	-5786793.55	-5786793.35	0.0068	0.0046
Pluto	-20556-08-17 13:11 J	-5786427.06	-5786426.95	-5786426.76	0.0068	0.0056
Saturn	-20552-11-29 04:33 J	-5784862.48	-5784862.31	-5784862.13	0.0274	0.0194
Uranus	-20544-11-20 00:28 J	-5781949.64	-5781949.48	-5781949.31	0.0142	0.0107
Uranus	-20543-11-25 00:43 J	-5781579.72	-5781579.47	-5781579.21	0.0141	0.0020
Neptune	-20542-05-05 13:11 J	-5781418.13	-5781417.95	-5781417.73	0.0089	0.0053
Uranus	-20542-11-29 23:45 J	-5781209.73	-5781209.51	-5781209.27	0.0141	0.0066
Neptune	-20541-05-07 00:00 J	-5781050.74	-5781050.50	-5781050.24	0.0089	0.0011
Neptune	-20540-05-09 10:48 J	-5780683.28	-5780683.05	-5780682.81	0.0089	0.0033
Neptune	-20539-05-11 21:07 J	-5780315.74	-5780315.62	-5780315.47	0.0089	0.0075
Saturn	-20538-05-31 06:00 J	-5779931.40	-5779931.25	-5779931.08	0.0287	0.0212
Jupiter	-20528-04-26 19:55 J	-5776312.89	-5776312.67	-5776312.45	0.0532	0.0160
Saturn	-20523-11-24 00:14 J	-5774275.72	-5774275.49	-5774275.24	0.0272	0.0076
Jupiter	-20516-05-01 14:23 J	-5771925.06	-5771924.90	-5771924.72	0.0532	0.0356
Saturn	-20509-05-25 02:09 J	-5769344.64	-5769344.41	-5769344.18	0.0289	0.0088
Uranus	-20499-05-22 07:26 J	-5765695.35	-5765695.19	-5765695.00	0.0136	0.0099
Jupiter	-20499-10-22 06:00 J	-5765542.41	-5765542.25	-5765542.09	0.0495	0.0361
Uranus	-20498-05-26 15:50 J	-5765326.08	-5765325.84	-5765325.59	0.0137	0.0025
Uranus	-20497-05-30 00:57 J	-5764956.69	-5764956.46	-5764956.23	0.0137	0.0051
Uranus	-20496-06-03 10:33 J	-5764587.15	-5764587.06	-5764586.96	0.0138	0.0127

Jupiter	-20487-10-26 18:00 J	-5761154.98	-5761154.75	-5761154.51	0.0494	0.0073
Pluto	-20470-02-20 17:16 J	-5755194.01	-5755193.78	-5755193.52	0.0076	0.0024
Mars	-20470-04-06 05:31 J	-5755149.42	-5755149.27	-5755149.11	0.1685	0.0925
Saturn	-20464-11-25 14:23 J	-5752724.15	-5752723.90	-5752723.65	0.0273	0.0009
Neptune	-20461-11-01 03:07 J	-5751652.53	-5751652.37	-5751652.20	0.0088	0.0069
Neptune	-20460-11-03 15:36 J	-5751285.09	-5751284.85	-5751284.59	0.0088	0.0026
Uranus	-20460-11-20 06:00 J	-5751268.42	-5751268.25	-5751268.08	0.0142	0.0106
Neptune	-20459-11-06 04:33 J	-5750917.57	-5750917.31	-5750917.05	0.0088	0.0016
Uranus	-20459-11-25 06:14 J	-5750898.50	-5750898.24	-5750897.98	0.0142	0.0019
Neptune	-20458-11-08 16:48 J	-5750549.97	-5750549.80	-5750549.58	0.0088	0.0059
Uranus	-20458-11-30 05:16 J	-5750528.49	-5750528.28	-5750528.04	0.0141	0.0067
Saturn	-20450-05-27 18:43 J	-5747792.96	-5747792.72	-5747792.48	0.0289	0.0009
Jupiter	-20445-04-25 13:40 J	-5745998.12	-5745997.93	-5745997.74	0.0531	0.0288
Saturn	-20435-11-20 12:14 J	-5742137.07	-5742136.99	-5742136.91	0.0271	0.0257
Jupiter	-20433-04-30 10:04 J	-5741610.29	-5741610.08	-5741609.87	0.0532	0.0233
Jupiter	-20416-10-21 05:45 J	-5735227.35	-5735227.26	-5735227.15	0.0495	0.0447
Uranus	-20415-05-22 16:04 J	-5735013.99	-5735013.83	-5735013.64	0.0136	0.0096
Uranus	-20414-05-27 00:43 J	-5734644.71	-5734644.47	-5734644.22	0.0137	0.0021
Uranus	-20413-05-30 09:21 J	-5734275.32	-5734275.11	-5734274.86	0.0137	0.0055
Uranus	-20412-06-03 19:11 J	-5733905.77	-5733905.70	-5733905.61	0.0138	0.0130
Saturn	-20405-11-27 01:26 J	-5731172.68	-5731172.44	-5731172.20	0.0273	0.0086
Jupiter	-20404-10-25 18:00 J	-5730839.99	-5730839.75	-5730839.51	0.0494	0.0014
Mars	-20398-10-04 18:28 J	-5728669.92	-5728669.73	-5728669.55	0.1837	0.0650
Jupiter	-20392-10-30 06:00 J	-5726452.36	-5726452.25	-5726452.12	0.0494	0.0421
Mars	-20391-04-08 11:31 J	-5726292.19	-5726292.02	-5726291.84	0.1682	0.0554
Saturn	-20391-05-29 09:50 J	-5726241.31	-5726241.09	-5726240.86	0.0288	0.0103
Neptune	-20378-05-05 01:40 J	-5721517.56	-5721517.43	-5721517.28	0.0089	0.0074
Neptune	-20377-05-06 12:00 J	-5721150.22	-5721150.00	-5721149.74	0.0089	0.0032
Neptune	-20376-05-08 22:48 J	-5720782.80	-5720782.55	-5720782.29	0.0089	0.0012
Uranus	-20376-11-20 12:28 J	-5720587.14	-5720586.98	-5720586.78	0.0142	0.0103

Saturn	-20376-11-21 21:21 J	-5720585.78	-5720585.61	-5720585.41	0.0272	0.0184
Neptune	-20375-05-11 09:07 J	-5720415.31	-5720415.12	-5720414.91	0.0089	0.0055
Uranus	-20375-11-25 13:11 J	-5720217.21	-5720216.95	-5720216.69	0.0142	0.0016
Uranus	-20374-11-30 12:14 J	-5719847.21	-5719846.99	-5719846.76	0.0141	0.0069
Jupiter	-20362-04-25 12:57 J	-5715683.11	-5715682.96	-5715682.81	0.0531	0.0393
Saturn	-20362-05-23 20:38 J	-5715654.79	-5715654.64	-5715654.47	0.0290	0.0213
Jupiter	-20350-04-30 13:11 J	-5711295.17	-5711294.95	-5711294.73	0.0532	0.0146
Saturn	-20346-11-29 08:38 J	-5709621.34	-5709621.14	-5709620.93	0.0274	0.0156
Saturn	-20332-05-30 21:07 J	-5704689.80	-5704689.62	-5704689.44	0.0288	0.0186
Uranus	-20331-05-23 02:23 J	-5704332.57	-5704332.40	-5704332.20	0.0136	0.0091
Uranus	-20330-05-27 11:02 J	-5703963.29	-5703963.04	-5703962.79	0.0137	0.0017
Uranus	-20329-05-30 19:55 J	-5703593.89	-5703593.67	-5703593.43	0.0137	0.0059
Uranus	-20328-06-04 05:31 J	-5703224.30	-5703224.27	-5703224.20	0.0138	0.0135
Jupiter	-20321-10-24 22:33 J	-5700524.79	-5700524.56	-5700524.32	0.0495	0.0083
Saturn	-20317-11-23 02:38 J	-5699034.60	-5699034.39	-5699034.15	0.0272	0.0119
Pluto	-20310-08-18 12:57 J	-5696575.19	-5696574.96	-5696574.69	0.0068	0.0020
Jupiter	-20309-10-29 11:45 J	-5696137.17	-5696137.01	-5696136.84	0.0494	0.0354
Saturn	-20303-05-25 07:26 J	-5694103.40	-5694103.19	-5694102.97	0.0289	0.0130
Neptune	-20296-11-03 00:28 J	-5691384.68	-5691384.48	-5691384.24	0.0088	0.0048
Neptune	-20295-11-05 13:40 J	-5691017.19	-5691016.93	-5691016.66	0.0088	0.0005
Neptune	-20294-11-08 02:09 J	-5690649.63	-5690649.41	-5690649.16	0.0088	0.0038
Neptune	-20293-11-09 14:38 J	-5690281.97	-5690281.89	-5690281.76	0.0088	0.0081
Uranus	-20292-11-20 22:04 J	-5689905.75	-5689905.58	-5689905.37	0.0142	0.0098
Uranus	-20291-11-25 22:33 J	-5689535.81	-5689535.56	-5689535.30	0.0142	0.0012
Uranus	-20290-11-30 21:36 J	-5689165.81	-5689165.60	-5689165.37	0.0141	0.0074
Saturn	-20287-11-30 11:45 J	-5688070.15	-5688070.01	-5688069.85	0.0274	0.0217
Jupiter	-20279-04-24 16:19 J	-5685367.92	-5685367.82	-5685367.72	0.0531	0.0476
Saturn	-20273-06-01 04:19 J	-5683138.42	-5683138.32	-5683138.22	0.0288	0.0261
Jupiter	-20267-04-29 14:38 J	-5680980.12	-5680979.89	-5680979.66	0.0531	0.0052
Saturn	-20258-11-25 04:19 J	-5677483.56	-5677483.32	-5677483.07	0.0272	0.0061

Uranus	-20247-05-23 12:00 J	-5673651.18	-5673651.00	-5673650.79	0.0137	0.0087
Uranus	-20246-05-27 20:52 J	-5673281.88	-5673281.63	-5673281.38	0.0137	0.0013
Uranus	-20245-05-31 06:00 J	-5672912.47	-5672912.25	-5672912.02	0.0137	0.0063
Saturn	-20244-05-26 13:11 J	-5672552.19	-5672551.95	-5672551.71	0.0289	0.0058
Jupiter	-20238-10-25 06:00 J	-5670209.48	-5670209.25	-5670209.02	0.0495	0.0139
Saturn	-20228-12-01 10:48 J	-5666519.08	-5666519.05	-5666519.00	0.0274	0.0271
Jupiter	-20226-10-29 19:11 J	-5665821.88	-5665821.70	-5665821.50	0.0494	0.0298
Pluto	-20223-02-22 08:09 J	-5664975.32	-5664975.16	-5664974.96	0.0076	0.0055
Neptune	-20213-05-05 23:45 J	-5661249.69	-5661249.51	-5661249.28	0.0089	0.0053
Neptune	-20212-05-08 10:48 J	-5660882.30	-5660882.05	-5660881.80	0.0089	0.0009
Neptune	-20211-05-10 20:52 J	-5660514.85	-5660514.63	-5660514.38	0.0089	0.0034
Neptune	-20210-05-13 06:57 J	-5660147.31	-5660147.21	-5660147.05	0.0089	0.0077
Uranus	-20208-11-21 10:04 J	-5659224.28	-5659224.08	-5659223.88	0.0142	0.0091
Uranus	-20207-11-26 10:04 J	-5658854.34	-5658854.08	-5658853.82	0.0142	0.0005
Uranus	-20206-12-01 08:52 J	-5658484.33	-5658484.13	-5658483.91	0.0141	0.0079
Saturn	-20199-11-26 02:09 J	-5655932.66	-5655932.41	-5655932.16	0.0272	0.0010
Mars	-20186-04-07 04:48 J	-5651417.47	-5651417.30	-5651417.13	0.1690	0.0671
Saturn	-20185-05-27 15:07 J	-5651001.11	-5651000.87	-5651000.63	0.0289	0.0006
Jupiter	-20184-04-28 19:55 J	-5650664.90	-5650664.67	-5650664.44	0.0531	0.0028
Jupiter	-20172-05-03 20:23 J	-5646276.70	-5646276.65	-5646276.59	0.0532	0.0513
Uranus	-20163-05-23 22:19 J	-5642969.77	-5642969.57	-5642969.37	0.0137	0.0082
Uranus	-20162-05-28 06:57 J	-5642600.46	-5642600.21	-5642599.96	0.0137	0.0008
Uranus	-20161-05-31 15:50 J	-5642231.05	-5642230.84	-5642230.61	0.0137	0.0067
Jupiter	-20155-10-24 13:40 J	-5639894.14	-5639893.93	-5639893.71	0.0496	0.0197
Jupiter	-20143-10-29 03:50 J	-5635506.55	-5635506.34	-5635506.13	0.0495	0.0243
Saturn	-20140-11-26 21:21 J	-5634381.85	-5634381.61	-5634381.36	0.0272	0.0037
Neptune	-20132-11-02 09:21 J	-5631484.26	-5631484.11	-5631483.93	0.0088	0.0068
Neptune	-20131-11-04 22:19 J	-5631116.81	-5631116.57	-5631116.31	0.0088	0.0026
Neptune	-20130-11-07 11:02 J	-5630749.29	-5630749.04	-5630748.77	0.0088	0.0017
Neptune	-20129-11-08 23:45 J	-5630381.69	-5630381.51	-5630381.30	0.0088	0.0059

Saturn	-20126-05-29 13:26 J	-5629450.17	-5629449.94	-5629449.70	0.0289	0.0064
Uranus	-20124-11-21 21:21 J	-5628542.80	-5628542.61	-5628542.38	0.0142	0.0086
Uranus	-20123-11-26 21:36 J	-5628172.86	-5628172.60	-5628172.34	0.0142	0.0002
Uranus	-20122-12-01 20:38 J	-5627802.84	-5627802.64	-5627802.43	0.0141	0.0085
Mars	-20114-10-04 09:21 J	-5624939.31	-5624939.11	-5624938.91	0.1830	0.0055
Saturn	-20111-11-21 06:00 J	-5623795.32	-5623795.25	-5623795.16	0.0270	0.0255
Mars	-20107-04-09 11:31 J	-5622560.18	-5622560.02	-5622559.86	0.1687	0.0832
Jupiter	-20101-04-28 07:26 J	-5620349.41	-5620349.19	-5620348.96	0.0531	0.0079
Saturn	-20097-05-22 14:52 J	-5618863.94	-5618863.88	-5618863.81	0.0292	0.0281
Jupiter	-20089-05-03 06:57 J	-5615961.33	-5615961.21	-5615961.09	0.0531	0.0454
Saturn	-20081-11-27 16:19 J	-5612831.06	-5612830.82	-5612830.58	0.0272	0.0083
Uranus	-20079-05-24 06:00 J	-5612288.45	-5612288.25	-5612288.04	0.0136	0.0079
Uranus	-20078-05-28 14:38 J	-5611919.14	-5611918.89	-5611918.64	0.0137	0.0006
Uranus	-20077-05-31 23:31 J	-5611549.72	-5611549.52	-5611549.29	0.0137	0.0070
Jupiter	-20072-10-24 02:09 J	-5609578.62	-5609578.41	-5609578.20	0.0496	0.0236
Saturn	-20067-05-30 09:50 J	-5607899.31	-5607899.09	-5607898.87	0.0289	0.0115
Pluto	-20063-08-19 23:16 J	-5606356.79	-5606356.53	-5606356.27	0.0068	0.0006
Jupiter	-20060-10-28 16:19 J	-5605191.03	-5605190.82	-5605190.60	0.0495	0.0205
Saturn	-20052-11-22 01:11 J	-5602244.61	-5602244.45	-5602244.30	0.0270	0.0210
Neptune	-20049-05-05 11:02 J	-5601349.16	-5601349.04	-5601348.87	0.0089	0.0073
Neptune	-20048-05-07 21:50 J	-5600981.82	-5600981.59	-5600981.35	0.0089	0.0031
Neptune	-20047-05-10 08:09 J	-5600614.40	-5600614.16	-5600613.90	0.0089	0.0012
Neptune	-20046-05-12 18:28 J	-5600246.92	-5600246.73	-5600246.52	0.0089	0.0054
Uranus	-20040-11-22 07:55 J	-5597861.36	-5597861.17	-5597860.94	0.0142	0.0080
Uranus	-20039-11-27 08:23 J	-5597491.41	-5597491.15	-5597490.89	0.0142	0.0006
Saturn	-20038-05-24 09:50 J	-5597313.23	-5597313.09	-5597312.94	0.0292	0.0231
Uranus	-20038-12-02 07:40 J	-5597121.38	-5597121.18	-5597120.98	0.0141	0.0090
Saturn	-20022-11-29 11:31 J	-5591280.24	-5591280.02	-5591279.80	0.0272	0.0130
Jupiter	-20018-04-28 15:50 J	-5590034.06	-5590033.84	-5590033.61	0.0530	0.0144
Saturn	-20008-05-31 05:31 J	-5586348.45	-5586348.27	-5586348.06	0.0290	0.0168

20TH MILLENNIUM BCE

This is a list of transits of Earth in the 20th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-19995-05-24 13:55 J		-5581607.11	-5581606.92	-5581606.70	0.0136	0.0076	
Uranus	-19994-05-28 22:48 J		-5581237.80	-5581237.55	-5581237.30	0.0137	0.0003	
Uranus	-19993-06-01 07:26 J		-5580868.39	-5580868.19	-5580867.96	0.0137	0.0072	
Saturn	-19993-11-22 21:21 J		-5580693.80	-5580693.61	-5580693.40	0.0270	0.0160	
Jupiter	-19989-10-23 14:09 J		-5579263.10	-5579262.91	-5579262.71	0.0496	0.0276	
Saturn	-19979-05-25 05:02 J		-5575762.47	-5575762.29	-5575762.09	0.0292	0.0179	
Pluto	-19977-02-22 18:43 J		-5575123.76	-5575123.72	-5575123.61	0.0077	0.0074	
Jupiter	-19977-10-27 23:45 J		-5574875.74	-5574875.51	-5574875.28	0.0495	0.0145	
Pluto	-19976-02-23 19:40 J		-5574756.69	-5574756.68	-5574756.61	0.0076	0.0076	
Neptune	-19967-11-04 05:45 J		-5571216.46	-5571216.26	-5571216.02	0.0088	0.0048	
Neptune	-19966-11-06 18:57 J		-5570848.97	-5570848.71	-5570848.45	0.0088	0.0005	
Neptune	-19965-11-08 07:26 J		-5570481.41	-5570481.19	-5570480.94	0.0088	0.0037	
Neptune	-19964-11-10 20:38 J		-5570113.74	-5570113.64	-5570113.52	0.0088	0.0079	
Saturn	-19963-11-30 08:38 J		-5569729.32	-5569729.14	-5569728.95	0.0272	0.0182	
Uranus	-19956-11-22 15:36 J		-5567180.06	-5567179.85	-5567179.62	0.0142	0.0077	
Uranus	-19955-11-27 15:50 J		-5566810.09	-5566809.84	-5566809.58	0.0142	0.0010	
Uranus	-19954-12-02 15:07 J		-5566440.04	-5566439.87	-5566439.66	0.0141	0.0094	
Saturn	-19949-06-01 01:40 J		-5564797.58	-5564797.43	-5564797.27	0.0290	0.0221	

Jupiter	-19935-04-28 01:26 J	-5559718.65	-5559718.44	-5559718.22	0.0531	0.0203
Saturn	-19934-11-24 20:23 J	-5559142.87	-5559142.65	-5559142.41	0.0270	0.0106
Jupiter	-19923-05-03 02:52 J	-5555330.55	-5555330.38	-5555330.20	0.0531	0.0336
Saturn	-19920-05-26 02:09 J	-5554211.63	-5554211.41	-5554211.19	0.0292	0.0123
Uranus	-19911-05-24 22:48 J	-5550925.76	-5550925.55	-5550925.34	0.0136	0.0073
Uranus	-19910-05-29 07:11 J	-5550556.45	-5550556.20	-5550555.95	0.0137	0.0000
Uranus	-19909-06-01 15:50 J	-5550187.04	-5550186.84	-5550186.62	0.0137	0.0074
Jupiter	-19906-10-23 19:11 J	-5548947.87	-5548947.70	-5548947.53	0.0496	0.0346
Saturn	-19904-12-01 09:07 J	-5548178.23	-5548178.12	-5548178.01	0.0272	0.0240
Mars	-19902-04-08 03:36 J	-5547685.53	-5547685.35	-5547685.17	0.1695	0.0421
Jupiter	-19894-10-28 10:19 J	-5544560.30	-5544560.07	-5544559.84	0.0496	0.0098
Saturn	-19890-06-03 00:43 J	-5543246.52	-5543246.47	-5543246.40	0.0290	0.0280
Neptune	-19884-05-07 08:23 J	-5541081.33	-5541081.15	-5541080.92	0.0089	0.0053
Neptune	-19883-05-09 19:26 J	-5540713.95	-5540713.69	-5540713.44	0.0089	0.0010
Neptune	-19882-05-12 05:45 J	-5540346.49	-5540346.26	-5540346.02	0.0089	0.0033
Neptune	-19881-05-13 15:36 J	-5539978.96	-5539978.85	-5539978.69	0.0089	0.0075
Saturn	-19875-11-25 23:16 J	-5537591.77	-5537591.53	-5537591.28	0.0270	0.0043
Uranus	-19872-11-22 22:33 J	-5536498.77	-5536498.56	-5536498.33	0.0142	0.0074
Uranus	-19871-11-27 23:02 J	-5536128.79	-5536128.54	-5536128.27	0.0142	0.0013
Uranus	-19870-12-02 22:48 J	-5535758.73	-5535758.55	-5535758.35	0.0141	0.0096
Saturn	-19861-05-27 01:40 J	-5532660.66	-5532660.43	-5532660.19	0.0292	0.0061
Jupiter	-19852-04-27 12:28 J	-5529403.18	-5529402.98	-5529402.78	0.0530	0.0257
Jupiter	-19840-05-02 07:26 J	-5525015.38	-5525015.19	-5525014.98	0.0530	0.0255
Mars	-19830-10-04 01:11 J	-5521208.63	-5521208.45	-5521208.26	0.1823	0.0698
Uranus	-19827-05-25 09:50 J	-5520244.29	-5520244.09	-5520243.86	0.0136	0.0068
Uranus	-19826-05-29 18:28 J	-5519874.97	-5519874.73	-5519874.48	0.0137	0.0006
Uranus	-19825-06-02 03:21 J	-5519505.56	-5519505.36	-5519505.16	0.0137	0.0079
Mars	-19823-04-10 10:19 J	-5518828.22	-5518828.07	-5518827.93	0.1692	0.1095
Jupiter	-19823-10-23 04:19 J	-5518632.46	-5518632.32	-5518632.17	0.0496	0.0396
Pluto	-19816-08-21 07:40 J	-5516138.44	-5516138.18	-5516137.93	0.0068	0.0002

Saturn	-19816-11-27 05:31 J	-5516040.52	-5516040.27	-5516040.02	0.0270	0.0028
Jupiter	-19811-10-27 17:31 J	-5514245.00	-5514244.77	-5514244.53	0.0496	0.0041
Neptune	-19803-11-03 12:43 J	-5511316.10	-5511315.97	-5511315.79	0.0088	0.0070
Saturn	-19802-05-29 06:00 J	-5511109.49	-5511109.25	-5511109.01	0.0292	0.0011
Neptune	-19802-11-06 01:40 J	-5510948.67	-5510948.43	-5510948.17	0.0088	0.0028
Neptune	-19801-11-07 14:23 J	-5510581.14	-5510580.90	-5510580.62	0.0088	0.0016
Neptune	-19800-11-10 02:52 J	-5510213.55	-5510213.38	-5510213.16	0.0088	0.0057
Jupiter	-19799-11-01 02:23 J	-5509857.49	-5509857.40	-5509857.31	0.0495	0.0453
Uranus	-19788-11-23 07:26 J	-5505817.40	-5505817.19	-5505816.95	0.0142	0.0069
Saturn	-19787-11-22 04:48 J	-5505453.43	-5505453.30	-5505453.17	0.0269	0.0229
Uranus	-19787-11-28 08:09 J	-5505447.41	-5505447.16	-5505446.90	0.0142	0.0017
Uranus	-19786-12-03 08:09 J	-5505077.34	-5505077.16	-5505076.97	0.0141	0.0100
Jupiter	-19769-04-26 12:00 J	-5499088.17	-5499088.00	-5499087.83	0.0530	0.0358
Jupiter	-19757-05-01 09:21 J	-5494700.33	-5494700.11	-5494699.89	0.0531	0.0161
Saturn	-19757-11-28 15:36 J	-5494489.07	-5494488.85	-5494488.61	0.0271	0.0106
Uranus	-19744-05-21 13:40 J	-5489931.97	-5489931.93	-5489931.88	0.0136	0.0133
Uranus	-19743-05-25 21:07 J	-5489562.83	-5489562.62	-5489562.38	0.0136	0.0063
Saturn	-19743-05-30 14:09 J	-5489558.14	-5489557.91	-5489557.68	0.0291	0.0092
Uranus	-19742-05-30 05:45 J	-5489193.51	-5489193.26	-5489193.01	0.0137	0.0010
Uranus	-19741-06-02 14:23 J	-5488824.09	-5488823.90	-5488823.70	0.0137	0.0083
Jupiter	-19740-10-22 04:19 J	-5488317.36	-5488317.32	-5488317.26	0.0496	0.0483
Pluto	-19730-02-24 02:23 J	-5484905.51	-5484905.40	-5484905.29	0.0077	0.0069
Jupiter	-19728-10-26 16:48 J	-5483930.03	-5483929.80	-5483929.56	0.0496	0.0053
Saturn	-19728-11-23 14:52 J	-5483902.08	-5483901.88	-5483901.67	0.0269	0.0153
Neptune	-19720-05-06 18:14 J	-5481180.87	-5481180.74	-5481180.60	0.0089	0.0075
Neptune	-19719-05-09 04:48 J	-5480813.53	-5480813.30	-5480813.05	0.0089	0.0032
Neptune	-19718-05-11 15:21 J	-5480446.11	-5480445.86	-5480445.60	0.0089	0.0010
Neptune	-19717-05-13 01:40 J	-5480078.62	-5480078.43	-5480078.22	0.0089	0.0053
Jupiter	-19716-10-31 06:43 J	-5479542.36	-5479542.22	-5479542.07	0.0495	0.0385
Saturn	-19714-05-25 02:52 J	-5478971.51	-5478971.38	-5478971.22	0.0293	0.0231

Uranus	-19704-11-23 19:55 J	-5475135.89	-5475135.67	-5475135.43	0.0142	0.0062
Uranus	-19703-11-28 20:52 J	-5474765.89	-5474765.63	-5474765.38	0.0142	0.0023
Uranus	-19702-12-03 20:38 J	-5474395.80	-5474395.64	-5474395.47	0.0141	0.0106
Saturn	-19698-12-01 04:33 J	-5472937.48	-5472937.31	-5472937.12	0.0271	0.0190
Jupiter	-19686-04-26 14:09 J	-5468773.03	-5468772.91	-5468772.79	0.0530	0.0450
Saturn	-19684-06-01 02:38 J	-5468006.56	-5468006.39	-5468006.19	0.0290	0.0183
Jupiter	-19674-05-01 13:11 J	-5464385.17	-5464384.95	-5464384.72	0.0531	0.0077
Saturn	-19669-11-25 03:50 J	-5462350.57	-5462350.34	-5462350.09	0.0270	0.0072
Uranus	-19660-05-22 02:09 J	-5459250.48	-5459250.41	-5459250.31	0.0136	0.0127
Uranus	-19659-05-26 10:04 J	-5458881.31	-5458881.08	-5458880.85	0.0136	0.0056
Uranus	-19658-05-30 18:14 J	-5458511.98	-5458511.74	-5458511.49	0.0137	0.0017
Uranus	-19657-06-03 02:52 J	-5458142.56	-5458142.38	-5458142.18	0.0137	0.0089
Saturn	-19655-05-26 18:00 J	-5457419.96	-5457419.75	-5457419.53	0.0293	0.0135
Jupiter	-19645-10-25 19:55 J	-5453614.89	-5453614.67	-5453614.43	0.0496	0.0127
Neptune	-19638-11-05 07:55 J	-5451048.36	-5451048.17	-5451047.93	0.0088	0.0051
Neptune	-19637-11-06 21:07 J	-5450680.88	-5450680.62	-5450680.36	0.0088	0.0008
Neptune	-19636-11-09 09:21 J	-5450313.34	-5450313.11	-5450312.85	0.0088	0.0034
Neptune	-19635-11-11 21:50 J	-5449945.69	-5449945.59	-5449945.43	0.0088	0.0076
Jupiter	-19633-10-30 08:23 J	-5449227.33	-5449227.15	-5449226.96	0.0495	0.0303
Saturn	-19625-06-02 19:11 J	-5446454.76	-5446454.70	-5446454.63	0.0290	0.0279
Uranus	-19621-11-19 07:55 J	-5444824.20	-5444824.17	-5444824.10	0.0143	0.0140
Uranus	-19620-11-24 09:36 J	-5444454.32	-5444454.10	-5444453.84	0.0142	0.0055
Uranus	-19619-11-29 10:19 J	-5444084.31	-5444084.07	-5444083.81	0.0142	0.0031
Mars	-19618-04-09 01:55 J	-5443953.61	-5443953.42	-5443953.23	0.1700	0.0183
Uranus	-19618-12-04 10:04 J	-5443714.22	-5443714.08	-5443713.91	0.0141	0.0114
Saturn	-19610-11-27 17:45 J	-5440799.01	-5440798.76	-5440798.51	0.0270	0.0012
Saturn	-19596-05-28 11:45 J	-5435868.25	-5435868.01	-5435867.77	0.0292	0.0034
Jupiter	-19591-04-30 06:43 J	-5434070.44	-5434070.22	-5434069.99	0.0530	0.0052
Saturn	-19581-11-21 18:57 J	-5430211.81	-5430211.71	-5430211.61	0.0269	0.0246
Jupiter	-19579-05-05 02:38 J	-5429682.50	-5429682.39	-5429682.27	0.0531	0.0460

Uranus	-19576-05-22 12:57 J	-5428569.05	-5428568.96	-5428568.83	0.0136	0.0122
Uranus	-19575-05-26 20:38 J	-5428199.86	-5428199.64	-5428199.40	0.0136	0.0052
Uranus	-19574-05-31 04:48 J	-5427830.54	-5427830.30	-5427830.04	0.0137	0.0021
Uranus	-19573-06-03 13:26 J	-5427461.11	-5427460.94	-5427460.74	0.0137	0.0093
Pluto	-19569-08-22 10:19 J	-5425920.32	-5425920.07	-5425919.80	0.0068	0.0007
Jupiter	-19562-10-25 18:00 J	-5423299.96	-5423299.75	-5423299.54	0.0496	0.0219
Neptune	-19555-05-08 13:26 J	-5420913.12	-5420912.94	-5420912.72	0.0089	0.0055
Neptune	-19554-05-11 00:28 J	-5420545.73	-5420545.48	-5420545.23	0.0089	0.0013
Neptune	-19553-05-12 10:48 J	-5420178.28	-5420178.05	-5420177.80	0.0089	0.0030
Neptune	-19552-05-14 20:52 J	-5419810.75	-5419810.63	-5419810.46	0.0089	0.0072
Saturn	-19551-11-29 06:57 J	-5419247.45	-5419247.21	-5419246.98	0.0271	0.0094
Jupiter	-19550-10-30 06:00 J	-5418912.46	-5418912.25	-5418912.03	0.0495	0.0208
Mars	-19546-10-03 19:40 J	-5417477.82	-5417477.68	-5417477.53	0.1815	0.1235
Mars	-19539-04-11 08:52 J	-5415096.24	-5415096.13	-5415096.02	0.1697	0.1362
Saturn	-19537-05-30 06:00 J	-5414316.48	-5414316.25	-5414316.02	0.0292	0.0069
Uranus	-19537-11-19 23:02 J	-5414142.64	-5414142.54	-5414142.44	0.0143	0.0131
Uranus	-19536-11-25 00:14 J	-5413772.72	-5413772.49	-5413772.23	0.0142	0.0046
Uranus	-19535-11-30 00:57 J	-5413402.70	-5413402.46	-5413402.20	0.0142	0.0039
Uranus	-19534-12-05 00:28 J	-5413032.59	-5413032.48	-5413032.33	0.0141	0.0122
Saturn	-19522-11-24 07:26 J	-5408660.38	-5408660.19	-5408659.99	0.0269	0.0166
Jupiter	-19508-04-29 04:33 J	-5403755.53	-5403755.31	-5403755.09	0.0530	0.0162
Saturn	-19508-05-24 15:50 J	-5403729.94	-5403729.84	-5403729.71	0.0293	0.0256
Jupiter	-19496-05-04 03:36 J	-5399367.51	-5399367.35	-5399367.18	0.0531	0.0365
Uranus	-19492-05-23 00:00 J	-5397887.60	-5397887.50	-5397887.35	0.0136	0.0117
Saturn	-19492-11-30 18:28 J	-5397695.91	-5397695.73	-5397695.53	0.0271	0.0173
Uranus	-19491-05-27 07:26 J	-5397518.41	-5397518.19	-5397517.94	0.0136	0.0047
Uranus	-19490-05-31 15:50 J	-5397149.09	-5397148.84	-5397148.59	0.0137	0.0025
Uranus	-19489-06-04 00:00 J	-5396779.66	-5396779.50	-5396779.31	0.0137	0.0098
Pluto	-19482-02-27 05:31 J	-5394320.35	-5394320.27	-5394320.13	0.0076	0.0070
Jupiter	-19479-10-24 19:11 J	-5392984.89	-5392984.70	-5392984.51	0.0496	0.0300

Saturn	-19478-06-01 23:02 J	-5392764.73	-5392764.54	-5392764.34	0.0291	0.0169
Neptune	-19474-11-04 13:11 J	-5391148.06	-5391147.95	-5391147.78	0.0088	0.0075
Neptune	-19473-11-06 02:09 J	-5390780.64	-5390780.41	-5390780.16	0.0088	0.0032
Neptune	-19472-11-08 14:52 J	-5390413.14	-5390412.88	-5390412.61	0.0088	0.0010
Neptune	-19471-11-11 03:07 J	-5390045.56	-5390045.37	-5390045.14	0.0088	0.0052
Mars	-19467-10-06 20:09 J	-5388619.79	-5388619.66	-5388619.51	0.1820	0.1280
Jupiter	-19467-10-29 08:23 J	-5388597.38	-5388597.15	-5388596.92	0.0496	0.0131
Saturn	-19463-11-25 17:45 J	-5387108.99	-5387108.76	-5387108.52	0.0269	0.0091
Uranus	-19453-11-20 10:48 J	-5383461.15	-5383461.05	-5383460.90	0.0143	0.0125
Uranus	-19452-11-25 12:43 J	-5383091.21	-5383090.97	-5383090.71	0.0142	0.0040
Uranus	-19451-11-30 13:26 J	-5382721.18	-5382720.94	-5382720.69	0.0142	0.0045
Uranus	-19450-12-05 12:57 J	-5382351.05	-5382350.96	-5382350.83	0.0141	0.0128
Saturn	-19449-05-26 08:38 J	-5382178.33	-5382178.14	-5382177.93	0.0292	0.0157
Saturn	-19433-12-02 02:52 J	-5376144.47	-5376144.38	-5376144.27	0.0271	0.0246
Jupiter	-19425-04-28 03:50 J	-5373440.53	-5373440.34	-5373440.13	0.0530	0.0261
Saturn	-19419-06-03 13:11 J	-5371213.04	-5371212.95	-5371212.84	0.0291	0.0262
Mars	-19413-04-06 14:23 J	-5369078.97	-5369078.90	-5369078.83	0.1709	0.1580
Jupiter	-19413-05-03 01:26 J	-5369052.64	-5369052.44	-5369052.24	0.0530	0.0255
Uranus	-19408-05-23 09:50 J	-5367206.22	-5367206.09	-5367205.94	0.0136	0.0113
Uranus	-19407-05-27 17:02 J	-5366837.02	-5366836.79	-5366836.55	0.0136	0.0043
Uranus	-19406-06-01 00:57 J	-5366467.70	-5366467.46	-5366467.21	0.0137	0.0028
Uranus	-19405-06-04 08:52 J	-5366098.28	-5366098.13	-5366097.94	0.0137	0.0101
Saturn	-19404-11-27 00:43 J	-5365557.72	-5365557.47	-5365557.22	0.0270	0.0022
Jupiter	-19396-10-23 23:31 J	-5362669.67	-5362669.52	-5362669.35	0.0497	0.0370
Neptune	-19391-05-07 20:52 J	-5361012.71	-5361012.63	-5361012.48	0.0089	0.0080
Neptune	-19390-05-10 08:09 J	-5360645.39	-5360645.16	-5360644.92	0.0089	0.0037
Saturn	-19390-05-28 22:04 J	-5360626.81	-5360626.58	-5360626.34	0.0292	0.0065
Neptune	-19389-05-11 18:43 J	-5360277.96	-5360277.72	-5360277.46	0.0089	0.0007
Neptune	-19388-05-14 05:16 J	-5359910.47	-5359910.28	-5359910.05	0.0089	0.0048
Jupiter	-19384-10-28 12:14 J	-5358282.23	-5358281.99	-5358281.76	0.0496	0.0061

Jupiter	-19372-11-02 00:57 J	-5353894.48	-5353894.46	-5353894.42	0.0495	0.0491
Uranus	-19369-11-20 20:38 J	-5352779.77	-5352779.64	-5352779.50	0.0143	0.0120
Uranus	-19368-11-25 22:19 J	-5352409.81	-5352409.57	-5352409.31	0.0142	0.0036
Uranus	-19367-11-30 23:16 J	-5352039.77	-5352039.53	-5352039.28	0.0142	0.0049
Uranus	-19366-12-05 23:02 J	-5351669.62	-5351669.54	-5351669.43	0.0141	0.0131
Saturn	-19345-11-28 03:36 J	-5344006.60	-5344006.35	-5344006.10	0.0270	0.0040
Jupiter	-19342-04-28 04:48 J	-5343125.47	-5343125.30	-5343125.13	0.0529	0.0357
Mars	-19334-04-09 23:02 J	-5340221.73	-5340221.54	-5340221.35	0.1705	0.0036
Saturn	-19331-05-30 06:14 J	-5339075.48	-5339075.24	-5339075.00	0.0292	0.0015
Jupiter	-19330-05-03 03:36 J	-5338737.57	-5338737.35	-5338737.13	0.0530	0.0163
Uranus	-19324-05-23 22:19 J	-5336524.72	-5336524.57	-5336524.41	0.0136	0.0107
Uranus	-19323-05-28 05:16 J	-5336155.52	-5336155.28	-5336155.04	0.0136	0.0037
Uranus	-19322-06-01 12:57 J	-5335786.19	-5335785.96	-5335785.71	0.0137	0.0034
Pluto	-19322-08-24 10:19 J	-5335702.29	-5335702.07	-5335701.80	0.0067	0.0024
Uranus	-19321-06-04 21:07 J	-5335416.76	-5335416.62	-5335416.44	0.0137	0.0105
Saturn	-19316-11-22 18:00 J	-5333419.85	-5333419.75	-5333419.64	0.0268	0.0241
Jupiter	-19313-10-23 06:43 J	-5332354.34	-5332354.22	-5332354.10	0.0496	0.0428
Neptune	-19309-11-05 06:43 J	-5330880.40	-5330880.22	-5330879.99	0.0088	0.0056
Neptune	-19308-11-07 19:40 J	-5330512.93	-5330512.68	-5330512.41	0.0088	0.0014
Neptune	-19307-11-10 08:09 J	-5330145.39	-5330145.16	-5330144.89	0.0088	0.0028
Neptune	-19306-11-12 20:23 J	-5329777.78	-5329777.65	-5329777.47	0.0088	0.0070
Jupiter	-19301-10-27 17:31 J	-5327967.01	-5327966.77	-5327966.53	0.0496	0.0006
Jupiter	-19289-11-01 07:40 J	-5323579.30	-5323579.18	-5323579.06	0.0496	0.0429
Saturn	-19286-11-30 03:07 J	-5322455.59	-5322455.37	-5322455.13	0.0270	0.0096
Uranus	-19285-11-21 06:00 J	-5322098.40	-5322098.25	-5322098.10	0.0143	0.0116
Uranus	-19284-11-26 07:40 J	-5321728.43	-5321728.18	-5321727.92	0.0143	0.0031
Uranus	-19283-12-01 08:23 J	-5321358.37	-5321358.15	-5321357.89	0.0142	0.0054
Uranus	-19282-12-06 08:09 J	-5320988.21	-5320988.16	-5320988.06	0.0141	0.0136
Saturn	-19272-05-31 09:21 J	-5317524.34	-5317524.11	-5317523.88	0.0292	0.0083
Mars	-19262-10-03 16:19 J	-5313746.88	-5313746.82	-5313746.75	0.1808	0.1690

Jupiter	-19259-04-27 12:43 J	-5312810.10	-5312809.97	-5312809.83	0.0530	0.0421
Saturn	-19257-11-23 15:50 J	-5311869.01	-5311868.84	-5311868.66	0.0268	0.0190
Mars	-19255-04-12 07:40 J	-5311364.23	-5311364.18	-5311364.13	0.1702	0.1630
Jupiter	-19247-05-02 12:28 J	-5308422.21	-5308421.98	-5308421.76	0.0530	0.0101
Saturn	-19243-05-25 09:50 J	-5306938.18	-5306938.09	-5306937.99	0.0295	0.0269
Uranus	-19240-05-24 11:02 J	-5305843.20	-5305843.04	-5305842.86	0.0136	0.0101
Uranus	-19239-05-28 18:00 J	-5305473.98	-5305473.75	-5305473.50	0.0136	0.0032
Uranus	-19238-06-02 01:40 J	-5305104.66	-5305104.43	-5305104.18	0.0136	0.0040
Uranus	-19237-06-05 09:50 J	-5304735.21	-5304735.09	-5304734.92	0.0137	0.0111
Pluto	-19235-02-28 02:38 J	-5304102.60	-5304102.39	-5304102.15	0.0076	0.0039
Jupiter	-19230-10-23 13:26 J	-5302038.97	-5302038.94	-5302038.90	0.0497	0.0490
Saturn	-19227-11-30 23:45 J	-5300904.72	-5300904.51	-5300904.29	0.0270	0.0144
Neptune	-19226-05-09 14:38 J	-5300745.05	-5300744.89	-5300744.69	0.0089	0.0062
Neptune	-19225-05-11 01:26 J	-5300377.67	-5300377.44	-5300377.18	0.0089	0.0019
Neptune	-19224-05-13 12:00 J	-5300010.24	-5300010.00	-5300009.75	0.0089	0.0024
Neptune	-19223-05-15 22:48 J	-5299642.72	-5299642.55	-5299642.37	0.0089	0.0066
Jupiter	-19218-10-28 04:33 J	-5297651.54	-5297651.31	-5297651.07	0.0497	0.0050
Saturn	-19213-06-01 08:38 J	-5295973.34	-5295973.14	-5295972.92	0.0292	0.0144
Jupiter	-19206-11-01 18:57 J	-5293263.85	-5293263.71	-5293263.56	0.0496	0.0387
Uranus	-19201-11-21 17:45 J	-5291416.92	-5291416.76	-5291416.59	0.0143	0.0110
Uranus	-19200-11-26 19:40 J	-5291046.93	-5291046.68	-5291046.42	0.0143	0.0025
Uranus	-19199-12-01 20:23 J	-5290676.88	-5290676.65	-5290676.41	0.0142	0.0059
Saturn	-19198-11-25 11:31 J	-5290318.23	-5290318.02	-5290317.80	0.0268	0.0142
Uranus	-19198-12-06 20:23 J	-5290306.66	-5290306.65	-5290306.61	0.0142	0.0141
Saturn	-19184-05-26 06:28 J	-5285387.39	-5285387.23	-5285387.06	0.0295	0.0214
Mars	-19183-10-06 15:50 J	-5284889.01	-5284888.84	-5284888.66	0.1812	0.0752
Jupiter	-19176-04-27 00:14 J	-5282494.58	-5282494.49	-5282494.38	0.0529	0.0471
Saturn	-19168-12-01 18:28 J	-5279353.90	-5279353.73	-5279353.55	0.0270	0.0191
Jupiter	-19164-05-01 20:38 J	-5278106.87	-5278106.64	-5278106.41	0.0529	0.0035
Uranus	-19156-05-25 02:09 J	-5275161.59	-5275161.41	-5275161.23	0.0136	0.0093

Uranus	-19155-05-29 09:07 J	-5274792.36	-5274792.12	-5274791.87	0.0136	0.0024
Uranus	-19154-06-02 17:02 J	-5274423.02	-5274422.79	-5274422.55	0.0137	0.0047
Saturn	-19154-06-03 04:33 J	-5274422.49	-5274422.31	-5274422.13	0.0292	0.0196
Uranus	-19153-06-06 01:26 J	-5274053.55	-5274053.44	-5274053.31	0.0137	0.0118
Neptune	-19145-11-04 10:48 J	-5270980.15	-5270980.05	-5270979.94	0.0088	0.0080
Neptune	-19144-11-06 23:16 J	-5270612.74	-5270612.53	-5270612.27	0.0088	0.0039
Neptune	-19143-11-09 12:14 J	-5270245.25	-5270244.99	-5270244.73	0.0088	0.0003
Neptune	-19142-11-12 00:28 J	-5269877.69	-5269877.48	-5269877.24	0.0088	0.0045
Neptune	-19141-11-13 12:57 J	-5269509.97	-5269509.96	-5269509.90	0.0088	0.0087
Saturn	-19139-11-26 06:00 J	-5268767.48	-5268767.25	-5268767.01	0.0268	0.0097
Jupiter	-19135-10-27 17:02 J	-5267336.02	-5267335.79	-5267335.56	0.0497	0.0088
Mars	-19129-04-07 10:48 J	-5265347.15	-5265347.05	-5265346.94	0.1715	0.1390
Saturn	-19125-05-27 00:57 J	-5263836.65	-5263836.46	-5263836.25	0.0295	0.0163
Jupiter	-19123-11-01 03:07 J	-5262948.54	-5262948.37	-5262948.19	0.0496	0.0329
Uranus	-19117-11-22 08:09 J	-5260735.32	-5260735.16	-5260734.96	0.0143	0.0101
Uranus	-19116-11-27 10:19 J	-5260365.32	-5260365.07	-5260364.81	0.0143	0.0017
Uranus	-19115-12-02 11:02 J	-5259995.26	-5259995.04	-5259994.80	0.0142	0.0067
Saturn	-19109-12-02 12:28 J	-5257803.08	-5257802.98	-5257802.85	0.0269	0.0237
Saturn	-19095-06-03 22:48 J	-5252871.67	-5252871.55	-5252871.41	0.0292	0.0247
Jupiter	-19081-05-01 07:40 J	-5247791.41	-5247791.18	-5247790.95	0.0530	0.0018
Saturn	-19080-11-27 01:26 J	-5247216.69	-5247216.44	-5247216.20	0.0268	0.0050
Pluto	-19075-08-25 04:04 J	-5245484.42	-5245484.33	-5245484.18	0.0067	0.0060
Pluto	-19074-08-26 18:57 J	-5245117.89	-5245117.71	-5245117.48	0.0068	0.0043
Uranus	-19072-05-25 16:04 J	-5244480.01	-5244479.83	-5244479.63	0.0136	0.0086
Uranus	-19071-05-29 23:16 J	-5244110.77	-5244110.53	-5244110.28	0.0136	0.0017
Uranus	-19070-06-03 07:11 J	-5243741.42	-5243741.20	-5243740.96	0.0137	0.0054
Jupiter	-19069-05-06 08:38 J	-5243403.20	-5243403.14	-5243403.08	0.0530	0.0509
Uranus	-19069-06-06 15:21 J	-5243371.94	-5243371.86	-5243371.74	0.0137	0.0125
Saturn	-19066-05-28 18:43 J	-5242285.94	-5242285.72	-5242285.50	0.0295	0.0114
Neptune	-19062-05-08 20:52 J	-5240844.67	-5240844.63	-5240844.54	0.0089	0.0087

Neptune	-19061-05-10 07:26 J	-5240477.39	-5240477.19	-5240476.95	0.0089	0.0045
Neptune	-19060-05-12 18:28 J	-5240109.98	-5240109.73	-5240109.47	0.0089	0.0002
Neptune	-19059-05-15 04:48 J	-5239742.51	-5239742.30	-5239742.06	0.0089	0.0041
Neptune	-19058-05-17 15:21 J	-5239374.94	-5239374.86	-5239374.75	0.0089	0.0083
Jupiter	-19052-10-26 23:45 J	-5237020.73	-5237020.51	-5237020.28	0.0497	0.0152
Mars	-19050-04-10 20:09 J	-5236489.85	-5236489.66	-5236489.48	0.1711	0.0258
Jupiter	-19040-10-31 15:36 J	-5232633.04	-5232632.85	-5232632.66	0.0497	0.0291
Uranus	-19033-11-23 00:00 J	-5230053.68	-5230053.50	-5230053.28	0.0143	0.0093
Uranus	-19032-11-28 02:23 J	-5229683.66	-5229683.40	-5229683.14	0.0143	0.0008
Uranus	-19031-12-03 03:07 J	-5229313.59	-5229313.37	-5229313.15	0.0142	0.0076
Saturn	-19021-11-27 22:04 J	-5225665.83	-5225665.58	-5225665.33	0.0268	0.0004
Saturn	-19007-05-29 14:09 J	-5220735.15	-5220734.91	-5220734.68	0.0295	0.0061

19TH MILLENNIUM BCE

This is a list of transits of Earth in the 19th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-18998-05-01 21:21 J	-5217475.83	-5217475.61	-5217475.38	0.0529	0.0060		
Saturn	-18992-11-22 19:55 J	-5215078.72	-5215078.67	-5215078.60	0.0266	0.0257		
Pluto	-18988-02-28 17:02 J	-5213885.04	-5213884.79	-5213884.52	0.0077	0.0014		
Uranus	-18988-05-26 06:28 J	-5213798.42	-5213798.23	-5213798.01	0.0136	0.0079		
Uranus	-18987-05-30 13:55 J	-5213429.17	-5213428.92	-5213428.67	0.0136	0.0009		
Jupiter	-18986-05-06 16:48 J	-5213087.92	-5213087.80	-5213087.67	0.0529	0.0444		
Uranus	-18986-06-03 21:50 J	-5213059.81	-5213059.59	-5213059.37	0.0137	0.0061		

Uranus	-18985-06-07 06:00 J	-5212690.30	-5212690.25	-5212690.16	0.0137	0.0132
Neptune	-18980-11-06 03:07 J	-5210712.55	-5210712.37	-5210712.18	0.0088	0.0063
Neptune	-18979-11-08 15:21 J	-5210345.10	-5210344.86	-5210344.59	0.0088	0.0022
Neptune	-18978-11-11 04:04 J	-5209977.57	-5209977.33	-5209977.06	0.0088	0.0020
Neptune	-18977-11-12 16:33 J	-5209609.98	-5209609.81	-5209609.61	0.0088	0.0062
Jupiter	-18969-10-26 12:00 J	-5206705.22	-5206705.00	-5206704.78	0.0497	0.0190
Saturn	-18962-11-29 21:36 J	-5204114.84	-5204114.60	-5204114.35	0.0268	0.0058
Jupiter	-18957-10-31 02:09 J	-5202317.62	-5202317.41	-5202317.20	0.0496	0.0244
Uranus	-18949-11-23 16:33 J	-5199372.01	-5199371.81	-5199371.59	0.0143	0.0082
Saturn	-18948-05-30 12:00 J	-5199184.24	-5199184.00	-5199183.76	0.0295	0.0002
Uranus	-18948-11-28 18:28 J	-5199001.98	-5199001.73	-5199001.47	0.0143	0.0003
Uranus	-18947-12-03 19:26 J	-5198631.89	-5198631.69	-5198631.48	0.0142	0.0085
Saturn	-18933-11-23 21:07 J	-5193527.78	-5193527.62	-5193527.45	0.0266	0.0198
Jupiter	-18915-05-01 01:11 J	-5187160.67	-5187160.45	-5187160.23	0.0529	0.0141
Uranus	-18904-05-26 18:57 J	-5183116.91	-5183116.71	-5183116.49	0.0135	0.0072
Jupiter	-18903-05-05 22:48 J	-5182772.71	-5182772.55	-5182772.38	0.0530	0.0370
Uranus	-18903-05-31 02:23 J	-5182747.65	-5182747.40	-5182747.15	0.0136	0.0004
Saturn	-18903-12-01 01:26 J	-5182563.65	-5182563.44	-5182563.21	0.0268	0.0123
Uranus	-18902-06-04 09:50 J	-5182378.29	-5182378.09	-5182377.86	0.0136	0.0066
Uranus	-18901-06-07 18:14 J	-5182008.75	-5182008.74	-5182008.71	0.0137	0.0136
Mars	-18899-10-06 13:55 J	-5181158.12	-5181157.92	-5181157.73	0.1805	0.0311
Neptune	-18897-05-09 12:28 J	-5180577.11	-5180576.98	-5180576.80	0.0089	0.0070
Neptune	-18896-05-11 23:45 J	-5180209.75	-5180209.51	-5180209.27	0.0089	0.0028
Neptune	-18895-05-14 10:04 J	-5179842.32	-5179842.08	-5179841.82	0.0089	0.0015
Neptune	-18894-05-16 20:38 J	-5179474.82	-5179474.64	-5179474.43	0.0089	0.0057
Saturn	-18889-05-31 14:09 J	-5177633.14	-5177632.91	-5177632.67	0.0294	0.0068
Jupiter	-18886-10-26 14:38 J	-5176390.08	-5176389.89	-5176389.68	0.0497	0.0267
Jupiter	-18874-10-31 04:04 J	-5172002.55	-5172002.33	-5172002.11	0.0497	0.0164
Saturn	-18874-11-26 01:55 J	-5171976.63	-5171976.42	-5171976.19	0.0266	0.0133
Uranus	-18865-11-24 04:33 J	-5168690.51	-5168690.31	-5168690.08	0.0143	0.0076

Uranus	-18864-11-29 06:57 J	-5168320.46	-5168320.21	-5168319.95	0.0143	0.0009
Uranus	-18863-12-04 07:55 J	-5167950.35	-5167950.17	-5167949.96	0.0142	0.0091
Saturn	-18860-05-25 20:09 J	-5167046.73	-5167046.66	-5167046.57	0.0296	0.0278
Mars	-18845-04-08 06:14 J	-5161615.37	-5161615.24	-5161615.11	0.1721	0.1218
Saturn	-18844-12-02 09:21 J	-5161012.27	-5161012.11	-5161011.93	0.0268	0.0196
Jupiter	-18832-04-30 07:11 J	-5156845.40	-5156845.20	-5156844.98	0.0529	0.0215
Saturn	-18830-06-02 21:50 J	-5156081.80	-5156081.59	-5156081.38	0.0294	0.0148
Pluto	-18827-08-27 09:36 J	-5154900.36	-5154900.10	-5154899.85	0.0067	0.0006
Uranus	-18821-05-23 01:40 J	-5152804.45	-5152804.43	-5152804.37	0.0135	0.0133
Jupiter	-18820-05-05 06:28 J	-5152457.42	-5152457.23	-5152457.04	0.0530	0.0303
Uranus	-18820-05-27 08:09 J	-5152435.36	-5152435.16	-5152434.93	0.0135	0.0066
Uranus	-18819-05-31 15:36 J	-5152066.10	-5152065.85	-5152065.60	0.0136	0.0003
Uranus	-18818-06-04 23:02 J	-5151696.75	-5151696.54	-5151696.33	0.0136	0.0072
Neptune	-18815-11-07 18:14 J	-5150444.94	-5150444.74	-5150444.49	0.0088	0.0047
Saturn	-18815-11-27 10:48 J	-5150425.29	-5150425.05	-5150424.80	0.0267	0.0059
Neptune	-18814-11-10 07:26 J	-5150077.45	-5150077.19	-5150076.93	0.0088	0.0005
Neptune	-18813-11-11 19:55 J	-5149709.89	-5149709.67	-5149709.42	0.0088	0.0037
Neptune	-18812-11-14 08:38 J	-5149342.25	-5149342.14	-5149342.02	0.0088	0.0078
Jupiter	-18803-10-25 19:40 J	-5146074.85	-5146074.68	-5146074.50	0.0498	0.0332
Saturn	-18801-05-27 06:28 J	-5145495.40	-5145495.23	-5145495.03	0.0296	0.0191
Jupiter	-18791-10-30 09:36 J	-5141687.33	-5141687.10	-5141686.86	0.0497	0.0101
Uranus	-18781-11-24 15:21 J	-5138009.08	-5138008.86	-5138008.63	0.0143	0.0071
Uranus	-18780-11-29 17:31 J	-5137639.02	-5137638.77	-5137638.50	0.0143	0.0014
Uranus	-18779-12-04 18:57 J	-5137268.89	-5137268.71	-5137268.51	0.0142	0.0096
Saturn	-18771-06-04 09:36 J	-5134530.24	-5134530.10	-5134529.96	0.0293	0.0237
Mars	-18766-04-11 16:33 J	-5132757.99	-5132757.81	-5132757.63	0.1717	0.0464
Saturn	-18756-11-28 22:48 J	-5128873.80	-5128873.55	-5128873.30	0.0267	0.0021
Jupiter	-18749-04-29 06:28 J	-5126530.41	-5126530.23	-5126530.04	0.0528	0.0313
Saturn	-18742-05-29 21:07 J	-5123943.85	-5123943.62	-5123943.39	0.0296	0.0094
Pluto	-18740-03-03 00:43 J	-5123300.61	-5123300.47	-5123300.28	0.0076	0.0059

Jupiter	-18737-05-04 02:23 J	-5122142.61	-5122142.40	-5122142.18	0.0529	0.0188
Uranus	-18737-05-23 16:04 J	-5122122.90	-5122122.83	-5122122.73	0.0135	0.0126
Uranus	-18736-05-27 22:48 J	-5121753.78	-5121753.55	-5121753.33	0.0135	0.0059
Uranus	-18735-06-01 05:31 J	-5121384.52	-5121384.27	-5121384.02	0.0136	0.0009
Uranus	-18734-06-05 12:28 J	-5121015.16	-5121014.98	-5121014.76	0.0136	0.0079
Neptune	-18732-05-11 04:33 J	-5120309.50	-5120309.31	-5120309.10	0.0089	0.0054
Neptune	-18731-05-13 15:21 J	-5119942.11	-5119941.86	-5119941.61	0.0089	0.0012
Neptune	-18730-05-16 01:26 J	-5119574.66	-5119574.44	-5119574.19	0.0089	0.0031
Neptune	-18729-05-17 12:00 J	-5119207.13	-5119207.00	-5119206.84	0.0089	0.0072
Saturn	-18727-11-24 02:23 J	-5118286.52	-5118286.40	-5118286.28	0.0266	0.0231
Jupiter	-18720-10-24 22:19 J	-5115759.70	-5115759.57	-5115759.44	0.0497	0.0408
Jupiter	-18708-10-29 07:55 J	-5111372.41	-5111372.17	-5111371.93	0.0497	0.0008
Uranus	-18697-11-25 00:14 J	-5107327.70	-5107327.49	-5107327.24	0.0143	0.0067
Saturn	-18697-11-30 12:28 J	-5107322.21	-5107321.98	-5107321.75	0.0268	0.0104
Jupiter	-18696-11-02 20:09 J	-5106984.77	-5106984.66	-5106984.54	0.0496	0.0430
Uranus	-18696-11-30 03:07 J	-5106957.62	-5106957.37	-5106957.11	0.0143	0.0018
Uranus	-18695-12-05 04:33 J	-5106587.47	-5106587.31	-5106587.11	0.0142	0.0101
Saturn	-18683-05-31 14:38 J	-5102392.13	-5102391.89	-5102391.65	0.0295	0.0011
Saturn	-18668-11-25 16:19 J	-5096735.03	-5096734.82	-5096734.61	0.0266	0.0149
Jupiter	-18666-04-29 01:40 J	-5096215.56	-5096215.43	-5096215.30	0.0528	0.0432
Jupiter	-18654-05-04 00:28 J	-5091827.70	-5091827.48	-5091827.25	0.0529	0.0081
Uranus	-18653-05-24 07:40 J	-5091441.28	-5091441.18	-5091441.04	0.0135	0.0117
Uranus	-18652-05-28 14:23 J	-5091072.13	-5091071.90	-5091071.67	0.0135	0.0050
Uranus	-18651-06-01 21:07 J	-5090702.86	-5090702.62	-5090702.37	0.0136	0.0018
Neptune	-18651-11-06 21:21 J	-5090544.74	-5090544.61	-5090544.44	0.0088	0.0072
Uranus	-18650-06-06 04:33 J	-5090333.50	-5090333.31	-5090333.12	0.0136	0.0086
Neptune	-18650-11-09 10:19 J	-5090177.30	-5090177.07	-5090176.81	0.0088	0.0030
Neptune	-18649-11-10 23:02 J	-5089809.80	-5089809.54	-5089809.28	0.0088	0.0011
Neptune	-18648-11-13 11:16 J	-5089442.22	-5089442.03	-5089441.81	0.0088	0.0053
Saturn	-18638-12-03 01:55 J	-5085770.59	-5085770.42	-5085770.23	0.0268	0.0187

Jupiter	-18625-10-28 08:09 J	-5081057.39	-5081057.16	-5081056.92	0.0497	0.0076
Saturn	-18624-06-02 10:19 J	-5080840.29	-5080840.07	-5080839.85	0.0294	0.0117
Mars	-18615-10-06 12:28 J	-5077427.18	-5077426.98	-5077426.79	0.1797	0.0094
Uranus	-18614-11-21 11:02 J	-5077016.07	-5077016.04	-5077016.01	0.0144	0.0142
Jupiter	-18613-11-01 21:36 J	-5076669.77	-5076669.60	-5076669.43	0.0497	0.0351
Uranus	-18613-11-25 14:09 J	-5076646.14	-5076645.91	-5076645.66	0.0143	0.0058
Uranus	-18612-11-30 16:33 J	-5076276.05	-5076275.81	-5076275.54	0.0143	0.0026
Uranus	-18611-12-05 18:14 J	-5075905.89	-5075905.74	-5075905.55	0.0142	0.0108
Saturn	-18609-11-27 05:16 J	-5075183.51	-5075183.28	-5075183.03	0.0267	0.0068
Saturn	-18595-05-27 17:31 J	-5070253.92	-5070253.77	-5070253.60	0.0295	0.0220
Jupiter	-18583-04-28 01:40 J	-5065900.43	-5065900.43	-5065900.43	0.0529	0.0528
Pluto	-18579-08-29 07:40 J	-5064316.39	-5064316.18	-5064315.92	0.0068	0.0030
Saturn	-18579-12-04 14:09 J	-5064218.92	-5064218.91	-5064218.88	0.0269	0.0268
Jupiter	-18571-05-02 21:36 J	-5061512.83	-5061512.60	-5061512.37	0.0529	0.0028
Uranus	-18569-05-24 23:45 J	-5060759.64	-5060759.51	-5060759.35	0.0135	0.0109
Neptune	-18568-05-10 08:38 J	-5060409.23	-5060409.14	-5060409.01	0.0089	0.0081
Uranus	-18568-05-29 06:00 J	-5060390.47	-5060390.25	-5060390.00	0.0135	0.0043
Neptune	-18567-05-12 19:11 J	-5060041.91	-5060041.70	-5060041.45	0.0089	0.0039
Uranus	-18567-06-02 12:57 J	-5060021.20	-5060020.96	-5060020.71	0.0136	0.0025
Neptune	-18566-05-15 06:14 J	-5059674.49	-5059674.24	-5059673.98	0.0089	0.0005
Uranus	-18566-06-06 20:09 J	-5059651.83	-5059651.66	-5059651.47	0.0136	0.0093
Neptune	-18565-05-16 16:19 J	-5059307.01	-5059306.82	-5059306.58	0.0089	0.0047
Saturn	-18565-06-04 04:33 J	-5059288.47	-5059288.31	-5059288.15	0.0294	0.0221
Neptune	-18564-05-19 03:21 J	-5058939.40	-5058939.36	-5058939.31	0.0089	0.0088
Mars	-18561-04-09 00:43 J	-5057883.61	-5057883.47	-5057883.32	0.1727	0.1062
Jupiter	-18559-05-07 18:00 J	-5057124.85	-5057124.75	-5057124.65	0.0529	0.0474
Saturn	-18550-11-29 16:19 J	-5053632.07	-5053631.82	-5053631.57	0.0267	0.0010
Jupiter	-18542-10-28 10:04 J	-5050742.30	-5050742.08	-5050741.85	0.0497	0.0154
Saturn	-18536-05-29 12:28 J	-5048702.20	-5048701.98	-5048701.76	0.0295	0.0114
Jupiter	-18530-11-01 22:04 J	-5046354.78	-5046354.58	-5046354.38	0.0496	0.0268

Uranus	-18530-11-22 00:43 J	-5046334.55	-5046334.47	-5046334.36	0.0144	0.0134
Uranus	-18529-11-26 04:04 J	-5045964.56	-5045964.33	-5045964.08	0.0143	0.0050
Uranus	-18528-12-01 06:43 J	-5045594.47	-5045594.22	-5045593.96	0.0143	0.0033
Uranus	-18527-12-06 08:38 J	-5045224.29	-5045224.14	-5045223.98	0.0142	0.0115
Saturn	-18521-11-23 14:09 J	-5043044.97	-5043044.91	-5043044.83	0.0266	0.0255
Pluto	-18493-03-03 01:26 J	-5033083.64	-5033083.44	-5033083.21	0.0077	0.0042
Saturn	-18491-12-01 00:00 J	-5032080.73	-5032080.50	-5032080.26	0.0267	0.0081
Jupiter	-18488-05-01 18:43 J	-5031197.94	-5031197.72	-5031197.49	0.0528	0.0140
Neptune	-18486-11-08 13:40 J	-5030277.11	-5030276.93	-5030276.70	0.0088	0.0055
Uranus	-18485-05-25 15:36 J	-5030078.01	-5030077.85	-5030077.68	0.0135	0.0100
Neptune	-18485-11-10 02:23 J	-5029909.65	-5029909.40	-5029909.13	0.0088	0.0014
Uranus	-18484-05-29 21:36 J	-5029708.83	-5029708.60	-5029708.34	0.0135	0.0035
Neptune	-18484-11-12 14:52 J	-5029542.12	-5029541.88	-5029541.62	0.0088	0.0028
Uranus	-18483-06-03 04:33 J	-5029339.55	-5029339.31	-5029339.06	0.0136	0.0033
Neptune	-18483-11-15 03:07 J	-5029174.50	-5029174.37	-5029174.18	0.0088	0.0070
Mars	-18482-04-12 11:02 J	-5029026.22	-5029026.04	-5029025.87	0.1723	0.0633
Uranus	-18482-06-07 11:31 J	-5028970.17	-5028970.02	-5028969.84	0.0136	0.0101
Saturn	-18477-05-31 03:21 J	-5027150.60	-5027150.36	-5027150.12	0.0295	0.0017
Jupiter	-18476-05-06 16:48 J	-5026809.96	-5026809.80	-5026809.63	0.0529	0.0370
Saturn	-18462-11-25 19:26 J	-5021493.85	-5021493.69	-5021493.51	0.0266	0.0190
Jupiter	-18459-10-27 13:11 J	-5020427.16	-5020426.95	-5020426.73	0.0497	0.0227
Jupiter	-18447-11-01 00:28 J	-5016039.70	-5016039.48	-5016039.26	0.0497	0.0190
Uranus	-18446-11-22 17:45 J	-5015652.87	-5015652.76	-5015652.61	0.0144	0.0124
Uranus	-18445-11-26 21:07 J	-5015282.85	-5015282.62	-5015282.36	0.0143	0.0041
Uranus	-18444-12-01 23:45 J	-5014912.75	-5014912.51	-5014912.26	0.0143	0.0043
Uranus	-18443-12-07 00:57 J	-5014542.56	-5014542.46	-5014542.31	0.0142	0.0125
Saturn	-18432-12-02 03:36 J	-5010529.55	-5010529.35	-5010529.13	0.0268	0.0145
Saturn	-18418-06-02 14:09 J	-5005599.14	-5005598.91	-5005598.67	0.0295	0.0071
Jupiter	-18405-04-30 22:48 J	-5000882.75	-5000882.55	-5000882.33	0.0529	0.0219
Neptune	-18403-05-12 00:00 J	-5000141.66	-5000141.50	-5000141.31	0.0089	0.0065

Saturn	-18403-11-26 21:36 J	-4999942.81	-4999942.60	-4999942.38	0.0266	0.0130
Neptune	-18402-05-14 10:48 J	-4999774.29	-4999774.05	-4999773.80	0.0089	0.0023
Neptune	-18401-05-15 21:36 J	-4999406.85	-4999406.60	-4999406.35	0.0089	0.0020
Uranus	-18401-05-26 06:00 J	-4999396.42	-4999396.25	-4999396.06	0.0135	0.0093
Neptune	-18400-05-18 07:40 J	-4999039.34	-4999039.18	-4999038.97	0.0089	0.0062
Uranus	-18400-05-30 12:14 J	-4999027.23	-4999026.99	-4999026.74	0.0135	0.0027
Uranus	-18399-06-03 18:43 J	-4998657.95	-4998657.72	-4998657.47	0.0136	0.0040
Uranus	-18398-06-08 01:55 J	-4998288.56	-4998288.42	-4998288.26	0.0136	0.0108
Jupiter	-18393-05-05 21:21 J	-4996494.80	-4996494.61	-4996494.41	0.0529	0.0291
Saturn	-18389-05-26 15:36 J	-4995012.91	-4995012.85	-4995012.79	0.0297	0.0286
Jupiter	-18376-10-26 17:16 J	-4990111.96	-4990111.78	-4990111.59	0.0498	0.0299
Saturn	-18373-12-03 03:50 J	-4988978.49	-4988978.34	-4988978.16	0.0268	0.0202
Jupiter	-18364-10-31 08:23 J	-4985724.38	-4985724.15	-4985723.92	0.0497	0.0135
Uranus	-18362-11-23 07:26 J	-4984971.33	-4984971.19	-4984971.03	0.0144	0.0116
Uranus	-18361-11-27 10:48 J	-4984601.30	-4984601.05	-4984600.80	0.0143	0.0033
Uranus	-18360-12-02 12:57 J	-4984231.19	-4984230.96	-4984230.70	0.0143	0.0050
Saturn	-18359-06-03 19:26 J	-4984047.88	-4984047.69	-4984047.47	0.0295	0.0148
Uranus	-18359-12-07 14:38 J	-4983860.97	-4983860.89	-4983860.77	0.0142	0.0131
Saturn	-18344-11-27 20:09 J	-4978391.89	-4978391.66	-4978391.41	0.0266	0.0077
Pluto	-18332-08-29 12:14 J	-4974099.14	-4974098.99	-4974098.77	0.0067	0.0047
Pluto	-18331-08-31 03:21 J	-4973732.48	-4973732.36	-4973732.20	0.0068	0.0056
Mars	-18331-10-06 12:43 J	-4973696.16	-4973695.97	-4973695.78	0.1790	0.0420
Saturn	-18330-05-28 18:14 J	-4973461.90	-4973461.74	-4973461.57	0.0297	0.0215
Jupiter	-18322-05-01 07:26 J	-4970567.39	-4970567.19	-4970567.00	0.0528	0.0281
Neptune	-18322-11-07 18:00 J	-4970376.85	-4970376.75	-4970376.63	0.0088	0.0080
Neptune	-18321-11-09 06:14 J	-4970009.47	-4970009.24	-4970009.00	0.0088	0.0038
Neptune	-18320-11-11 18:57 J	-4969641.97	-4969641.71	-4969641.45	0.0088	0.0003
Neptune	-18319-11-14 06:57 J	-4969274.41	-4969274.21	-4969273.96	0.0088	0.0045
Neptune	-18318-11-16 19:26 J	-4968906.72	-4968906.69	-4968906.62	0.0088	0.0086
Uranus	-18317-05-26 18:57 J	-4968714.89	-4968714.71	-4968714.51	0.0135	0.0087

Uranus	-18316-05-31 00:57 J	-4968345.70	-4968345.46	-4968345.21	0.0135	0.0021
Uranus	-18315-06-04 07:26 J	-4967976.42	-4967976.19	-4967975.95	0.0136	0.0046
Uranus	-18314-06-08 14:09 J	-4967607.03	-4967606.91	-4967606.75	0.0136	0.0113
Saturn	-18314-12-05 01:55 J	-4967427.49	-4967427.42	-4967427.34	0.0267	0.0254
Jupiter	-18310-05-06 03:07 J	-4966179.58	-4966179.37	-4966179.16	0.0528	0.0214
Saturn	-18300-06-04 20:38 J	-4962496.79	-4962496.64	-4962496.46	0.0295	0.0214
Jupiter	-18293-10-26 04:19 J	-4959796.49	-4959796.32	-4959796.15	0.0498	0.0342
Saturn	-18285-11-28 17:16 J	-4956841.03	-4956840.78	-4956840.53	0.0266	0.0027
Jupiter	-18281-10-30 18:43 J	-4955408.95	-4955408.72	-4955408.49	0.0497	0.0089
Uranus	-18278-11-23 19:11 J	-4954289.85	-4954289.70	-4954289.52	0.0144	0.0110
Mars	-18277-04-09 18:00 J	-4954151.91	-4954151.75	-4954151.59	0.1733	0.0938
Uranus	-18277-11-27 22:48 J	-4953919.80	-4953919.55	-4953919.29	0.0144	0.0027
Uranus	-18276-12-03 01:11 J	-4953549.67	-4953549.45	-4953549.20	0.0143	0.0056
Uranus	-18275-12-08 02:38 J	-4953179.44	-4953179.39	-4953179.29	0.0143	0.0137
Saturn	-18271-05-29 16:33 J	-4951911.01	-4951910.81	-4951910.61	0.0297	0.0154
Pluto	-18245-03-04 21:21 J	-4942499.86	-4942499.61	-4942499.35	0.0077	0.0014
Saturn	-18241-06-05 18:14 J	-4940945.82	-4940945.74	-4940945.64	0.0295	0.0272
Jupiter	-18239-04-30 14:09 J	-4940252.07	-4940251.91	-4940251.73	0.0528	0.0350
Neptune	-18238-05-13 15:50 J	-4939874.04	-4939873.84	-4939873.61	0.0089	0.0049
Neptune	-18237-05-15 02:52 J	-4939506.63	-4939506.38	-4939506.12	0.0089	0.0007
Neptune	-18236-05-17 13:26 J	-4939139.17	-4939138.94	-4939138.70	0.0089	0.0036
Neptune	-18235-05-19 23:45 J	-4938771.61	-4938771.51	-4938771.36	0.0089	0.0078
Uranus	-18233-05-27 07:55 J	-4938033.36	-4938033.17	-4938032.96	0.0135	0.0081
Uranus	-18232-05-31 13:55 J	-4937664.17	-4937663.92	-4937663.67	0.0135	0.0015
Uranus	-18231-06-04 20:23 J	-4937294.88	-4937294.65	-4937294.42	0.0136	0.0051
Uranus	-18230-06-09 02:52 J	-4936925.48	-4936925.38	-4936925.24	0.0136	0.0118
Jupiter	-18227-05-05 13:11 J	-4935864.17	-4935863.95	-4935863.73	0.0529	0.0159
Saturn	-18226-11-30 12:57 J	-4935290.21	-4935289.96	-4935289.71	0.0266	0.0022
Saturn	-18212-05-30 12:14 J	-4930360.21	-4930359.99	-4930359.75	0.0297	0.0099
Jupiter	-18210-10-26 11:16 J	-4929481.16	-4929481.03	-4929480.89	0.0499	0.0404

Mars	-18198-04-13 04:33 J	-4925294.47	-4925294.31	-4925294.14	0.1729	0.0787
Jupiter	-18198-10-31 01:55 J	-4925093.66	-4925093.42	-4925093.18	0.0498	0.0027
Saturn	-18197-11-24 11:31 J	-4924703.12	-4924703.02	-4924702.90	0.0264	0.0234
Uranus	-18194-11-24 01:40 J	-4923608.58	-4923608.43	-4923608.24	0.0144	0.0108
Uranus	-18193-11-28 05:31 J	-4923238.52	-4923238.27	-4923238.01	0.0144	0.0024
Uranus	-18192-12-03 07:55 J	-4922868.39	-4922868.17	-4922867.92	0.0143	0.0059
Uranus	-18191-12-08 09:50 J	-4922498.13	-4922498.09	-4922498.02	0.0143	0.0139
Jupiter	-18186-11-04 17:45 J	-4920705.84	-4920705.76	-4920705.67	0.0497	0.0464
Saturn	-18167-12-01 08:23 J	-4913739.39	-4913739.15	-4913738.90	0.0266	0.0070
Neptune	-18157-11-08 10:48 J	-4910109.21	-4910109.05	-4910108.84	0.0088	0.0062
Jupiter	-18156-04-30 03:50 J	-4909936.48	-4909936.34	-4909936.18	0.0527	0.0391
Neptune	-18156-11-10 23:31 J	-4909741.76	-4909741.52	-4909741.25	0.0088	0.0021
Neptune	-18155-11-13 11:45 J	-4909374.25	-4909374.01	-4909373.74	0.0088	0.0021
Neptune	-18154-11-16 00:00 J	-4909006.66	-4909006.50	-4909006.29	0.0088	0.0062
Saturn	-18153-05-31 06:00 J	-4908809.49	-4908809.25	-4908809.01	0.0297	0.0048
Uranus	-18149-05-27 21:36 J	-4907351.79	-4907351.60	-4907351.38	0.0135	0.0074
Uranus	-18148-06-01 03:36 J	-4906982.60	-4906982.35	-4906982.10	0.0135	0.0009
Uranus	-18147-06-05 09:50 J	-4906613.31	-4906613.09	-4906612.86	0.0136	0.0058
Uranus	-18146-06-09 16:33 J	-4906243.89	-4906243.81	-4906243.69	0.0136	0.0124
Jupiter	-18144-05-05 03:50 J	-4905548.56	-4905548.34	-4905548.11	0.0528	0.0121
Saturn	-18138-11-26 07:11 J	-4903152.36	-4903152.20	-4903152.01	0.0264	0.0186
Jupiter	-18127-10-25 23:31 J	-4899165.62	-4899165.52	-4899165.40	0.0499	0.0442
Jupiter	-18115-10-30 15:36 J	-4894778.09	-4894777.85	-4894777.62	0.0498	0.0009
Uranus	-18110-11-24 11:16 J	-4892927.19	-4892927.03	-4892926.83	0.0144	0.0102
Uranus	-18109-11-28 15:07 J	-4892557.12	-4892556.87	-4892556.61	0.0144	0.0019
Saturn	-18108-12-02 05:02 J	-4892188.51	-4892188.29	-4892188.06	0.0266	0.0121
Uranus	-18108-12-03 17:31 J	-4892186.99	-4892186.77	-4892186.53	0.0143	0.0063
Uranus	-18107-12-08 19:26 J	-4891816.69	-4891816.69	-4891816.68	0.0143	0.0142
Jupiter	-18103-11-04 06:14 J	-4890390.36	-4890390.24	-4890390.12	0.0497	0.0425
Saturn	-18094-06-02 00:00 J	-4887258.74	-4887258.50	-4887258.26	0.0297	0.0004

Pluto	-18084-08-31 04:48 J	-4883515.51	-4883515.30	-4883515.06	0.0067	0.0032
Saturn	-18079-11-27 04:48 J	-4881601.51	-4881601.30	-4881601.08	0.0264	0.0135
Neptune	-18074-05-12 21:21 J	-4879973.74	-4879973.61	-4879973.46	0.0089	0.0074
Jupiter	-18073-04-29 13:40 J	-4879621.05	-4879620.93	-4879620.80	0.0527	0.0444
Neptune	-18073-05-14 07:55 J	-4879606.39	-4879606.17	-4879605.92	0.0089	0.0032
Neptune	-18072-05-16 18:57 J	-4879238.96	-4879238.71	-4879238.45	0.0089	0.0010
Neptune	-18071-05-19 05:45 J	-4878871.47	-4878871.26	-4878871.05	0.0089	0.0052
Uranus	-18066-05-25 06:43 J	-4877039.26	-4877039.22	-4877039.15	0.0134	0.0130
Uranus	-18065-05-28 12:00 J	-4876670.20	-4876670.00	-4876669.76	0.0135	0.0067
Uranus	-18064-06-01 18:14 J	-4876300.99	-4876300.74	-4876300.49	0.0135	0.0001
Uranus	-18063-06-06 00:43 J	-4875931.69	-4875931.47	-4875931.25	0.0136	0.0065
Uranus	-18062-06-10 07:11 J	-4875562.24	-4875562.20	-4875562.12	0.0136	0.0132
Jupiter	-18061-05-04 10:48 J	-4875233.28	-4875233.05	-4875232.82	0.0528	0.0053
Saturn	-18049-12-03 03:36 J	-4870637.53	-4870637.35	-4870637.15	0.0266	0.0176
Mars	-18047-10-06 14:38 J	-4869965.07	-4869964.89	-4869964.71	0.1782	0.0692
Jupiter	-18044-10-25 11:31 J	-4868850.08	-4868850.02	-4868849.96	0.0499	0.0482
Saturn	-18035-06-02 20:52 J	-4865707.86	-4865707.63	-4865707.39	0.0297	0.0060
Jupiter	-18032-10-29 20:52 J	-4864462.86	-4864462.63	-4864462.39	0.0498	0.0072
Uranus	-18026-11-24 21:21 J	-4862245.78	-4862245.61	-4862245.40	0.0144	0.0097
Uranus	-18025-11-29 01:11 J	-4861875.70	-4861875.45	-4861875.19	0.0144	0.0015
Uranus	-18024-12-04 03:21 J	-4861505.57	-4861505.36	-4861505.12	0.0143	0.0068
Jupiter	-18020-11-03 11:02 J	-4860075.20	-4860075.04	-4860074.87	0.0498	0.0355
Saturn	-18020-11-28 04:33 J	-4860050.55	-4860050.31	-4860050.07	0.0264	0.0079

18TH MILLENNIUM BCE

This is a list of transits of Earth in the 18th millennium BCE.

	FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
	TRANSIT								
	TIME								
Pluto	-17997-03-06	13:55	J	-4851916.18	-4851915.92	-4851915.66	0.0077	0.0005	
Mars	-17993-04-10	09:50	J	-4850420.25	-4850420.09	-4850419.92	0.1739	0.0847	
Neptune	-17993-11-07	16:19	J	-4850208.86	-4850208.82	-4850208.74	0.0088	0.0085	
Neptune	-17992-11-10	04:33	J	-4849841.51	-4849841.31	-4849841.06	0.0088	0.0044	
Neptune	-17991-11-12	17:31	J	-4849474.03	-4849473.77	-4849473.50	0.0088	0.0003	
Jupiter	-17990-04-29	20:09	J	-4849305.70	-4849305.66	-4849305.61	0.0527	0.0513	
Neptune	-17990-11-15	05:31	J	-4849106.49	-4849106.27	-4849106.02	0.0088	0.0039	
Saturn	-17990-12-05	05:16	J	-4849086.37	-4849086.28	-4849086.15	0.0266	0.0237	
Neptune	-17989-11-16	18:00	J	-4848738.84	-4848738.75	-4848738.62	0.0088	0.0080	
Uranus	-17982-05-25	20:38	J	-4846357.71	-4846357.64	-4846357.52	0.0134	0.0124	
Uranus	-17981-05-29	02:38	J	-4845988.61	-4845988.39	-4845988.16	0.0135	0.0059	
Uranus	-17980-06-02	08:38	J	-4845619.39	-4845619.14	-4845618.89	0.0135	0.0006	
Uranus	-17979-06-06	15:21	J	-4845250.07	-4845249.86	-4845249.65	0.0136	0.0072	
Jupiter	-17978-05-04	20:52	J	-4844917.86	-4844917.63	-4844917.40	0.0528	0.0004	
Saturn	-17976-06-03	20:38	J	-4844156.85	-4844156.64	-4844156.41	0.0297	0.0125	
Mars	-17968-10-09	11:16	J	-4841107.12	-4841107.03	-4841106.93	0.1787	0.1565	
Jupiter	-17966-05-09	20:09	J	-4840529.72	-4840529.66	-4840529.59	0.0529	0.0505	
Saturn	-17961-11-29	06:57	J	-4838499.46	-4838499.21	-4838498.96	0.0264	0.0019	
Jupiter	-17949-10-29	05:02	J	-4834147.52	-4834147.29	-4834147.06	0.0498	0.0125	
Saturn	-17947-05-28	22:19	J	-4833570.70	-4833570.57	-4833570.41	0.0299	0.0238	
Uranus	-17942-11-25	11:45	J	-4831564.20	-4831564.01	-4831563.79	0.0144	0.0089	
Uranus	-17941-11-29	15:21	J	-4831194.12	-4831193.86	-4831193.60	0.0144	0.0006	
Uranus	-17940-12-04	17:31	J	-4830823.98	-4830823.77	-4830823.54	0.0143	0.0075	
Jupiter	-17937-11-02	19:55	J	-4829759.86	-4829759.67	-4829759.49	0.0498	0.0304	
Saturn	-17917-06-05	01:55	J	-4822605.58	-4822605.42	-4822605.23	0.0296	0.0202	
Mars	-17914-04-13	21:36	J	-4821562.76	-4821562.60	-4821562.44	0.1735	0.0927	

Neptune	-17909-05-13 14:52 J	-4819706.06	-4819705.88	-4819705.67	0.0089	0.0056
Neptune	-17908-05-16 01:40 J	-4819338.67	-4819338.43	-4819338.17	0.0089	0.0015
Neptune	-17907-05-18 12:28 J	-4818971.21	-4818970.98	-4818970.73	0.0089	0.0028
Neptune	-17906-05-20 22:48 J	-4818603.68	-4818603.55	-4818603.36	0.0089	0.0070
Saturn	-17902-12-01 13:11 J	-4816948.19	-4816947.95	-4816947.70	0.0265	0.0051
Uranus	-17898-05-26 11:02 J	-4815676.16	-4815676.04	-4815675.91	0.0134	0.0116
Uranus	-17897-05-29 16:33 J	-4815307.03	-4815306.81	-4815306.57	0.0135	0.0052
Uranus	-17896-06-02 22:48 J	-4814937.80	-4814937.55	-4814937.30	0.0135	0.0013
Jupiter	-17895-05-04 00:00 J	-4814602.72	-4814602.50	-4814602.27	0.0527	0.0085
Uranus	-17895-06-07 05:31 J	-4814568.47	-4814568.27	-4814568.06	0.0136	0.0079
Saturn	-17888-05-30 06:28 J	-4812019.43	-4812019.23	-4812019.02	0.0298	0.0155
Jupiter	-17883-05-08 19:55 J	-4810214.81	-4810214.67	-4810214.52	0.0528	0.0408
Saturn	-17873-11-25 16:19 J	-4806360.97	-4806360.82	-4806360.65	0.0264	0.0203
Jupiter	-17866-10-29 10:19 J	-4803832.29	-4803832.07	-4803831.85	0.0498	0.0190
Saturn	-17858-06-07 12:28 J	-4801054.02	-4801053.98	-4801053.92	0.0296	0.0289
Uranus	-17858-11-26 00:57 J	-4800882.67	-4800882.46	-4800882.24	0.0144	0.0081
Uranus	-17857-11-30 04:19 J	-4800512.58	-4800512.32	-4800512.06	0.0144	0.0001
Uranus	-17856-12-05 06:14 J	-4800142.44	-4800142.24	-4800142.02	0.0143	0.0081
Jupiter	-17854-11-02 19:55 J	-4799444.88	-4799444.67	-4799444.46	0.0497	0.0220
Saturn	-17843-12-02 22:19 J	-4795396.78	-4795396.57	-4795396.34	0.0265	0.0125
Pluto	-17836-09-01 18:43 J	-4792931.94	-4792931.72	-4792931.46	0.0067	0.0025
Saturn	-17829-05-31 20:09 J	-4790467.90	-4790467.66	-4790467.42	0.0298	0.0058
Neptune	-17828-11-09 10:33 J	-4789941.20	-4789941.06	-4789940.86	0.0088	0.0067
Neptune	-17827-11-11 23:31 J	-4789573.77	-4789573.52	-4789573.27	0.0088	0.0025
Neptune	-17826-11-14 11:45 J	-4789206.26	-4789206.01	-4789205.74	0.0088	0.0016
Neptune	-17825-11-16 00:00 J	-4788838.68	-4788838.50	-4788838.28	0.0088	0.0057
Uranus	-17814-05-26 23:02 J	-4784994.66	-4784994.54	-4784994.38	0.0134	0.0110
Saturn	-17814-11-28 03:36 J	-4784809.57	-4784809.35	-4784809.13	0.0264	0.0125
Uranus	-17813-05-30 05:02 J	-4784625.52	-4784625.29	-4784625.05	0.0135	0.0046
Jupiter	-17812-05-02 21:50 J	-4784287.80	-4784287.59	-4784287.37	0.0527	0.0190

Uranus	-17812-06-03 11:16 J	-4784256.28	-4784256.03	-4784255.79	0.0135	0.0019
Uranus	-17811-06-07 18:00 J	-4783886.94	-4783886.75	-4783886.55	0.0136	0.0084
Jupiter	-17800-05-07 20:52 J	-4779899.81	-4779899.63	-4779899.44	0.0528	0.0314
Saturn	-17784-12-04 10:04 J	-4773845.23	-4773845.08	-4773844.91	0.0266	0.0205
Jupiter	-17783-10-28 08:23 J	-4773517.35	-4773517.15	-4773516.96	0.0498	0.0281
Uranus	-17774-11-26 13:11 J	-4770201.15	-4770200.95	-4770200.71	0.0144	0.0075
Uranus	-17773-11-30 16:48 J	-4769831.06	-4769830.80	-4769830.54	0.0144	0.0007
Uranus	-17772-12-05 18:57 J	-4769460.90	-4769460.71	-4769460.49	0.0143	0.0088
Jupiter	-17771-11-01 21:21 J	-4769129.84	-4769129.61	-4769129.38	0.0498	0.0142
Saturn	-17770-06-03 13:26 J	-4768916.17	-4768915.94	-4768915.70	0.0298	0.0047
Mars	-17763-10-06 17:31 J	-4766233.93	-4766233.77	-4766233.60	0.1775	0.0916
Saturn	-17755-11-29 16:04 J	-4763258.08	-4763257.83	-4763257.58	0.0264	0.0045
Pluto	-17749-03-08 02:09 J	-4761332.67	-4761332.41	-4761332.15	0.0077	0.0007
Neptune	-17745-05-12 22:48 J	-4759805.65	-4759805.55	-4759805.43	0.0089	0.0080
Neptune	-17744-05-15 09:21 J	-4759438.32	-4759438.11	-4759437.86	0.0089	0.0039
Neptune	-17743-05-17 20:23 J	-4759070.90	-4759070.65	-4759070.39	0.0089	0.0004
Neptune	-17742-05-20 06:57 J	-4758703.42	-4758703.21	-4758702.98	0.0089	0.0045
Neptune	-17741-05-21 17:16 J	-4758335.81	-4758335.78	-4758335.70	0.0089	0.0088
Uranus	-17730-05-27 10:33 J	-4754313.20	-4754313.06	-4754312.89	0.0134	0.0105
Jupiter	-17729-05-01 22:19 J	-4753972.75	-4753972.57	-4753972.37	0.0528	0.0282
Uranus	-17729-05-30 16:04 J	-4753944.05	-4753943.83	-4753943.58	0.0135	0.0042
Uranus	-17728-06-03 22:33 J	-4753574.81	-4753574.56	-4753574.31	0.0135	0.0023
Uranus	-17727-06-08 04:48 J	-4753205.47	-4753205.30	-4753205.09	0.0136	0.0089
Jupiter	-17717-05-06 18:00 J	-4749584.96	-4749584.75	-4749584.54	0.0528	0.0207
Saturn	-17711-06-05 09:50 J	-4747364.29	-4747364.09	-4747363.88	0.0297	0.0158
Mars	-17709-04-11 00:57 J	-4746688.63	-4746688.46	-4746688.29	0.1746	0.0773
Jupiter	-17700-10-27 09:07 J	-4743202.28	-4743202.12	-4743201.96	0.0499	0.0363
Saturn	-17696-12-01 05:02 J	-4741706.53	-4741706.29	-4741706.04	0.0265	0.0037
Uranus	-17690-11-26 20:52 J	-4739519.85	-4739519.63	-4739519.40	0.0144	0.0071
Uranus	-17689-12-01 00:28 J	-4739149.74	-4739149.48	-4739149.22	0.0144	0.0010

Jupiter -17688-10-31 22:19 J -4738814.80 -4738814.57 -4738814.33 0.0498 0.0061
 Uranus -17688-12-06 02:52 J -4738779.57 -4738779.38 -4738779.18 0.0143 0.0090
 Mars -17684-10-09 13:55 J -4737376.05 -4737375.92 -4737375.78 0.1780 0.1289
 Saturn -17682-05-30 15:07 J -4736778.05 -4736777.87 -4736777.68 0.0298 0.0190
 Jupiter -17676-11-05 09:21 J -4734427.17 -4734427.11 -4734427.03 0.0497 0.0474
 Saturn -17667-11-26 08:38 J -4731119.28 -4731119.14 -4731119.00 0.0264 0.0216
 Neptune -17663-11-11 05:45 J -4729673.45 -4729673.26 -4729673.01 0.0088 0.0048
 Neptune -17662-11-13 18:57 J -4729305.97 -4729305.71 -4729305.45 0.0088 0.0006
 Neptune -17661-11-15 07:11 J -4728938.43 -4728938.20 -4728937.95 0.0088 0.0035
 Neptune -17660-11-17 19:26 J -4728570.80 -4728570.69 -4728570.54 0.0088 0.0076
 Saturn -17652-06-07 06:00 J -4725812.34 -4725812.25 -4725812.14 0.0297 0.0270
 Jupiter -17646-05-01 18:14 J -4723657.89 -4723657.74 -4723657.59 0.0527 0.0394
 Uranus -17646-05-27 21:21 J -4723631.76 -4723631.61 -4723631.43 0.0134 0.0100
 Uranus -17645-05-31 03:21 J -4723262.60 -4723262.36 -4723262.12 0.0135 0.0037
 Uranus -17644-06-04 09:21 J -4722893.35 -4722893.11 -4722892.86 0.0135 0.0027
 Uranus -17643-06-08 15:36 J -4722524.02 -4722523.85 -4722523.66 0.0135 0.0093
 Saturn -17637-12-02 17:02 J -4720155.00 -4720154.79 -4720154.56 0.0265 0.0117
 Jupiter -17634-05-06 12:57 J -4719270.19 -4719269.96 -4719269.74 0.0528 0.0089
 Mars -17630-04-14 13:26 J -4717831.09 -4717830.94 -4717830.79 0.1742 0.1043
 Saturn -17623-06-01 12:28 J -4715226.21 -4715225.98 -4715225.75 0.0298 0.0076
 Jupiter -17617-10-26 09:36 J -4712887.21 -4712887.10 -4712887.00 0.0499 0.0444
 Saturn -17608-11-27 18:43 J -4709567.93 -4709567.72 -4709567.50 0.0264 0.0141
 Uranus -17606-11-27 03:07 J -4708838.59 -4708838.37 -4708838.14 0.0144 0.0069
 Jupiter -17605-10-30 22:19 J -4708499.81 -4708499.57 -4708499.34 0.0498 0.0024
 Uranus -17605-12-01 06:43 J -4708468.48 -4708468.22 -4708467.96 0.0144 0.0012
 Uranus -17604-12-06 09:21 J -4708098.30 -4708098.11 -4708097.91 0.0143 0.0092
 Jupiter -17593-11-04 09:36 J -4704112.24 -4704112.10 -4704111.94 0.0498 0.0390
 Pluto -17588-09-03 06:00 J -4702348.47 -4702348.25 -4702347.99 0.0067 0.0025
 Neptune -17580-05-14 18:28 J -4699537.89 -4699537.73 -4699537.52 0.0089 0.0061
 Neptune -17579-05-17 05:16 J -4699170.51 -4699170.28 -4699170.02 0.0089 0.0019

Neptune -17578-05-19 15:50 J -4698803.07 -4698802.84 -4698802.58 0.0089 0.0024
 Saturn -17578-12-05 02:23 J -4698603.56 -4698603.40 -4698603.21 0.0265 0.0192
 Neptune -17577-05-21 02:23 J -4698435.56 -4698435.40 -4698435.21 0.0089 0.0065
 Saturn -17564-06-03 05:45 J -4693674.50 -4693674.26 -4693674.02 0.0297 0.0029
 Jupiter -17563-04-30 15:50 J -4693342.91 -4693342.84 -4693342.78 0.0527 0.0500
 Uranus -17562-05-28 09:21 J -4692950.27 -4692950.11 -4692949.92 0.0134 0.0095
 Uranus -17561-05-31 15:07 J -4692581.10 -4692580.87 -4692580.61 0.0135 0.0032
 Uranus -17560-06-04 21:07 J -4692211.85 -4692211.62 -4692211.37 0.0135 0.0033
 Uranus -17559-06-09 03:21 J -4691842.51 -4691842.36 -4691842.16 0.0135 0.0098
 Jupiter -17551-05-05 13:40 J -4688955.16 -4688954.93 -4688954.70 0.0528 0.0005
 Saturn -17549-11-29 01:55 J -4688016.66 -4688016.42 -4688016.18 0.0264 0.0072
 Jupiter -17539-05-10 11:02 J -4684567.12 -4684567.04 -4684566.96 0.0528 0.0491
 Jupiter -17522-10-31 00:00 J -4678184.73 -4678184.50 -4678184.27 0.0499 0.0105
 Uranus -17522-11-27 09:36 J -4678157.31 -4678157.10 -4678156.86 0.0144 0.0066
 Uranus -17521-12-01 13:26 J -4677787.20 -4677786.94 -4677786.68 0.0143 0.0015
 Uranus -17520-12-06 15:36 J -4677417.02 -4677416.85 -4677416.63 0.0143 0.0095
 Saturn -17519-12-06 08:38 J -4677052.19 -4677052.14 -4677052.10 0.0265 0.0260
 Jupiter -17510-11-04 14:38 J -4673797.07 -4673796.89 -4673796.71 0.0498 0.0321
 Saturn -17505-06-04 18:14 J -4672122.95 -4672122.74 -4672122.52 0.0297 0.0123
 Pluto -17501-03-09 13:11 J -4670749.20 -4670748.95 -4670748.68 0.0077 0.0006
 Neptune -17499-11-10 13:11 J -4669773.09 -4669772.95 -4669772.77 0.0088 0.0069
 Neptune -17498-11-13 01:55 J -4669405.66 -4669405.42 -4669405.16 0.0088 0.0028
 Neptune -17497-11-14 14:38 J -4669038.14 -4669037.89 -4669037.62 0.0088 0.0013
 Neptune -17496-11-17 03:07 J -4668670.57 -4668670.37 -4668670.16 0.0088 0.0054
 Saturn -17490-12-01 05:45 J -4666465.51 -4666465.26 -4666465.01 0.0264 0.0008
 Mars -17479-10-06 23:31 J -4662502.68 -4662502.52 -4662502.36 0.1768 0.1051
 Uranus -17478-05-28 21:07 J -4662268.79 -4662268.62 -4662268.41 0.0134 0.0089
 Uranus -17477-06-01 03:21 J -4661899.61 -4661899.36 -4661899.11 0.0135 0.0026
 Saturn -17476-05-29 17:45 J -4661536.90 -4661536.76 -4661536.62 0.0299 0.0244
 Uranus -17476-06-05 09:07 J -4661530.35 -4661530.12 -4661529.87 0.0135 0.0038

Uranus	-17475-06-09 15:21 J	-4661161.00	-4661160.86	-4661160.68	0.0136	0.0103
Jupiter	-17468-05-04 18:00 J	-4658639.98	-4658639.75	-4658639.53	0.0527	0.0084
Saturn	-17461-11-25 08:23 J	-4655878.19	-4655878.15	-4655878.09	0.0263	0.0257
Jupiter	-17456-05-09 12:57 J	-4654252.10	-4654251.96	-4654251.81	0.0528	0.0402
Saturn	-17446-06-07 01:40 J	-4650571.59	-4650571.43	-4650571.25	0.0297	0.0207
Jupiter	-17439-10-30 07:40 J	-4647869.40	-4647869.18	-4647868.95	0.0499	0.0160
Uranus	-17439-11-22 15:50 J	-4647845.87	-4647845.84	-4647845.78	0.0144	0.0142
Uranus	-17438-11-27 19:55 J	-4647475.90	-4647475.67	-4647475.43	0.0144	0.0061
Uranus	-17437-12-01 23:16 J	-4647105.78	-4647105.53	-4647105.27	0.0143	0.0020
Uranus	-17436-12-07 01:40 J	-4646735.60	-4646735.43	-4646735.23	0.0143	0.0099
Saturn	-17431-12-02 05:45 J	-4644914.50	-4644914.26	-4644914.01	0.0264	0.0049
Jupiter	-17427-11-03 21:50 J	-4643481.79	-4643481.59	-4643481.39	0.0498	0.0264
Mars	-17425-04-11 14:52 J	-4642957.06	-4642956.88	-4642956.71	0.1752	0.0728
Saturn	-17417-05-30 21:50 J	-4639985.78	-4639985.59	-4639985.38	0.0299	0.0168
Neptune	-17416-05-14 04:48 J	-4639637.38	-4639637.30	-4639637.18	0.0089	0.0082
Neptune	-17415-05-16 15:36 J	-4639270.06	-4639269.85	-4639269.61	0.0089	0.0040
Neptune	-17414-05-19 02:23 J	-4638902.65	-4638902.40	-4638902.14	0.0089	0.0002
Neptune	-17413-05-20 13:11 J	-4638535.17	-4638534.95	-4638534.73	0.0089	0.0043
Neptune	-17412-05-22 23:16 J	-4638167.59	-4638167.53	-4638167.42	0.0089	0.0084
Saturn	-17402-11-27 07:11 J	-4634327.35	-4634327.20	-4634327.04	0.0263	0.0203
Mars	-17400-10-09 18:00 J	-4633644.91	-4633644.75	-4633644.60	0.1773	0.1067
Uranus	-17394-05-29 09:21 J	-4631587.29	-4631587.11	-4631586.90	0.0134	0.0083
Uranus	-17393-06-01 15:07 J	-4631218.11	-4631217.87	-4631217.61	0.0135	0.0021
Uranus	-17392-06-05 21:07 J	-4630848.85	-4630848.62	-4630848.38	0.0135	0.0043
Uranus	-17391-06-10 03:50 J	-4630479.49	-4630479.34	-4630479.19	0.0136	0.0107
Saturn	-17387-06-08 03:36 J	-4629020.43	-4629020.35	-4629020.25	0.0297	0.0276
Jupiter	-17385-05-03 22:19 J	-4628324.79	-4628324.57	-4628324.35	0.0527	0.0162
Jupiter	-17373-05-08 20:23 J	-4623936.82	-4623936.65	-4623936.47	0.0528	0.0336
Saturn	-17372-12-03 02:52 J	-4623363.61	-4623363.38	-4623363.15	0.0264	0.0100
Saturn	-17358-06-01 21:21 J	-4618434.83	-4618434.61	-4618434.38	0.0299	0.0102

Jupiter	-17356-10-29 12:57 J	-4617554.16	-4617553.96	-4617553.74	0.0499	0.0228
Uranus	-17355-11-23 03:36 J	-4617164.42	-4617164.35	-4617164.24	0.0144	0.0136
Uranus	-17354-11-28 07:26 J	-4616794.42	-4616794.19	-4616793.94	0.0144	0.0055
Uranus	-17353-12-02 10:33 J	-4616424.31	-4616424.06	-4616423.80	0.0143	0.0026
Uranus	-17352-12-07 12:57 J	-4616054.12	-4616053.96	-4616053.77	0.0143	0.0104
Mars	-17346-04-15 04:48 J	-4614099.44	-4614099.30	-4614099.15	0.1748	0.1153
Jupiter	-17344-11-03 03:50 J	-4613166.56	-4613166.34	-4613166.12	0.0499	0.0199
Saturn	-17343-11-28 03:21 J	-4612776.56	-4612776.36	-4612776.15	0.0262	0.0154
Pluto	-17340-09-04 15:21 J	-4611765.07	-4611764.86	-4611764.62	0.0067	0.0032
Neptune	-17334-11-12 10:04 J	-4609505.28	-4609505.08	-4609504.84	0.0088	0.0049
Neptune	-17333-11-13 22:48 J	-4609137.80	-4609137.55	-4609137.28	0.0088	0.0008
Neptune	-17332-11-16 11:31 J	-4608770.25	-4608770.02	-4608769.77	0.0088	0.0033
Neptune	-17331-11-19 00:00 J	-4608402.62	-4608402.50	-4608402.35	0.0088	0.0074
Saturn	-17313-12-03 21:50 J	-4601812.79	-4601812.59	-4601812.37	0.0264	0.0148
Uranus	-17310-05-29 20:09 J	-4600905.85	-4600905.66	-4600905.45	0.0134	0.0079
Uranus	-17309-06-02 02:09 J	-4600536.66	-4600536.41	-4600536.16	0.0135	0.0016
Uranus	-17308-06-06 07:55 J	-4600167.39	-4600167.17	-4600166.93	0.0135	0.0048
Uranus	-17307-06-10 14:38 J	-4599798.03	-4599797.89	-4599797.74	0.0136	0.0111
Jupiter	-17302-05-04 10:19 J	-4598009.27	-4598009.07	-4598008.85	0.0527	0.0209
Saturn	-17299-06-02 16:48 J	-4596884.04	-4596883.80	-4596883.56	0.0299	0.0046
Jupiter	-17290-05-09 10:19 J	-4593621.26	-4593621.07	-4593620.88	0.0527	0.0293
Saturn	-17284-11-28 22:04 J	-4591225.80	-4591225.58	-4591225.34	0.0262	0.0108
Jupiter	-17273-10-29 01:11 J	-4587238.65	-4587238.45	-4587238.25	0.0500	0.0266
Uranus	-17271-11-23 15:50 J	-4586482.94	-4586482.84	-4586482.71	0.0144	0.0129
Uranus	-17270-11-28 19:26 J	-4586112.92	-4586112.69	-4586112.44	0.0144	0.0049
Uranus	-17269-12-02 22:33 J	-4585742.81	-4585742.56	-4585742.30	0.0143	0.0031
Uranus	-17268-12-08 00:28 J	-4585372.62	-4585372.48	-4585372.29	0.0143	0.0110
Jupiter	-17261-11-02 17:16 J	-4582851.00	-4582850.78	-4582850.56	0.0499	0.0165
Saturn	-17254-12-05 16:33 J	-4580261.97	-4580261.81	-4580261.64	0.0264	0.0194
Pluto	-17253-03-10 19:11 J	-4580165.95	-4580165.70	-4580165.44	0.0077	0.0013

Neptune	-17251-05-16 02:09 J	-4579369.57	-4579369.41	-4579369.20	0.0089	0.0062
Neptune	-17250-05-18 13:26 J	-4579002.18	-4579001.94	-4579001.69	0.0089	0.0020
Neptune	-17249-05-19 23:45 J	-4578634.74	-4578634.51	-4578634.25	0.0089	0.0022
Neptune	-17248-05-22 10:04 J	-4578267.23	-4578267.08	-4578266.87	0.0089	0.0064
Saturn	-17240-06-03 10:48 J	-4575333.29	-4575333.05	-4575332.81	0.0299	0.0007
Uranus	-17226-05-30 06:00 J	-4570224.45	-4570224.25	-4570224.04	0.0134	0.0075
Uranus	-17225-06-02 11:45 J	-4569855.26	-4569855.01	-4569854.76	0.0135	0.0012
Saturn	-17225-11-29 17:16 J	-4569675.03	-4569674.78	-4569674.54	0.0262	0.0061
Uranus	-17224-06-06 17:16 J	-4569485.99	-4569485.78	-4569485.53	0.0135	0.0051
Uranus	-17223-06-11 00:14 J	-4569116.62	-4569116.49	-4569116.36	0.0136	0.0114
Jupiter	-17219-05-03 21:21 J	-4567693.81	-4567693.61	-4567693.41	0.0526	0.0257
Jupiter	-17207-05-08 18:28 J	-4563305.93	-4563305.73	-4563305.52	0.0527	0.0232
Mars	-17195-10-07 07:40 J	-4558771.33	-4558771.18	-4558771.03	0.1761	0.1115
Saturn	-17195-12-06 11:45 J	-4558711.09	-4558711.01	-4558710.90	0.0264	0.0243
Jupiter	-17190-10-29 14:09 J	-4556923.09	-4556922.91	-4556922.71	0.0499	0.0302
Uranus	-17187-11-24 00:57 J	-4555801.57	-4555801.46	-4555801.31	0.0144	0.0125
Uranus	-17186-11-29 04:48 J	-4555431.54	-4555431.30	-4555431.05	0.0144	0.0044
Uranus	-17185-12-03 07:55 J	-4555061.42	-4555061.17	-4555060.92	0.0143	0.0035
Uranus	-17184-12-08 10:04 J	-4554691.22	-4554691.08	-4554690.91	0.0143	0.0113
Saturn	-17181-06-04 04:19 J	-4553782.56	-4553782.32	-4553782.09	0.0299	0.0057
Jupiter	-17178-11-03 00:00 J	-4552535.73	-4552535.50	-4552535.27	0.0499	0.0104
Neptune	-17170-11-11 19:11 J	-4549604.86	-4549604.70	-4549604.54	0.0088	0.0070
Neptune	-17169-11-13 07:26 J	-4549237.42	-4549237.19	-4549236.92	0.0088	0.0029
Neptune	-17168-11-15 20:23 J	-4548869.91	-4548869.65	-4548869.39	0.0088	0.0013
Neptune	-17167-11-18 08:52 J	-4548502.33	-4548502.13	-4548501.92	0.0088	0.0054
Saturn	-17166-12-01 13:11 J	-4548124.20	-4548123.95	-4548123.70	0.0262	0.0012
Uranus	-17143-05-26 08:52 J	-4539912.14	-4539912.13	-4539912.09	0.0134	0.0133
Uranus	-17142-05-30 13:55 J	-4539543.12	-4539542.92	-4539542.70	0.0134	0.0072
Mars	-17141-04-12 03:50 J	-4539225.52	-4539225.34	-4539225.17	0.1759	0.0704
Uranus	-17141-06-02 19:40 J	-4539173.93	-4539173.68	-4539173.43	0.0135	0.0010

Uranus	-17140-06-07 01:40 J	-4538804.66	-4538804.43	-4538804.20	0.0135	0.0053
Uranus	-17139-06-11 07:26 J	-4538435.29	-4538435.19	-4538435.04	0.0136	0.0117
Jupiter	-17136-05-03 06:28 J	-4537378.41	-4537378.23	-4537378.04	0.0526	0.0315
Jupiter	-17124-05-08 07:26 J	-4532990.40	-4532990.19	-4532989.97	0.0527	0.0188
Saturn	-17122-06-05 23:45 J	-4532231.72	-4532231.51	-4532231.28	0.0299	0.0113
Mars	-17116-10-10 00:28 J	-4529913.65	-4529913.48	-4529913.32	0.1765	0.0921
Jupiter	-17107-10-28 19:26 J	-4526607.84	-4526607.69	-4526607.53	0.0500	0.0367
Saturn	-17107-12-02 11:31 J	-4526573.26	-4526573.02	-4526572.77	0.0262	0.0042
Uranus	-17103-11-24 06:14 J	-4525120.35	-4525120.24	-4525120.08	0.0144	0.0123
Uranus	-17102-11-29 10:04 J	-4524750.31	-4524750.08	-4524749.82	0.0144	0.0043
Uranus	-17101-12-03 13:26 J	-4524380.19	-4524379.94	-4524379.68	0.0144	0.0037
Uranus	-17100-12-08 15:36 J	-4524009.99	-4524009.85	-4524009.68	0.0143	0.0114
Jupiter	-17095-11-02 11:02 J	-4522220.27	-4522220.04	-4522219.80	0.0499	0.0062
Saturn	-17093-05-29 18:28 J	-4521645.82	-4521645.73	-4521645.62	0.0301	0.0273
Pluto	-17092-09-05 22:33 J	-4521181.74	-4521181.56	-4521181.37	0.0067	0.0047
Pluto	-17091-09-07 12:28 J	-4520815.10	-4520814.98	-4520814.81	0.0067	0.0056
Neptune	-17087-05-15 13:55 J	-4519468.99	-4519468.92	-4519468.78	0.0089	0.0082
Neptune	-17086-05-18 00:57 J	-4519101.67	-4519101.46	-4519101.21	0.0089	0.0040
Neptune	-17085-05-19 12:14 J	-4518734.25	-4518733.99	-4518733.74	0.0089	0.0002
Neptune	-17084-05-21 22:19 J	-4518366.77	-4518366.57	-4518366.33	0.0089	0.0043
Neptune	-17083-05-24 08:52 J	-4517999.19	-4517999.13	-4517999.03	0.0089	0.0084
Jupiter	-17083-11-07 02:38 J	-4517832.43	-4517832.39	-4517832.34	0.0498	0.0488
Saturn	-17078-11-27 12:43 J	-4515986.10	-4515985.97	-4515985.82	0.0261	0.0214
Saturn	-17063-06-06 22:48 J	-4510680.75	-4510680.55	-4510680.36	0.0299	0.0174
Mars	-17062-04-15 19:26 J	-4510367.82	-4510367.69	-4510367.55	0.1755	0.1246
Uranus	-17059-05-26 17:16 J	-4509230.81	-4509230.78	-4509230.69	0.0134	0.0130
Uranus	-17058-05-30 22:48 J	-4508861.76	-4508861.55	-4508861.33	0.0134	0.0069
Uranus	-17057-06-03 04:19 J	-4508492.57	-4508492.32	-4508492.07	0.0135	0.0007
Uranus	-17056-06-07 09:50 J	-4508123.30	-4508123.09	-4508122.85	0.0135	0.0056
Uranus	-17055-06-11 16:19 J	-4507753.92	-4507753.82	-4507753.69	0.0135	0.0119

Jupiter	-17053-05-02 19:26 J	-4507062.86	-4507062.69	-4507062.52	0.0526	0.0355
Saturn	-17048-12-03 13:11 J	-4505022.18	-4505021.95	-4505021.72	0.0262	0.0101
Jupiter	-17041-05-07 15:07 J	-4502675.10	-4502674.87	-4502674.65	0.0527	0.0127
Saturn	-17034-05-31 20:23 J	-4500094.82	-4500094.65	-4500094.47	0.0301	0.0203
Jupiter	-17024-10-28 05:31 J	-4496292.40	-4496292.27	-4496292.13	0.0500	0.0413
Uranus	-17019-11-24 10:19 J	-4494439.19	-4494439.07	-4494438.92	0.0144	0.0121
Saturn	-17019-11-28 16:19 J	-4494435.02	-4494434.82	-4494434.61	0.0262	0.0152
Uranus	-17018-11-29 14:09 J	-4494069.15	-4494068.91	-4494068.66	0.0144	0.0042
Uranus	-17017-12-03 17:16 J	-4493699.03	-4493698.78	-4493698.53	0.0144	0.0037
Uranus	-17016-12-08 19:26 J	-4493328.83	-4493328.69	-4493328.52	0.0143	0.0114
Jupiter	-17012-11-01 19:55 J	-4491904.90	-4491904.67	-4491904.43	0.0499	0.0013
Pluto	-17005-03-12 00:57 J	-4489582.69	-4489582.46	-4489582.22	0.0077	0.0034
Neptune	-17005-11-12 17:31 J	-4489336.98	-4489336.77	-4489336.55	0.0088	0.0049
Saturn	-17004-06-08 01:55 J	-4489129.55	-4489129.42	-4489129.28	0.0299	0.0247
Neptune	-17004-11-15 06:00 J	-4488969.51	-4488969.25	-4488968.99	0.0088	0.0008
Neptune	-17003-11-17 18:14 J	-4488601.97	-4488601.74	-4488601.49	0.0088	0.0033
Neptune	-17002-11-20 06:28 J	-4488234.35	-4488234.23	-4488234.07	0.0088	0.0075

17TH MILLENNIUM BCE

This is a list of transits of Earth in the 17th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-17000-11-06 05:45 J	-4487517.39	-4487517.26	-4487517.13	0.0498	0.0414		
Saturn	-16989-12-04 18:14 J	-4483470.93	-4483470.74	-4483470.54	0.0263	0.0167		

Uranus	-16975-05-27 02:23 J	-4478549.47	-4478549.40	-4478549.30	0.0134	0.0126
Saturn	-16975-06-02 02:23 J	-4478543.61	-4478543.40	-4478543.17	0.0301	0.0124
Uranus	-16974-05-31 07:40 J	-4478180.39	-4478180.18	-4478179.95	0.0134	0.0066
Uranus	-16973-06-03 13:26 J	-4477811.19	-4477810.94	-4477810.69	0.0135	0.0004
Uranus	-16972-06-07 19:11 J	-4477441.92	-4477441.70	-4477441.47	0.0135	0.0059
Uranus	-16971-06-12 01:40 J	-4477072.53	-4477072.43	-4477072.31	0.0135	0.0122
Jupiter	-16970-05-02 21:21 J	-4476747.74	-4476747.61	-4476747.49	0.0526	0.0438
Saturn	-16960-11-29 23:02 J	-4472883.77	-4472883.54	-4472883.30	0.0262	0.0083
Jupiter	-16958-05-07 16:48 J	-4472360.03	-4472359.80	-4472359.57	0.0527	0.0040
Jupiter	-16941-10-27 06:57 J	-4465977.25	-4465977.21	-4465977.16	0.0500	0.0488
Uranus	-16935-11-24 16:04 J	-4463757.97	-4463757.83	-4463757.68	0.0144	0.0119
Uranus	-16934-11-29 19:40 J	-4463387.92	-4463387.68	-4463387.42	0.0144	0.0040
Uranus	-16933-12-03 22:48 J	-4463017.80	-4463017.55	-4463017.30	0.0144	0.0039
Uranus	-16932-12-09 00:43 J	-4462647.60	-4462647.47	-4462647.30	0.0143	0.0116
Saturn	-16930-12-07 02:09 J	-4461919.50	-4461919.41	-4461919.30	0.0263	0.0239
Jupiter	-16929-10-31 20:09 J	-4461589.89	-4461589.66	-4461589.43	0.0499	0.0072
Neptune	-16922-05-17 12:28 J	-4459201.14	-4459200.98	-4459200.76	0.0089	0.0060
Neptune	-16921-05-19 00:00 J	-4458833.75	-4458833.50	-4458833.25	0.0089	0.0019
Neptune	-16920-05-21 10:19 J	-4458466.30	-4458466.07	-4458465.81	0.0089	0.0024
Neptune	-16919-05-23 20:52 J	-4458098.78	-4458098.63	-4458098.43	0.0089	0.0064
Jupiter	-16917-11-05 09:50 J	-4457202.25	-4457202.09	-4457201.92	0.0499	0.0348
Saturn	-16916-06-03 14:09 J	-4456992.15	-4456991.91	-4456991.67	0.0300	0.0031
Mars	-16911-10-07 16:33 J	-4455039.96	-4455039.81	-4455039.67	0.1754	0.1150
Saturn	-16901-12-01 08:38 J	-4451332.39	-4451332.14	-4451331.89	0.0262	0.0009
Uranus	-16891-05-27 12:00 J	-4447868.08	-4447868.00	-4447867.88	0.0134	0.0122
Uranus	-16890-05-31 17:16 J	-4447498.99	-4447498.78	-4447498.54	0.0134	0.0062
Uranus	-16889-06-03 23:16 J	-4447129.78	-4447129.53	-4447129.28	0.0135	0.0001
Uranus	-16888-06-08 05:02 J	-4446760.50	-4446760.29	-4446760.06	0.0135	0.0063
Uranus	-16887-06-12 11:45 J	-4446391.09	-4446391.01	-4446390.91	0.0136	0.0126
Jupiter	-16875-05-06 20:23 J	-4442044.88	-4442044.65	-4442044.42	0.0527	0.0040

Saturn	-16872-11-26 14:52 J	-4440744.92	-4440744.88	-4440744.81	0.0261	0.0255
Jupiter	-16863-05-11 15:36 J	-4437656.97	-4437656.85	-4437656.72	0.0527	0.0440
Mars	-16857-04-12 15:50 J	-4435494.02	-4435493.84	-4435493.67	0.1766	0.0707
Saturn	-16857-06-05 06:57 J	-4435440.44	-4435440.21	-4435439.98	0.0300	0.0074
Uranus	-16851-11-25 00:43 J	-4433076.61	-4433076.47	-4433076.30	0.0144	0.0115
Uranus	-16850-11-30 04:19 J	-4432706.56	-4432706.32	-4432706.06	0.0144	0.0036
Uranus	-16849-12-04 07:11 J	-4432336.44	-4432336.20	-4432335.95	0.0143	0.0042
Uranus	-16848-12-09 09:36 J	-4431966.23	-4431966.10	-4431965.95	0.0143	0.0119
Jupiter	-16846-10-31 22:33 J	-4431274.79	-4431274.56	-4431274.34	0.0500	0.0147
Pluto	-16843-09-08 17:02 J	-4430232.00	-4430231.79	-4430231.55	0.0067	0.0033
Saturn	-16842-12-03 20:09 J	-4429780.90	-4429780.66	-4429780.42	0.0263	0.0070
Neptune	-16841-11-12 03:21 J	-4429436.50	-4429436.36	-4429436.17	0.0088	0.0068
Neptune	-16840-11-14 16:04 J	-4429069.07	-4429068.83	-4429068.57	0.0088	0.0027
Neptune	-16839-11-17 04:19 J	-4428701.56	-4428701.32	-4428701.05	0.0088	0.0014
Neptune	-16838-11-19 17:02 J	-4428333.99	-4428333.79	-4428333.58	0.0088	0.0055
Jupiter	-16834-11-05 12:00 J	-4426887.19	-4426887.00	-4426886.79	0.0499	0.0272
Mars	-16832-10-10 08:38 J	-4426182.31	-4426182.14	-4426181.97	0.1758	0.0827
Saturn	-16828-05-30 08:23 J	-4424854.21	-4424854.15	-4424854.09	0.0300	0.0290
Saturn	-16813-11-28 02:09 J	-4419193.58	-4419193.41	-4419193.21	0.0262	0.0178
Uranus	-16807-05-27 21:07 J	-4417186.72	-4417186.62	-4417186.48	0.0134	0.0119
Uranus	-16806-06-01 02:52 J	-4416817.60	-4416817.38	-4416817.15	0.0134	0.0057
Uranus	-16805-06-04 08:38 J	-4416448.38	-4416448.14	-4416447.88	0.0135	0.0005
Uranus	-16804-06-08 15:07 J	-4416079.08	-4416078.87	-4416078.65	0.0135	0.0066
Uranus	-16803-06-12 22:04 J	-4415709.65	-4415709.58	-4415709.51	0.0136	0.0129
Saturn	-16798-06-08 02:38 J	-4413888.58	-4413888.39	-4413888.20	0.0299	0.0186
Jupiter	-16792-05-05 16:04 J	-4411730.05	-4411729.83	-4411729.60	0.0526	0.0150
Saturn	-16783-12-05 08:09 J	-4408229.36	-4408229.16	-4408228.95	0.0263	0.0150
Jupiter	-16780-05-10 10:33 J	-4407342.24	-4407342.06	-4407341.88	0.0527	0.0323
Mars	-16778-04-16 08:23 J	-4406636.28	-4406636.15	-4406636.02	0.1761	0.1290
Saturn	-16769-06-01 06:14 J	-4403302.43	-4403302.24	-4403302.03	0.0300	0.0172

Uranus	-16767-11-25 11:02 J	-4402395.19	-4402395.04	-4402394.85	0.0144	0.0109
Uranus	-16766-11-30 14:52 J	-4402025.13	-4402024.88	-4402024.62	0.0144	0.0031
Uranus	-16765-12-04 17:31 J	-4401655.00	-4401654.77	-4401654.52	0.0143	0.0048
Uranus	-16764-12-09 19:26 J	-4401284.79	-4401284.69	-4401284.54	0.0143	0.0124
Jupiter	-16763-10-30 21:36 J	-4400959.81	-4400959.60	-4400959.39	0.0499	0.0232
Neptune	-16758-05-17 00:57 J	-4399300.55	-4399300.46	-4399300.32	0.0089	0.0080
Pluto	-16757-03-12 23:31 J	-4398999.53	-4398999.52	-4398999.44	0.0077	0.0076
Neptune	-16757-05-18 12:00 J	-4398933.22	-4398933.00	-4398932.76	0.0089	0.0038
Neptune	-16756-05-20 23:02 J	-4398565.79	-4398565.54	-4398565.28	0.0089	0.0004
Neptune	-16755-05-23 09:36 J	-4398198.30	-4398198.10	-4398197.86	0.0089	0.0044
Neptune	-16754-05-25 20:09 J	-4397830.71	-4397830.66	-4397830.57	0.0089	0.0086
Saturn	-16754-11-30 13:40 J	-4397642.16	-4397641.93	-4397641.70	0.0262	0.0101
Jupiter	-16751-11-04 10:04 J	-4396572.30	-4396572.08	-4396571.86	0.0498	0.0181
Saturn	-16724-12-06 19:55 J	-4386677.79	-4386677.67	-4386677.55	0.0263	0.0229
Uranus	-16723-05-28 06:28 J	-4386505.34	-4386505.23	-4386505.08	0.0134	0.0114
Uranus	-16722-06-01 12:14 J	-4386136.21	-4386135.99	-4386135.76	0.0134	0.0054
Uranus	-16721-06-04 18:14 J	-4385766.99	-4385766.74	-4385766.49	0.0135	0.0008
Uranus	-16720-06-09 00:28 J	-4385397.68	-4385397.48	-4385397.26	0.0135	0.0070
Uranus	-16719-06-13 06:57 J	-4385028.24	-4385028.21	-4385028.14	0.0136	0.0133
Saturn	-16710-06-04 04:19 J	-4381750.56	-4381750.32	-4381750.08	0.0300	0.0054
Jupiter	-16709-05-04 11:45 J	-4381415.21	-4381415.01	-4381414.81	0.0526	0.0262
Jupiter	-16697-05-09 09:07 J	-4377027.33	-4377027.12	-4377026.91	0.0527	0.0223
Saturn	-16695-12-01 23:45 J	-4376090.75	-4376090.51	-4376090.26	0.0262	0.0025
Uranus	-16683-11-25 22:04 J	-4371713.75	-4371713.58	-4371713.39	0.0144	0.0103
Uranus	-16682-12-01 01:40 J	-4371343.68	-4371343.43	-4371343.17	0.0144	0.0025
Uranus	-16681-12-05 04:19 J	-4370973.55	-4370973.32	-4370973.07	0.0143	0.0052
Jupiter	-16680-10-29 20:09 J	-4370644.83	-4370644.66	-4370644.47	0.0500	0.0323
Uranus	-16680-12-10 06:28 J	-4370603.32	-4370603.23	-4370603.10	0.0143	0.0129
Neptune	-16677-11-11 13:40 J	-4369535.94	-4369535.93	-4369535.88	0.0088	0.0087
Neptune	-16676-11-14 02:23 J	-4369168.62	-4369168.40	-4369168.18	0.0088	0.0047

Neptune	-16675-11-16 14:52 J	-4368801.14	-4368800.88	-4368800.62	0.0088	0.0006
Neptune	-16674-11-19 02:52 J	-4368433.60	-4368433.38	-4368433.12	0.0088	0.0036
Neptune	-16673-11-20 15:36 J	-4368065.97	-4368065.85	-4368065.71	0.0088	0.0076
Jupiter	-16668-11-03 09:50 J	-4366257.32	-4366257.09	-4366256.86	0.0499	0.0095
Saturn	-16651-06-06 00:14 J	-4360198.72	-4360198.49	-4360198.25	0.0300	0.0061
Uranus	-16639-05-28 14:23 J	-4355824.03	-4355823.90	-4355823.75	0.0134	0.0111
Uranus	-16638-06-01 20:09 J	-4355454.89	-4355454.66	-4355454.43	0.0134	0.0051
Uranus	-16637-06-05 01:55 J	-4355085.66	-4355085.42	-4355085.17	0.0135	0.0011
Uranus	-16636-06-09 08:09 J	-4354716.36	-4354716.16	-4354715.94	0.0135	0.0072
Saturn	-16636-12-03 08:09 J	-4354539.40	-4354539.16	-4354538.91	0.0263	0.0048
Uranus	-16635-06-13 14:38 J	-4354346.90	-4354346.89	-4354346.83	0.0136	0.0135
Mars	-16627-10-08 02:52 J	-4351308.52	-4351308.38	-4351308.23	0.1747	0.1139
Jupiter	-16626-05-04 11:16 J	-4351100.19	-4351100.03	-4351099.85	0.0526	0.0358
Jupiter	-16614-05-09 09:07 J	-4346712.34	-4346712.12	-4346711.89	0.0526	0.0126
Saturn	-16607-11-28 15:07 J	-4343952.04	-4343951.87	-4343951.70	0.0261	0.0193
Uranus	-16599-11-26 06:14 J	-4341032.42	-4341032.24	-4341032.05	0.0144	0.0099
Uranus	-16598-12-01 09:50 J	-4340662.34	-4340662.09	-4340661.83	0.0144	0.0022
Jupiter	-16597-10-28 23:45 J	-4340329.65	-4340329.51	-4340329.36	0.0500	0.0394
Uranus	-16597-12-05 12:28 J	-4340292.20	-4340291.98	-4340291.72	0.0143	0.0057
Uranus	-16596-12-10 14:52 J	-4339921.95	-4339921.88	-4339921.76	0.0143	0.0132
Pluto	-16595-09-09 20:09 J	-4339648.92	-4339648.66	-4339648.40	0.0067	0.0005
Neptune	-16593-05-18 00:14 J	-4339032.66	-4339032.49	-4339032.27	0.0089	0.0058
Neptune	-16592-05-20 11:16 J	-4338665.27	-4338665.03	-4338664.77	0.0089	0.0017
Saturn	-16592-06-07 15:50 J	-4338647.03	-4338646.84	-4338646.63	0.0300	0.0164
Neptune	-16591-05-22 22:19 J	-4338297.81	-4338297.57	-4338297.32	0.0089	0.0024
Neptune	-16590-05-25 08:52 J	-4337930.29	-4337930.13	-4337929.95	0.0089	0.0066
Jupiter	-16585-11-02 13:55 J	-4335942.15	-4335941.92	-4335941.68	0.0499	0.0026
Saturn	-16577-12-04 13:26 J	-4332988.16	-4332987.94	-4332987.71	0.0263	0.0116
Mars	-16573-04-13 01:40 J	-4331762.60	-4331762.43	-4331762.25	0.1773	0.0757
Jupiter	-16573-11-07 03:07 J	-4331554.46	-4331554.37	-4331554.25	0.0498	0.0442

Saturn	-16563-06-01 14:09 J	-4328061.07	-4328060.91	-4328060.73	0.0301	0.0210
Uranus	-16555-05-28 22:04 J	-4325142.71	-4325142.58	-4325142.42	0.0134	0.0108
Uranus	-16554-06-02 03:36 J	-4324773.57	-4324773.35	-4324773.11	0.0134	0.0048
Uranus	-16553-06-05 09:36 J	-4324404.35	-4324404.10	-4324403.85	0.0135	0.0013
Uranus	-16552-06-09 15:36 J	-4324035.04	-4324034.85	-4324034.63	0.0135	0.0074
Uranus	-16551-06-13 22:19 J	-4323665.57	-4323665.57	-4323665.56	0.0136	0.0135
Mars	-16548-10-10 17:02 J	-4322450.97	-4322450.79	-4322450.62	0.1751	0.0756
Saturn	-16548-11-29 18:57 J	-4322400.92	-4322400.71	-4322400.49	0.0261	0.0129
Jupiter	-16543-05-03 12:43 J	-4320785.08	-4320784.97	-4320784.84	0.0525	0.0445
Saturn	-16533-06-09 02:38 J	-4317095.50	-4317095.39	-4317095.26	0.0300	0.0256
Jupiter	-16531-05-08 09:36 J	-4316397.33	-4316397.10	-4316396.86	0.0526	0.0036
Jupiter	-16519-05-13 07:11 J	-4312009.23	-4312009.20	-4312009.16	0.0527	0.0519
Saturn	-16518-12-06 15:36 J	-4311437.03	-4311436.85	-4311436.66	0.0263	0.0178
Uranus	-16515-11-26 11:02 J	-4310351.22	-4310351.04	-4310350.84	0.0144	0.0098
Jupiter	-16514-10-29 06:28 J	-4310014.32	-4310014.23	-4310014.13	0.0500	0.0453
Uranus	-16514-12-01 14:52 J	-4309981.13	-4309980.88	-4309980.62	0.0144	0.0020
Uranus	-16513-12-05 17:45 J	-4309610.99	-4309610.76	-4309610.51	0.0143	0.0057
Neptune	-16512-11-13 12:28 J	-4309268.13	-4309267.98	-4309267.78	0.0088	0.0066
Uranus	-16512-12-10 20:23 J	-4309240.73	-4309240.65	-4309240.55	0.0143	0.0133
Neptune	-16511-11-16 01:26 J	-4308900.68	-4308900.44	-4308900.18	0.0088	0.0025
Neptune	-16510-11-18 13:40 J	-4308533.17	-4308532.93	-4308532.66	0.0088	0.0017
Neptune	-16509-11-20 02:09 J	-4308165.60	-4308165.41	-4308165.20	0.0088	0.0056
Pluto	-16508-03-16 01:26 J	-4308049.65	-4308049.44	-4308049.21	0.0077	0.0039
Saturn	-16504-06-02 20:52 J	-4306509.84	-4306509.63	-4306509.40	0.0301	0.0127
Jupiter	-16502-11-02 16:33 J	-4305627.04	-4305626.81	-4305626.58	0.0500	0.0052
Mars	-16494-04-16 19:11 J	-4302904.83	-4302904.70	-4302904.57	0.1768	0.1283
Jupiter	-16490-11-07 06:57 J	-4301239.36	-4301239.21	-4301239.05	0.0499	0.0367
Saturn	-16489-11-30 19:40 J	-4300849.91	-4300849.68	-4300849.43	0.0261	0.0070
Uranus	-16471-05-29 06:00 J	-4294461.39	-4294461.25	-4294461.09	0.0134	0.0105
Uranus	-16470-06-02 11:31 J	-4294092.24	-4294092.02	-4294091.77	0.0134	0.0046

Uranus	-16469-06-05 17:16 J	-4293723.02	-4293722.78	-4293722.52	0.0135	0.0016
Uranus	-16468-06-09 23:16 J	-4293353.73	-4293353.53	-4293353.31	0.0135	0.0076
Jupiter	-16460-05-02 18:14 J	-4290469.77	-4290469.74	-4290469.69	0.0525	0.0517
Saturn	-16459-12-07 14:38 J	-4289885.99	-4289885.89	-4289885.77	0.0262	0.0233
Jupiter	-16448-05-07 18:28 J	-4286081.96	-4286081.73	-4286081.50	0.0526	0.0027
Saturn	-16445-06-03 23:16 J	-4284958.77	-4284958.53	-4284958.30	0.0301	0.0053
Jupiter	-16436-05-12 17:45 J	-4281693.86	-4281693.76	-4281693.65	0.0527	0.0464
Uranus	-16431-11-26 15:07 J	-4279670.05	-4279669.87	-4279669.67	0.0144	0.0096
Uranus	-16430-12-01 18:57 J	-4279299.96	-4279299.71	-4279299.45	0.0144	0.0019
Saturn	-16430-12-02 18:00 J	-4279299.00	-4279298.75	-4279298.50	0.0261	0.0017
Neptune	-16429-05-17 12:43 J	-4279132.08	-4279131.97	-4279131.82	0.0089	0.0077
Uranus	-16429-12-05 21:50 J	-4278929.81	-4278929.59	-4278929.34	0.0143	0.0059
Neptune	-16428-05-19 23:45 J	-4278764.73	-4278764.51	-4278764.27	0.0089	0.0036
Uranus	-16428-12-11 00:28 J	-4278559.55	-4278559.48	-4278559.37	0.0143	0.0134
Neptune	-16427-05-22 10:33 J	-4278397.31	-4278397.06	-4278396.80	0.0089	0.0005
Neptune	-16426-05-24 21:07 J	-4278029.83	-4278029.62	-4278029.39	0.0089	0.0046
Neptune	-16425-05-26 07:40 J	-4277662.22	-4277662.18	-4277662.11	0.0089	0.0087
Jupiter	-16419-11-02 02:38 J	-4275311.62	-4275311.39	-4275311.16	0.0500	0.0098
Jupiter	-16407-11-06 18:28 J	-4270923.90	-4270923.73	-4270923.55	0.0499	0.0325
Uranus	-16387-05-29 15:07 J	-4263780.02	-4263779.87	-4263779.69	0.0134	0.0101
Uranus	-16386-06-02 20:52 J	-4263410.86	-4263410.63	-4263410.39	0.0134	0.0042
Saturn	-16386-06-05 19:55 J	-4263407.91	-4263407.67	-4263407.43	0.0301	0.0008
Uranus	-16385-06-06 02:38 J	-4263041.64	-4263041.39	-4263041.14	0.0135	0.0019
Uranus	-16384-06-10 08:38 J	-4262672.34	-4262672.14	-4262671.93	0.0135	0.0079
Saturn	-16371-12-03 13:40 J	-4257748.17	-4257747.93	-4257747.68	0.0261	0.0033
Jupiter	-16365-05-07 04:19 J	-4255766.54	-4255766.32	-4255766.09	0.0525	0.0080
Jupiter	-16353-05-12 01:11 J	-4251378.59	-4251378.45	-4251378.30	0.0526	0.0401
Neptune	-16348-11-12 22:33 J	-4249367.60	-4249367.56	-4249367.47	0.0088	0.0086
Pluto	-16347-09-10 20:09 J	-4249065.87	-4249065.66	-4249065.41	0.0067	0.0030
Neptune	-16347-11-15 11:02 J	-4249000.24	-4249000.04	-4248999.79	0.0088	0.0046

Uranus	-16347-11-26 22:04 J	-4248988.77	-4248988.58	-4248988.38	0.0144	0.0093
Neptune	-16346-11-18 00:00 J	-4248632.76	-4248632.50	-4248632.23	0.0088	0.0005
Uranus	-16346-12-02 01:55 J	-4248618.67	-4248618.42	-4248618.16	0.0144	0.0016
Neptune	-16345-11-19 12:43 J	-4248265.21	-4248264.97	-4248264.73	0.0088	0.0037
Uranus	-16345-12-06 05:02 J	-4248248.52	-4248248.29	-4248248.06	0.0143	0.0061
Neptune	-16344-11-22 00:43 J	-4247897.57	-4247897.47	-4247897.32	0.0088	0.0078
Uranus	-16344-12-11 07:26 J	-4247878.25	-4247878.19	-4247878.10	0.0143	0.0136
Mars	-16343-10-08 14:23 J	-4247577.05	-4247576.90	-4247576.76	0.1740	0.1102
Saturn	-16342-11-28 13:11 J	-4247161.06	-4247160.95	-4247160.83	0.0260	0.0227
Jupiter	-16336-11-01 15:21 J	-4244996.09	-4244995.86	-4244995.63	0.0500	0.0135
Saturn	-16327-06-06 13:26 J	-4241857.17	-4241856.94	-4241856.70	0.0301	0.0059
Jupiter	-16324-11-06 01:11 J	-4240608.64	-4240608.45	-4240608.24	0.0500	0.0265
Saturn	-16312-12-04 08:38 J	-4236197.37	-4236197.14	-4236196.90	0.0261	0.0079
Uranus	-16303-05-30 00:14 J	-4233098.65	-4233098.49	-4233098.31	0.0134	0.0098
Uranus	-16302-06-03 05:45 J	-4232729.48	-4232729.26	-4232729.00	0.0134	0.0039
Uranus	-16301-06-06 11:45 J	-4232360.26	-4232360.01	-4232359.76	0.0135	0.0022
Uranus	-16300-06-10 17:45 J	-4231990.95	-4231990.76	-4231990.56	0.0135	0.0083
Mars	-16289-04-13 10:33 J	-4228031.23	-4228031.06	-4228030.89	0.1781	0.0848
Saturn	-16283-11-29 07:55 J	-4225610.33	-4225610.17	-4225609.98	0.0260	0.0181
Jupiter	-16282-05-07 14:09 J	-4225451.13	-4225450.91	-4225450.68	0.0526	0.0133
Jupiter	-16270-05-12 15:07 J	-4221063.03	-4221062.87	-4221062.70	0.0526	0.0360
Saturn	-16268-06-07 06:14 J	-4220306.46	-4220306.24	-4220306.01	0.0301	0.0109
Neptune	-16264-05-19 12:28 J	-4218864.17	-4218863.98	-4218863.78	0.0089	0.0056
Mars	-16264-10-11 03:07 J	-4218719.54	-4218719.37	-4218719.19	0.1744	0.0732
Neptune	-16263-05-21 23:02 J	-4218496.78	-4218496.54	-4218496.28	0.0089	0.0015
Uranus	-16263-11-27 08:09 J	-4218307.36	-4218307.16	-4218306.95	0.0144	0.0088
Neptune	-16262-05-24 09:36 J	-4218129.33	-4218129.10	-4218128.84	0.0089	0.0026
Uranus	-16262-12-02 11:45 J	-4217937.27	-4217937.01	-4217936.75	0.0144	0.0011
Neptune	-16261-05-25 20:09 J	-4217761.80	-4217761.66	-4217761.47	0.0089	0.0067
Uranus	-16261-12-06 14:23 J	-4217567.12	-4217566.90	-4217566.66	0.0143	0.0066

Pluto	-16260-03-16 19:55 J	-4217466.91	-4217466.67	-4217466.41	0.0077	0.0021
Uranus	-16260-12-11 16:48 J	-4217196.83	-4217196.80	-4217196.73	0.0143	0.0140
Jupiter	-16253-10-31 21:50 J	-4214680.81	-4214680.59	-4214680.38	0.0500	0.0196
Saturn	-16253-12-05 03:21 J	-4214646.57	-4214646.36	-4214646.13	0.0261	0.0126
Jupiter	-16241-11-05 13:40 J	-4210293.14	-4210292.93	-4210292.72	0.0500	0.0229
Saturn	-16239-05-31 20:09 J	-4209720.71	-4209720.66	-4209720.61	0.0303	0.0294
Saturn	-16224-11-30 03:50 J	-4204059.55	-4204059.34	-4204059.12	0.0260	0.0133
Uranus	-16219-05-30 10:04 J	-4202417.24	-4202417.08	-4202416.88	0.0134	0.0093
Uranus	-16218-06-03 16:04 J	-4202048.07	-4202047.83	-4202047.59	0.0134	0.0034
Uranus	-16217-06-06 21:36 J	-4201678.84	-4201678.60	-4201678.35	0.0135	0.0026
Uranus	-16216-06-11 03:36 J	-4201309.53	-4201309.35	-4201309.15	0.0135	0.0086
Mars	-16210-04-17 04:19 J	-4199173.46	-4199173.32	-4199173.18	0.1776	0.1234
Saturn	-16209-06-07 23:45 J	-4198755.71	-4198755.51	-4198755.31	0.0301	0.0158
Jupiter	-16199-05-07 06:00 J	-4195135.47	-4195135.25	-4195135.03	0.0526	0.0161
Saturn	-16194-12-06 23:31 J	-4193095.70	-4193095.52	-4193095.33	0.0261	0.0175
Jupiter	-16187-05-12 01:55 J	-4190747.60	-4190747.42	-4190747.23	0.0526	0.0313
Neptune	-16183-11-14 21:07 J	-4189099.78	-4189099.62	-4189099.42	0.0088	0.0064
Neptune	-16182-11-17 09:35 J	-4188732.33	-4188732.10	-4188731.83	0.0088	0.0024
Neptune	-16181-11-18 22:19 J	-4188364.82	-4188364.57	-4188364.30	0.0088	0.0017
Saturn	-16180-06-01 14:52 J	-4188170.01	-4188169.88	-4188169.72	0.0303	0.0241
Neptune	-16180-11-21 10:48 J	-4187997.23	-4187997.05	-4187996.84	0.0088	0.0058
Uranus	-16179-11-27 19:40 J	-4187625.87	-4187625.68	-4187625.45	0.0144	0.0082
Uranus	-16178-12-02 23:31 J	-4187255.78	-4187255.52	-4187255.26	0.0144	0.0005
Uranus	-16177-12-07 02:24 J	-4186885.62	-4186885.40	-4186885.18	0.0143	0.0071
Jupiter	-16170-11-01 10:33 J	-4184365.26	-4184365.06	-4184364.85	0.0501	0.0230
Saturn	-16165-12-01 01:40 J	-4182508.67	-4182508.43	-4182508.20	0.0260	0.0081
Jupiter	-16158-11-06 01:40 J	-4179977.65	-4179977.43	-4179977.21	0.0500	0.0190
Saturn	-16150-06-09 20:38 J	-4177204.81	-4177204.64	-4177204.47	0.0301	0.0217
Uranus	-16135-05-30 19:11 J	-4171735.88	-4171735.70	-4171735.51	0.0134	0.0090
Saturn	-16135-12-07 22:48 J	-4171544.67	-4171544.55	-4171544.43	0.0261	0.0228

Uranus	-16134-06-04 00:43 J	-4171366.71	-4171366.47	-4171366.22	0.0134	0.0031
Uranus	-16133-06-07 06:28 J	-4170997.47	-4170997.23	-4170996.98	0.0135	0.0029
Uranus	-16132-06-11 12:14 J	-4170628.16	-4170627.99	-4170627.79	0.0135	0.0090
Saturn	-16121-06-02 13:40 J	-4166619.12	-4166618.93	-4166618.73	0.0303	0.0178
Jupiter	-16116-05-06 12:00 J	-4164820.21	-4164820.00	-4164819.79	0.0525	0.0227
Saturn	-16106-12-03 02:09 J	-4160957.66	-4160957.41	-4160957.16	0.0260	0.0025
Jupiter	-16104-05-11 08:09 J	-4160432.36	-4160432.16	-4160431.96	0.0526	0.0244
Neptune	-16100-05-19 00:00 J	-4158963.61	-4158963.50	-4158963.35	0.0089	0.0076
Neptune	-16099-05-21 10:48 J	-4158596.27	-4158596.05	-4158595.80	0.0089	0.0035
Pluto	-16099-09-11 20:24 J	-4158482.69	-4158482.65	-4158482.57	0.0067	0.0065
Neptune	-16098-05-23 21:50 J	-4158228.84	-4158228.59	-4158228.33	0.0089	0.0007
Pluto	-16098-09-13 10:33 J	-4158116.26	-4158116.06	-4158115.83	0.0067	0.0037
Neptune	-16097-05-25 08:24 J	-4157861.36	-4157861.15	-4157860.93	0.0089	0.0047
Neptune	-16096-05-27 18:43 J	-4157493.74	-4157493.72	-4157493.65	0.0089	0.0088
Uranus	-16095-11-28 07:40 J	-4156944.39	-4156944.18	-4156943.95	0.0144	0.0075
Uranus	-16094-12-03 11:16 J	-4156574.29	-4156574.03	-4156573.77	0.0144	0.0002
Uranus	-16093-12-07 13:40 J	-4156204.13	-4156203.93	-4156203.69	0.0143	0.0077
Saturn	-16091-06-10 21:21 J	-4155653.67	-4155653.61	-4155653.52	0.0301	0.0285
Jupiter	-16087-10-31 15:07 J	-4154050.05	-4154049.87	-4154049.67	0.0500	0.0294
Jupiter	-16075-11-05 04:48 J	-4149662.52	-4149662.30	-4149662.07	0.0500	0.0119
Saturn	-16062-06-04 17:45 J	-4145067.98	-4145067.76	-4145067.53	0.0303	0.0102
Mars	-16059-10-09 01:55 J	-4143845.57	-4143845.42	-4143845.27	0.1733	0.1051
Uranus	-16051-05-31 03:35 J	-4141054.53	-4141054.35	-4141054.14	0.0134	0.0086
Uranus	-16050-06-04 09:21 J	-4140685.36	-4140685.11	-4140684.86	0.0134	0.0028
Uranus	-16049-06-07 14:38 J	-4140316.13	-4140315.89	-4140315.64	0.0135	0.0032
Uranus	-16048-06-11 20:52 J	-4139946.81	-4139946.63	-4139946.44	0.0135	0.0092
Saturn	-16047-12-04 06:14 J	-4139406.48	-4139406.24	-4139405.99	0.0260	0.0040
Jupiter	-16033-05-05 17:31 J	-4134504.96	-4134504.77	-4134504.58	0.0525	0.0297
Jupiter	-16021-05-10 16:04 J	-4130117.04	-4130116.83	-4130116.61	0.0526	0.0187
Neptune	-16019-11-14 06:28 J	-4129199.28	-4129199.23	-4129199.12	0.0088	0.0085

Neptune -16018-11-16 19:40 J -4128831.91 -4128831.68 -4128831.46 0.0088 0.0044
 Saturn -16018-11-29 13:11 J -4128819.09 -4128818.95 -4128818.79 0.0260 0.0205
 Neptune -16017-11-18 08:09 J -4128464.42 -4128464.16 -4128463.90 0.0088 0.0003
 Neptune -16016-11-20 20:24 J -4128096.88 -4128096.65 -4128096.40 0.0088 0.0037
 Neptune -16015-11-23 08:24 J -4127729.24 -4127729.15 -4127729.00 0.0088 0.0078
 Pluto -16012-03-17 14:52 J -4126883.89 -4126883.88 -4126883.79 0.0077 0.0076
 Uranus -16011-11-28 16:04 J -4126263.04 -4126262.83 -4126262.59 0.0144 0.0071
 Uranus -16010-12-03 19:55 J -4125892.93 -4125892.67 -4125892.41 0.0144 0.0005
 Uranus -16009-12-07 22:33 J -4125522.76 -4125522.56 -4125522.33 0.0144 0.0080
 Mars -16005-04-13 18:00 J -4124299.91 -4124299.75 -4124299.58 0.1788 0.0970
 Jupiter -16004-10-30 20:24 J -4123734.81 -4123734.65 -4123734.48 0.0501 0.0356
 Saturn -16003-06-06 03:21 J -4123516.60 -4123516.36 -4123516.12 0.0302 0.0013

16TH MILLENNIUM BCE

This is a list of transits of Earth in the 16th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Jupiter	-15992-11-04 10:48 J		-4119347.28	-4119347.05	-4119346.82	0.0500	0.0058	
Saturn	-15988-12-05 13:55 J		-4117855.14	-4117854.92	-4117854.69	0.0261	0.0110	
Mars	-15980-10-11 14:52 J		-4114988.05	-4114987.88	-4114987.70	0.1737	0.0755	
Jupiter	-15980-11-09 00:57 J		-4114959.53	-4114959.46	-4114959.38	0.0499	0.0471	
Uranus	-15967-05-31 11:02 J		-4110373.21	-4110373.04	-4110372.82	0.0134	0.0084	
Uranus	-15966-06-04 16:33 J		-4110004.05	-4110003.81	-4110003.56	0.0134	0.0025	
Uranus	-15965-06-07 22:04 J		-4109634.82	-4109634.58	-4109634.33	0.0135	0.0034	

Uranus	-15964-06-12 04:04 J	-4109265.50	-4109265.33	-4109265.14	0.0135	0.0093
Saturn	-15959-11-30 21:35 J	-4107267.81	-4107267.60	-4107267.38	0.0260	0.0134
Jupiter	-15950-05-05 18:28 J	-4104189.88	-4104189.73	-4104189.56	0.0525	0.0381
Saturn	-15944-06-07 19:11 J	-4101964.93	-4101964.70	-4101964.47	0.0302	0.0092
Jupiter	-15938-05-10 14:38 J	-4099802.12	-4099801.89	-4099801.66	0.0526	0.0089
Neptune	-15935-05-20 23:02 J	-4098695.74	-4098695.54	-4098695.33	0.0089	0.0054
Neptune	-15934-05-23 09:35 J	-4098328.34	-4098328.10	-4098327.84	0.0089	0.0014
Neptune	-15933-05-24 20:09 J	-4097960.89	-4097960.66	-4097960.40	0.0089	0.0027
Neptune	-15932-05-27 06:57 J	-4097593.36	-4097593.21	-4097593.03	0.0089	0.0067
Saturn	-15929-12-07 00:14 J	-4096303.66	-4096303.49	-4096303.31	0.0261	0.0187
Uranus	-15928-11-23 18:00 J	-4095951.75	-4095951.75	-4095951.75	0.0145	0.0145
Uranus	-15927-11-28 21:35 J	-4095581.81	-4095581.60	-4095581.36	0.0144	0.0070
Mars	-15926-04-17 12:14 J	-4095442.13	-4095441.99	-4095441.84	0.1783	0.1153
Uranus	-15926-12-04 01:26 J	-4095211.69	-4095211.44	-4095211.18	0.0144	0.0007
Uranus	-15925-12-08 04:19 J	-4094841.52	-4094841.32	-4094841.10	0.0144	0.0082
Jupiter	-15921-10-29 23:31 J	-4093419.64	-4093419.52	-4093419.39	0.0501	0.0427
Saturn	-15915-06-01 17:31 J	-4091378.84	-4091378.77	-4091378.69	0.0302	0.0285
Jupiter	-15909-11-03 11:02 J	-4089032.28	-4089032.04	-4089031.81	0.0500	0.0023
Saturn	-15900-12-02 08:24 J	-4085716.39	-4085716.15	-4085715.90	0.0261	0.0058
Jupiter	-15897-11-07 23:16 J	-4084644.67	-4084644.53	-4084644.37	0.0499	0.0383
Saturn	-15885-06-09 14:24 J	-4080413.06	-4080412.90	-4080412.71	0.0302	0.0206
Uranus	-15883-05-31 20:24 J	-4079691.83	-4079691.65	-4079691.43	0.0134	0.0080
Uranus	-15882-06-05 01:55 J	-4079322.66	-4079322.42	-4079322.17	0.0134	0.0022
Uranus	-15881-06-08 07:11 J	-4078953.43	-4078953.20	-4078952.95	0.0135	0.0038
Uranus	-15880-06-12 12:57 J	-4078584.11	-4078583.96	-4078583.76	0.0135	0.0097
Jupiter	-15867-05-04 14:09 J	-4073874.99	-4073874.91	-4073874.83	0.0525	0.0490
Saturn	-15856-06-03 16:04 J	-4069827.02	-4069826.83	-4069826.62	0.0302	0.0164
Jupiter	-15855-05-09 11:16 J	-4069487.26	-4069487.03	-4069486.80	0.0526	0.0019
Neptune	-15854-11-16 04:04 J	-4068931.48	-4068931.33	-4068931.12	0.0088	0.0064
Neptune	-15853-11-17 17:02 J	-4068564.04	-4068563.79	-4068563.54	0.0088	0.0024

Neptune	-15852-11-20 05:02 J	-4068196.53	-4068196.29	-4068196.02	0.0088	0.0017
Neptune	-15851-11-22 17:16 J	-4067828.96	-4067828.78	-4067828.56	0.0088	0.0058
Pluto	-15850-09-14 08:52 J	-4067533.39	-4067533.13	-4067532.87	0.0067	0.0006
Uranus	-15844-11-23 23:02 J	-4065270.56	-4065270.54	-4065270.48	0.0145	0.0143
Jupiter	-15843-05-14 08:09 J	-4065099.26	-4065099.16	-4065099.04	0.0527	0.0458
Uranus	-15843-11-29 03:21 J	-4064900.58	-4064900.36	-4064900.13	0.0144	0.0067
Uranus	-15842-12-04 06:57 J	-4064530.46	-4064530.21	-4064529.95	0.0144	0.0009
Saturn	-15841-12-03 20:24 J	-4064164.90	-4064164.65	-4064164.40	0.0261	0.0021
Uranus	-15841-12-08 09:50 J	-4064160.28	-4064160.09	-4064159.86	0.0144	0.0084
Jupiter	-15826-11-03 09:50 J	-4058717.32	-4058717.09	-4058716.86	0.0500	0.0111
Jupiter	-15814-11-07 23:02 J	-4054329.72	-4054329.54	-4054329.34	0.0500	0.0298
Saturn	-15812-11-29 06:57 J	-4053577.34	-4053577.21	-4053577.06	0.0260	0.0214
Uranus	-15800-05-28 00:57 J	-4049379.47	-4049379.46	-4049379.43	0.0134	0.0133
Uranus	-15799-06-01 05:45 J	-4049010.45	-4049010.26	-4049010.04	0.0134	0.0076
Uranus	-15798-06-05 11:16 J	-4048641.28	-4048641.03	-4048640.78	0.0134	0.0018
Saturn	-15797-06-05 14:52 J	-4048275.11	-4048274.88	-4048274.64	0.0302	0.0042
Uranus	-15797-06-08 16:48 J	-4048272.03	-4048271.80	-4048271.56	0.0135	0.0041
Uranus	-15796-06-12 22:48 J	-4047902.71	-4047902.55	-4047902.37	0.0135	0.0100
Saturn	-15782-12-06 07:11 J	-4042613.42	-4042613.20	-4042612.96	0.0261	0.0099
Mars	-15775-10-09 15:07 J	-4040114.03	-4040113.87	-4040113.71	0.1727	0.0959
Jupiter	-15772-05-08 08:38 J	-4039172.37	-4039172.14	-4039171.92	0.0525	0.0121
Neptune	-15771-05-20 09:07 J	-4038795.23	-4038795.12	-4038794.95	0.0089	0.0075
Neptune	-15770-05-22 20:38 J	-4038427.87	-4038427.64	-4038427.40	0.0089	0.0034
Neptune	-15769-05-24 07:40 J	-4038060.44	-4038060.18	-4038059.93	0.0089	0.0006
Neptune	-15768-05-26 17:45 J	-4037692.95	-4037692.76	-4037692.52	0.0089	0.0048
Neptune	-15767-05-29 04:48 J	-4037325.33	-4037325.30	-4037325.23	0.0089	0.0087
Pluto	-15763-03-20 08:38 J	-4035934.39	-4035934.14	-4035933.87	0.0077	0.0010
Jupiter	-15760-05-13 05:31 J	-4034784.44	-4034784.27	-4034784.10	0.0526	0.0350
Uranus	-15760-11-24 07:40 J	-4034589.24	-4034589.18	-4034589.09	0.0145	0.0138
Uranus	-15759-11-29 12:00 J	-4034219.23	-4034219.00	-4034218.77	0.0145	0.0063

Uranus	-15758-12-04 15:35 J	-4033849.10	-4033848.85	-4033848.59	0.0144	0.0013
Uranus	-15757-12-08 18:28 J	-4033478.92	-4033478.73	-4033478.52	0.0144	0.0087
Saturn	-15753-11-30 17:31 J	-4032025.98	-4032025.77	-4032025.56	0.0260	0.0137
Jupiter	-15743-11-02 10:48 J	-4028402.26	-4028402.05	-4028401.83	0.0501	0.0191
Saturn	-15738-06-08 12:28 J	-4026723.21	-4026722.98	-4026722.74	0.0302	0.0078
Jupiter	-15731-11-07 00:14 J	-4024014.70	-4024014.49	-4024014.28	0.0499	0.0219
Saturn	-15723-12-07 16:19 J	-4021061.99	-4021061.82	-4021061.62	0.0261	0.0175
Mars	-15721-04-14 00:00 J	-4020568.65	-4020568.50	-4020568.35	0.1795	0.1136
Uranus	-15716-05-28 11:45 J	-4018698.07	-4018698.01	-4018697.93	0.0134	0.0128
Uranus	-15715-06-01 16:33 J	-4018329.01	-4018328.81	-4018328.59	0.0134	0.0071
Uranus	-15714-06-05 22:04 J	-4017959.82	-4017959.58	-4017959.32	0.0134	0.0013
Uranus	-15713-06-09 03:50 J	-4017590.57	-4017590.34	-4017590.10	0.0135	0.0046
Uranus	-15712-06-13 09:35 J	-4017221.23	-4017221.10	-4017220.92	0.0135	0.0105
Saturn	-15709-06-01 11:45 J	-4016137.03	-4016137.01	-4016136.96	0.0303	0.0299
Mars	-15696-10-12 03:07 J	-4011256.54	-4011256.37	-4011256.20	0.1731	0.0800
Saturn	-15694-12-03 01:11 J	-4010474.68	-4010474.45	-4010474.20	0.0260	0.0065
Neptune	-15690-11-15 12:57 J	-4009031.01	-4009030.96	-4009030.86	0.0088	0.0084
Jupiter	-15689-05-07 05:45 J	-4008857.46	-4008857.26	-4008857.05	0.0525	0.0224
Neptune	-15689-11-17 01:11 J	-4008663.65	-4008663.45	-4008663.20	0.0088	0.0045
Neptune	-15688-11-19 13:55 J	-4008296.18	-4008295.92	-4008295.66	0.0088	0.0004
Neptune	-15687-11-22 01:55 J	-4007928.64	-4007928.42	-4007928.17	0.0088	0.0037
Neptune	-15686-11-24 14:38 J	-4007561.01	-4007560.89	-4007560.75	0.0088	0.0077
Saturn	-15679-06-10 06:43 J	-4005171.40	-4005171.22	-4005171.03	0.0302	0.0189
Jupiter	-15677-05-12 02:09 J	-4004469.61	-4004469.41	-4004469.20	0.0526	0.0245
Uranus	-15676-11-24 19:11 J	-4003907.79	-4003907.70	-4003907.59	0.0145	0.0132
Uranus	-15675-11-29 23:16 J	-4003537.76	-4003537.53	-4003537.29	0.0144	0.0057
Uranus	-15674-12-05 02:52 J	-4003167.63	-4003167.38	-4003167.12	0.0144	0.0018
Uranus	-15673-12-09 05:45 J	-4002797.44	-4002797.26	-4002797.05	0.0144	0.0093
Saturn	-15664-12-08 22:33 J	-3999510.63	-3999510.56	-3999510.46	0.0261	0.0246
Jupiter	-15660-11-01 13:40 J	-3998087.12	-3998086.93	-3998086.72	0.0500	0.0264

Saturn	-15650-06-04 03:21 J	-3994585.54	-3994585.36	-3994585.17	0.0303	0.0192
Jupiter	-15648-11-05 23:45 J	-3993699.73	-3993699.51	-3993699.28	0.0500	0.0132
Mars	-15642-04-17 19:26 J	-3991710.85	-3991710.69	-3991710.53	0.1790	0.1046
Saturn	-15635-12-04 06:28 J	-3988923.48	-3988923.23	-3988922.98	0.0260	0.0003
Uranus	-15632-05-28 21:50 J	-3988016.66	-3988016.59	-3988016.47	0.0134	0.0124
Uranus	-15631-06-02 03:21 J	-3987647.57	-3987647.36	-3987647.14	0.0134	0.0066
Uranus	-15630-06-06 08:38 J	-3987278.39	-3987278.14	-3987277.88	0.0134	0.0009
Uranus	-15629-06-09 14:24 J	-3986909.12	-3986908.90	-3986908.66	0.0135	0.0050
Uranus	-15628-06-13 20:52 J	-3986539.77	-3986539.63	-3986539.48	0.0135	0.0108
Saturn	-15620-06-11 18:57 J	-3983619.76	-3983619.71	-3983619.62	0.0301	0.0288
Jupiter	-15606-05-07 07:11 J	-3978542.38	-3978542.20	-3978542.01	0.0525	0.0311
Neptune	-15606-05-22 06:28 J	-3978527.41	-3978527.23	-3978527.01	0.0089	0.0056
Saturn	-15606-11-29 10:19 J	-3978336.12	-3978336.07	-3978335.98	0.0260	0.0249
Neptune	-15605-05-23 17:31 J	-3978160.01	-3978159.77	-3978159.50	0.0089	0.0015
Neptune	-15604-05-26 04:33 J	-3977792.54	-3977792.31	-3977792.05	0.0089	0.0026
Neptune	-15603-05-28 15:07 J	-3977425.02	-3977424.87	-3977424.68	0.0089	0.0067
Pluto	-15602-09-15 07:26 J	-3976950.35	-3976950.19	-3976949.97	0.0067	0.0045
Pluto	-15601-09-15 22:04 J	-3976583.69	-3976583.58	-3976583.43	0.0067	0.0058
Jupiter	-15594-05-12 06:28 J	-3974154.45	-3974154.23	-3974154.01	0.0526	0.0165
Uranus	-15592-11-25 08:38 J	-3973226.25	-3973226.14	-3973225.99	0.0145	0.0125
Saturn	-15591-06-05 13:11 J	-3973034.18	-3973033.95	-3973033.72	0.0303	0.0099
Uranus	-15591-11-30 13:11 J	-3972856.19	-3972855.95	-3972855.71	0.0144	0.0050
Uranus	-15590-12-05 16:48 J	-3972486.05	-3972485.80	-3972485.54	0.0144	0.0025
Uranus	-15589-12-09 19:55 J	-3972115.86	-3972115.67	-3972115.48	0.0144	0.0099
Jupiter	-15577-10-31 15:21 J	-3967772.03	-3967771.86	-3967771.69	0.0501	0.0345
Saturn	-15576-12-05 07:55 J	-3967372.41	-3967372.17	-3967371.92	0.0260	0.0064
Jupiter	-15565-11-05 06:28 J	-3963384.46	-3963384.23	-3963384.00	0.0501	0.0072
Jupiter	-15553-11-09 21:50 J	-3958996.63	-3958996.59	-3958996.54	0.0500	0.0487
Uranus	-15548-05-29 08:52 J	-3957335.22	-3957335.13	-3957334.99	0.0134	0.0119
Uranus	-15547-06-02 14:24 J	-3956966.12	-3956965.90	-3956965.67	0.0134	0.0061

Saturn	-15547-11-30 11:02 J	-3956785.21	-3956785.04	-3956784.87	0.0259	0.0190
Uranus	-15546-06-06 19:55 J	-3956596.92	-3956596.67	-3956596.42	0.0134	0.0004
Uranus	-15545-06-10 01:26 J	-3956227.66	-3956227.44	-3956227.20	0.0135	0.0055
Uranus	-15544-06-14 07:26 J	-3955858.31	-3955858.19	-3955858.03	0.0135	0.0113
Saturn	-15532-06-06 17:02 J	-3951483.03	-3951482.79	-3951482.55	0.0303	0.0022
Neptune	-15525-11-16 08:38 J	-3948763.29	-3948763.14	-3948762.94	0.0088	0.0066
Neptune	-15524-11-18 21:07 J	-3948395.86	-3948395.62	-3948395.36	0.0088	0.0026
Jupiter	-15523-05-06 17:16 J	-3948226.94	-3948226.78	-3948226.61	0.0524	0.0364
Neptune	-15523-11-21 09:35 J	-3948028.34	-3948028.10	-3948027.83	0.0088	0.0016
Neptune	-15522-11-23 21:35 J	-3947660.78	-3947660.60	-3947660.38	0.0088	0.0055
Saturn	-15517-12-06 06:28 J	-3945821.45	-3945821.23	-3945821.00	0.0260	0.0119
Pluto	-15515-03-21 02:38 J	-3945351.58	-3945351.39	-3945351.18	0.0077	0.0050
Jupiter	-15511-05-11 13:11 J	-3943839.18	-3943838.95	-3943838.72	0.0525	0.0101
Uranus	-15508-11-25 21:21 J	-3942544.74	-3942544.61	-3942544.45	0.0145	0.0118
Uranus	-15507-12-01 01:55 J	-3942174.66	-3942174.42	-3942174.17	0.0145	0.0043
Uranus	-15506-12-06 05:16 J	-3941804.52	-3941804.28	-3941804.01	0.0144	0.0033
Uranus	-15505-12-10 08:24 J	-3941434.30	-3941434.15	-3941433.95	0.0144	0.0106
Jupiter	-15494-11-01 02:09 J	-3937456.55	-3937456.41	-3937456.26	0.0501	0.0388
Mars	-15491-10-10 06:14 J	-3936382.41	-3936382.24	-3936382.07	0.1720	0.0825
Saturn	-15488-12-01 08:52 J	-3935234.34	-3935234.13	-3935233.91	0.0259	0.0136
Jupiter	-15482-11-05 17:02 J	-3933069.02	-3933068.79	-3933068.55	0.0500	0.0027
Saturn	-15473-06-07 16:04 J	-3929932.07	-3929931.83	-3929931.59	0.0303	0.0045
Jupiter	-15470-11-10 02:52 J	-3928681.50	-3928681.38	-3928681.25	0.0500	0.0420
Uranus	-15464-05-29 18:28 J	-3926653.84	-3926653.73	-3926653.58	0.0133	0.0115
Uranus	-15463-06-02 23:45 J	-3926284.73	-3926284.51	-3926284.28	0.0134	0.0058
Uranus	-15462-06-07 05:16 J	-3925915.53	-3925915.28	-3925915.03	0.0134	0.0001
Uranus	-15461-06-10 10:33 J	-3925546.27	-3925546.06	-3925545.82	0.0135	0.0057
Uranus	-15460-06-14 16:33 J	-3925176.93	-3925176.81	-3925176.67	0.0135	0.0115
Saturn	-15458-12-08 03:35 J	-3924270.54	-3924270.35	-3924270.16	0.0259	0.0170
Neptune	-15442-05-21 16:04 J	-3918626.94	-3918626.83	-3918626.69	0.0089	0.0077

Neptune -15441-05-23 03:07 J -3918259.59 -3918259.37 -3918259.12 0.0089 0.0036
 Jupiter -15440-05-06 00:28 J -3917911.61 -3917911.48 -3917911.34 0.0524 0.0424
 Neptune -15440-05-25 14:09 J -3917892.16 -3917891.91 -3917891.65 0.0089 0.0005
 Neptune -15439-05-28 00:43 J -3917524.66 -3917524.47 -3917524.23 0.0089 0.0046
 Neptune -15438-05-30 11:31 J -3917157.07 -3917157.02 -3917156.92 0.0089 0.0086
 Mars -15437-04-14 05:02 J -3916837.41 -3916837.29 -3916837.16 0.1803 0.1337
 Saturn -15429-12-02 05:16 J -3913683.52 -3913683.28 -3913683.05 0.0259 0.0086
 Jupiter -15428-05-10 21:35 J -3913523.83 -3913523.60 -3913523.37 0.0525 0.0041
 Uranus -15424-11-26 07:11 J -3911863.35 -3911863.20 -3911863.03 0.0145 0.0113
 Uranus -15423-12-01 11:45 J -3911493.25 -3911493.01 -3911492.76 0.0145 0.0038
 Uranus -15422-12-06 15:35 J -3911123.09 -3911122.85 -3911122.59 0.0144 0.0037
 Uranus -15421-12-10 18:57 J -3910752.86 -3910752.71 -3910752.53 0.0144 0.0110
 Jupiter -15416-05-15 22:04 J -3909135.60 -3909135.58 -3909135.55 0.0526 0.0522
 Saturn -15414-06-09 10:48 J -3908381.27 -3908381.05 -3908380.82 0.0303 0.0101
 Mars -15412-10-12 17:31 J -3907524.93 -3907524.77 -3907524.61 0.1724 0.0895
 Jupiter -15411-10-31 08:24 J -3907141.25 -3907141.15 -3907141.05 0.0501 0.0448
 Jupiter -15399-11-04 23:02 J -3902753.77 -3902753.54 -3902753.30 0.0501 0.0036
 Saturn -15399-12-08 23:02 J -3902719.66 -3902719.54 -3902719.39 0.0259 0.0218
 Jupiter -15387-11-09 15:07 J -3898366.02 -3898365.87 -3898365.72 0.0500 0.0383
 Uranus -15380-05-30 05:31 J -3895972.40 -3895972.27 -3895972.12 0.0133 0.0109
 Uranus -15379-06-03 10:19 J -3895603.29 -3895603.07 -3895602.83 0.0134 0.0053
 Uranus -15378-06-07 15:50 J -3895234.09 -3895233.84 -3895233.59 0.0134 0.0004
 Uranus -15377-06-10 21:07 J -3894864.84 -3894864.62 -3894864.39 0.0134 0.0061
 Uranus -15376-06-15 02:52 J -3894495.50 -3894495.38 -3894495.26 0.0135 0.0118
 Saturn -15370-12-04 00:43 J -3892132.71 -3892132.47 -3892132.22 0.0259 0.0039
 Neptune -15361-11-15 15:50 J -3888862.87 -3888862.84 -3888862.78 0.0088 0.0087
 Neptune -15360-11-18 04:33 J -3888495.53 -3888495.31 -3888495.09 0.0088 0.0047
 Neptune -15359-11-20 16:48 J -3888128.06 -3888127.80 -3888127.54 0.0088 0.0007
 Mars -15358-04-18 01:11 J -3887979.62 -3887979.45 -3887979.28 0.1798 0.0904
 Neptune -15358-11-23 04:48 J -3887760.53 -3887760.30 -3887760.05 0.0088 0.0033

Jupiter	-15357-05-05 13:11 J	-3887596.04	-3887595.95	-3887595.84	0.0524	0.0466
Neptune	-15357-11-24 16:48 J	-3887392.92	-3887392.80	-3887392.63	0.0088	0.0074
Saturn	-15355-06-10 04:33 J	-3886830.51	-3886830.31	-3886830.10	0.0303	0.0153
Pluto	-15353-09-16 19:11 J	-3886000.94	-3886000.70	-3886000.44	0.0067	0.0013
Jupiter	-15345-05-10 13:55 J	-3883208.15	-3883207.92	-3883207.69	0.0525	0.0015
Uranus	-15340-11-26 13:40 J	-3881182.08	-3881181.93	-3881181.75	0.0145	0.0110
Uranus	-15339-12-01 18:28 J	-3880811.97	-3880811.73	-3880811.47	0.0145	0.0036
Uranus	-15338-12-06 22:33 J	-3880441.80	-3880441.56	-3880441.31	0.0144	0.0039
Uranus	-15337-12-11 02:09 J	-3880071.56	-3880071.41	-3880071.24	0.0144	0.0112
Jupiter	-15333-05-15 10:19 J	-3878820.16	-3878820.07	-3878819.98	0.0525	0.0481
Jupiter	-15328-10-30 20:38 J	-3876825.70	-3876825.64	-3876825.58	0.0502	0.0483
Saturn	-15326-06-03 15:07 J	-3876244.98	-3876244.87	-3876244.74	0.0304	0.0262
Jupiter	-15316-11-04 12:57 J	-3872438.19	-3872437.96	-3872437.72	0.0501	0.0066
Saturn	-15311-12-04 20:52 J	-3870581.88	-3870581.63	-3870581.38	0.0259	0.0011
Jupiter	-15304-11-09 04:33 J	-3868050.48	-3868050.31	-3868050.14	0.0500	0.0349
Uranus	-15296-05-30 16:19 J	-3865290.97	-3865290.82	-3865290.66	0.0133	0.0105
Saturn	-15296-06-10 21:35 J	-3865279.77	-3865279.60	-3865279.41	0.0303	0.0203
Uranus	-15295-06-03 20:52 J	-3864921.85	-3864921.63	-3864921.38	0.0134	0.0050
Uranus	-15294-06-08 02:09 J	-3864552.66	-3864552.41	-3864552.16	0.0134	0.0008
Uranus	-15293-06-11 07:11 J	-3864183.41	-3864183.20	-3864182.97	0.0134	0.0065
Uranus	-15292-06-15 12:28 J	-3863814.06	-3863813.98	-3863813.85	0.0135	0.0122
Saturn	-15282-11-30 02:09 J	-3859994.50	-3859994.41	-3859994.30	0.0258	0.0236
Neptune	-15277-05-22 11:16 J	-3858359.20	-3858359.03	-3858358.82	0.0089	0.0058
Neptune	-15276-05-24 22:19 J	-3857991.80	-3857991.57	-3857991.30	0.0089	0.0019
Neptune	-15275-05-27 09:21 J	-3857624.35	-3857624.11	-3857623.86	0.0089	0.0023
Jupiter	-15274-05-06 01:40 J	-3857280.49	-3857280.43	-3857280.37	0.0524	0.0503
Neptune	-15274-05-29 19:55 J	-3857256.83	-3857256.67	-3857256.47	0.0089	0.0063
Saturn	-15267-06-04 09:35 J	-3854694.26	-3854694.10	-3854693.91	0.0304	0.0209
Pluto	-15266-03-23 18:43 J	-3854401.93	-3854401.72	-3854401.46	0.0077	0.0034
Jupiter	-15262-05-10 22:19 J	-3852892.80	-3852892.57	-3852892.34	0.0525	0.0041

Uranus	-15256-11-26 21:50 J	-3850500.76	-3850500.59	-3850500.41	0.0145	0.0106
Uranus	-15255-12-02 02:38 J	-3850130.64	-3850130.39	-3850130.14	0.0145	0.0032
Uranus	-15254-12-07 06:28 J	-3849760.47	-3849760.23	-3849759.97	0.0144	0.0043
Uranus	-15253-12-11 10:19 J	-3849390.21	-3849390.07	-3849389.91	0.0144	0.0115
Saturn	-15252-12-05 18:28 J	-3849030.98	-3849030.73	-3849030.49	0.0259	0.0061
Jupiter	-15250-05-15 18:57 J	-3848504.84	-3848504.71	-3848504.57	0.0525	0.0423
Saturn	-15237-06-11 16:48 J	-3843728.92	-3843728.80	-3843728.67	0.0303	0.0258
Jupiter	-15233-11-03 19:40 J	-3842122.90	-3842122.68	-3842122.45	0.0501	0.0121
Saturn	-15223-12-01 00:00 J	-3838443.66	-3838443.50	-3838443.31	0.0258	0.0186
Jupiter	-15221-11-08 09:50 J	-3837735.28	-3837735.09	-3837734.89	0.0500	0.0288
Uranus	-15212-05-31 04:33 J	-3834609.46	-3834609.31	-3834609.13	0.0133	0.0099
Uranus	-15211-06-04 09:35 J	-3834240.33	-3834240.10	-3834239.86	0.0134	0.0043
Uranus	-15210-06-08 14:38 J	-3833871.14	-3833870.89	-3833870.64	0.0134	0.0013
Uranus	-15209-06-11 19:55 J	-3833501.88	-3833501.67	-3833501.45	0.0134	0.0070
Saturn	-15208-06-05 06:43 J	-3833143.43	-3833143.22	-3833143.01	0.0304	0.0149
Uranus	-15208-06-16 00:57 J	-3833132.52	-3833132.46	-3833132.35	0.0135	0.0127
Mars	-15207-10-10 22:19 J	-3832650.75	-3832650.57	-3832650.40	0.1714	0.0663
Neptune	-15196-11-17 09:50 J	-3828595.23	-3828595.09	-3828594.91	0.0088	0.0069
Neptune	-15195-11-19 22:33 J	-3828227.80	-3828227.56	-3828227.31	0.0088	0.0029
Neptune	-15194-11-22 10:48 J	-3827860.30	-3827860.05	-3827859.78	0.0088	0.0011
Neptune	-15193-11-23 23:16 J	-3827492.74	-3827492.53	-3827492.32	0.0088	0.0051
Saturn	-15193-12-06 17:45 J	-3827479.98	-3827479.76	-3827479.54	0.0259	0.0115
Jupiter	-15179-05-10 07:55 J	-3822577.40	-3822577.17	-3822576.94	0.0525	0.0093
Uranus	-15172-11-27 08:52 J	-3819819.31	-3819819.13	-3819818.94	0.0145	0.0100
Uranus	-15171-12-02 13:40 J	-3819449.18	-3819448.93	-3819448.68	0.0145	0.0026
Uranus	-15170-12-07 17:31 J	-3819079.01	-3819078.77	-3819078.52	0.0144	0.0048
Uranus	-15169-12-11 21:07 J	-3818708.75	-3818708.62	-3818708.47	0.0144	0.0120
Jupiter	-15167-05-15 07:11 J	-3818189.35	-3818189.20	-3818189.04	0.0526	0.0384
Saturn	-15164-12-02 00:14 J	-3816892.70	-3816892.49	-3816892.26	0.0259	0.0131
Mars	-15153-04-14 08:52 J	-3813106.23	-3813106.13	-3813106.04	0.1810	0.1584

Jupiter	-15150-11-04 04:33 J	-3811807.53	-3811807.31	-3811807.09	0.0501	0.0170
Saturn	-15149-06-06 08:24 J	-3811592.37	-3811592.15	-3811591.91	0.0304	0.0079
Jupiter	-15138-11-08 19:26 J	-3807419.89	-3807419.69	-3807419.48	0.0501	0.0241
Saturn	-15134-12-08 19:40 J	-3805928.86	-3805928.68	-3805928.49	0.0259	0.0175
Uranus	-15128-05-31 17:02 J	-3803927.95	-3803927.79	-3803927.60	0.0133	0.0094
Mars	-15128-10-13 09:21 J	-3803793.26	-3803793.11	-3803792.96	0.1718	0.1029
Uranus	-15127-06-04 21:50 J	-3803558.82	-3803558.59	-3803558.34	0.0134	0.0039
Uranus	-15126-06-09 02:52 J	-3803189.62	-3803189.38	-3803189.13	0.0134	0.0018
Uranus	-15125-06-12 07:55 J	-3802820.36	-3802820.17	-3802819.95	0.0134	0.0075
Uranus	-15124-06-16 13:26 J	-3802450.98	-3802450.94	-3802450.87	0.0135	0.0131
Neptune	-15113-05-21 19:26 J	-3798458.78	-3798458.69	-3798458.57	0.0089	0.0081
Neptune	-15112-05-24 06:28 J	-3798091.45	-3798091.23	-3798091.00	0.0089	0.0040
Neptune	-15111-05-26 17:31 J	-3797724.02	-3797723.77	-3797723.51	0.0089	0.0000
Neptune	-15110-05-29 04:04 J	-3797356.54	-3797356.33	-3797356.09	0.0089	0.0040
Neptune	-15109-05-30 14:38 J	-3796988.98	-3796988.89	-3796988.76	0.0089	0.0081
Pluto	-15105-09-17 19:11 J	-3795417.94	-3795417.70	-3795417.46	0.0067	0.0024
Saturn	-15105-12-03 03:21 J	-3795341.60	-3795341.36	-3795341.12	0.0259	0.0070
Jupiter	-15096-05-09 13:26 J	-3792262.16	-3792261.94	-3792261.72	0.0525	0.0158
Saturn	-15090-06-08 16:04 J	-3790041.07	-3790040.83	-3790040.59	0.0304	0.0007
Uranus	-15088-11-27 23:02 J	-3789137.72	-3789137.54	-3789137.33	0.0145	0.0093
Uranus	-15087-12-03 03:50 J	-3788767.59	-3788767.34	-3788767.08	0.0145	0.0019
Uranus	-15086-12-08 07:40 J	-3788397.41	-3788397.18	-3788396.93	0.0144	0.0054
Uranus	-15085-12-12 11:16 J	-3788027.14	-3788027.03	-3788026.90	0.0144	0.0126
Jupiter	-15084-05-14 09:50 J	-3787874.28	-3787874.09	-3787873.90	0.0525	0.0304
Saturn	-15075-12-10 00:57 J	-3784377.55	-3784377.46	-3784377.37	0.0259	0.0241
Mars	-15074-04-18 05:45 J	-3784248.44	-3784248.26	-3784248.08	0.1805	0.0724
Jupiter	-15067-11-03 11:02 J	-3781492.24	-3781492.04	-3781491.83	0.0501	0.0227
Jupiter	-15055-11-07 22:04 J	-3777104.80	-3777104.58	-3777104.36	0.0500	0.0170
Saturn	-15046-12-05 09:21 J	-3773790.36	-3773790.11	-3773789.86	0.0259	0.0005
Uranus	-15044-06-01 06:43 J	-3773246.39	-3773246.22	-3773246.01	0.0133	0.0088

Uranus	-15043-06-05 11:45 J	-3772877.25	-3772877.01	-3772876.76	0.0134	0.0032
Uranus	-15042-06-09 16:33 J	-3772508.05	-3772507.81	-3772507.56	0.0134	0.0024
Uranus	-15041-06-12 21:35 J	-3772138.78	-3772138.60	-3772138.38	0.0134	0.0081
Saturn	-15031-06-10 05:16 J	-3768489.51	-3768489.28	-3768489.06	0.0303	0.0106
Neptune	-15031-11-19 03:07 J	-3768327.56	-3768327.37	-3768327.14	0.0088	0.0052
Neptune	-15030-11-21 15:50 J	-3767960.10	-3767959.84	-3767959.58	0.0088	0.0012
Neptune	-15029-11-23 04:19 J	-3767592.57	-3767592.32	-3767592.07	0.0088	0.0028
Neptune	-15028-11-25 16:19 J	-3767224.98	-3767224.82	-3767224.65	0.0088	0.0067
Pluto	-15018-03-24 13:55 J	-3763819.17	-3763818.92	-3763818.68	0.0077	0.0025
Saturn	-15017-11-29 19:40 J	-3763202.77	-3763202.68	-3763202.59	0.0259	0.0240
Jupiter	-15013-05-08 11:45 J	-3761947.21	-3761947.01	-3761946.80	0.0524	0.0254
Uranus	-15004-11-28 15:07 J	-3758456.07	-3758455.87	-3758455.65	0.0145	0.0084
Uranus	-15003-12-03 19:40 J	-3758085.93	-3758085.68	-3758085.42	0.0145	0.0011
Saturn	-15002-06-04 01:40 J	-3757903.51	-3757903.43	-3757903.32	0.0303	0.0279
Uranus	-15002-12-08 23:31 J	-3757715.74	-3757715.52	-3757715.28	0.0144	0.0062
Jupiter	-15001-05-13 09:35 J	-3757559.31	-3757559.10	-3757558.89	0.0525	0.0213
Uranus	-15001-12-13 02:52 J	-3757345.45	-3757345.38	-3757345.27	0.0144	0.0134

15TH MILLENNIUM BCE

This is a list of transits of Earth in the 15th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-14987-12-06 17:45 J	-3752238.99	-3752238.76	-3752238.51	0.0260	0.0070		
Jupiter	-14984-11-02 11:16 J	-3751177.21	-3751177.03	-3751176.84	0.0501	0.0306		

Saturn	-14972-06-11 23:45 J	-3746937.66	-3746937.51	-3746937.33	0.0303	0.0219
Jupiter	-14972-11-06 23:02 J	-3746789.77	-3746789.54	-3746789.30	0.0501	0.0091
Uranus	-14960-06-01 19:40 J	-3742564.87	-3742564.68	-3742564.48	0.0133	0.0082
Jupiter	-14960-11-11 12:28 J	-3742402.00	-3742401.98	-3742401.93	0.0500	0.0493
Uranus	-14959-06-06 00:14 J	-3742195.73	-3742195.49	-3742195.24	0.0134	0.0027
Uranus	-14958-06-10 05:02 J	-3741826.53	-3741826.29	-3741826.04	0.0134	0.0029
Saturn	-14958-12-02 05:02 J	-3741651.47	-3741651.29	-3741651.09	0.0259	0.0166
Uranus	-14957-06-13 10:04 J	-3741457.26	-3741457.08	-3741456.87	0.0134	0.0085
Neptune	-14948-05-23 13:11 J	-3738191.13	-3738190.95	-3738190.77	0.0089	0.0064
Neptune	-14947-05-26 00:00 J	-3737823.74	-3737823.50	-3737823.25	0.0089	0.0024
Neptune	-14946-05-28 10:48 J	-3737456.29	-3737456.05	-3737455.79	0.0089	0.0017
Neptune	-14945-05-29 21:50 J	-3737088.78	-3737088.59	-3737088.39	0.0089	0.0057
Saturn	-14943-06-05 23:16 J	-3736351.73	-3736351.53	-3736351.32	0.0303	0.0160
Jupiter	-14930-05-08 10:33 J	-3731632.23	-3731632.06	-3731631.89	0.0525	0.0348
Saturn	-14928-12-08 04:04 J	-3730687.52	-3730687.33	-3730687.11	0.0260	0.0147
Mars	-14923-10-11 15:35 J	-3728919.04	-3728918.85	-3728918.67	0.1708	0.0473
Uranus	-14920-11-29 05:02 J	-3727774.50	-3727774.29	-3727774.06	0.0145	0.0078
Uranus	-14919-12-04 09:50 J	-3727404.35	-3727404.09	-3727403.83	0.0145	0.0004
Jupiter	-14918-05-13 07:26 J	-3727244.41	-3727244.19	-3727243.96	0.0525	0.0114
Uranus	-14918-12-09 13:55 J	-3727034.14	-3727033.92	-3727033.69	0.0145	0.0069
Uranus	-14917-12-13 17:16 J	-3726663.82	-3726663.78	-3726663.70	0.0144	0.0140
Jupiter	-14901-11-01 10:19 J	-3720862.21	-3720862.07	-3720861.92	0.0502	0.0394
Saturn	-14899-12-03 16:04 J	-3720100.06	-3720099.83	-3720099.59	0.0259	0.0088
Jupiter	-14889-11-06 00:14 J	-3716474.73	-3716474.49	-3716474.26	0.0501	0.0013
Saturn	-14884-06-07 23:02 J	-3714799.78	-3714799.54	-3714799.30	0.0303	0.0034
Uranus	-14877-05-29 04:04 J	-3712252.36	-3712252.33	-3712252.25	0.0133	0.0130
Jupiter	-14877-11-10 12:43 J	-3712087.10	-3712086.97	-3712086.84	0.0500	0.0410
Uranus	-14876-06-02 08:24 J	-3711883.34	-3711883.15	-3711882.93	0.0133	0.0076
Uranus	-14875-06-06 13:11 J	-3711514.19	-3711513.95	-3711513.70	0.0134	0.0021
Uranus	-14874-06-10 17:45 J	-3711145.00	-3711144.76	-3711144.51	0.0134	0.0034

Uranus	-14873-06-13 23:02 J	-3710775.72	-3710775.54	-3710775.35	0.0134	0.0090
Saturn	-14869-12-09 15:21 J	-3709135.97	-3709135.86	-3709135.72	0.0260	0.0226
Neptune	-14867-11-18 07:40 J	-3708427.29	-3708427.18	-3708427.02	0.0088	0.0075
Neptune	-14866-11-20 20:24 J	-3708059.88	-3708059.65	-3708059.40	0.0088	0.0036
Neptune	-14865-11-22 08:52 J	-3707692.39	-3707692.13	-3707691.87	0.0088	0.0004
Neptune	-14864-11-24 20:52 J	-3707324.84	-3707324.63	-3707324.39	0.0088	0.0044
Neptune	-14863-11-27 08:38 J	-3706957.18	-3706957.14	-3706957.03	0.0088	0.0084
Pluto	-14857-09-18 16:33 J	-3704834.81	-3704834.81	-3704834.77	0.0067	0.0067
Pluto	-14856-09-20 06:28 J	-3704468.43	-3704468.23	-3704467.99	0.0067	0.0035
Jupiter	-14847-05-07 08:09 J	-3701317.28	-3701317.16	-3701317.04	0.0524	0.0447
Mars	-14844-10-14 01:11 J	-3700061.59	-3700061.45	-3700061.31	0.1712	0.1167
Saturn	-14840-12-05 03:07 J	-3698548.62	-3698548.37	-3698548.12	0.0259	0.0009
Uranus	-14837-11-24 11:31 J	-3697463.04	-3697463.02	-3697463.00	0.0146	0.0145
Uranus	-14836-11-29 16:04 J	-3697093.04	-3697092.83	-3697092.60	0.0145	0.0072
Jupiter	-14835-05-12 02:38 J	-3696929.62	-3696929.39	-3696929.16	0.0525	0.0007
Uranus	-14835-12-04 21:07 J	-3696722.88	-3696722.62	-3696722.36	0.0145	0.0002
Uranus	-14834-12-10 01:11 J	-3696352.66	-3696352.45	-3696352.22	0.0145	0.0074
Saturn	-14825-06-09 21:50 J	-3693247.81	-3693247.59	-3693247.35	0.0303	0.0091
Jupiter	-14823-05-16 22:48 J	-3692541.66	-3692541.55	-3692541.44	0.0526	0.0463
Jupiter	-14818-11-01 11:31 J	-3690547.09	-3690547.02	-3690546.93	0.0501	0.0471
Saturn	-14811-11-30 12:28 J	-3687961.02	-3687960.98	-3687960.90	0.0259	0.0251
Jupiter	-14806-11-06 00:28 J	-3686159.71	-3686159.48	-3686159.25	0.0501	0.0070
Saturn	-14796-06-03 21:07 J	-3682661.69	-3682661.62	-3682661.54	0.0304	0.0288
Jupiter	-14794-11-10 10:33 J	-3681772.24	-3681772.06	-3681771.88	0.0500	0.0318
Uranus	-14793-05-29 17:16 J	-3681570.86	-3681570.78	-3681570.69	0.0133	0.0124
Uranus	-14792-06-02 21:07 J	-3681201.82	-3681201.62	-3681201.40	0.0133	0.0071
Uranus	-14791-06-07 01:26 J	-3680832.68	-3680832.44	-3680832.18	0.0133	0.0017
Mars	-14790-04-18 08:38 J	-3680517.33	-3680517.14	-3680516.95	0.1812	0.0488
Uranus	-14790-06-11 06:00 J	-3680463.48	-3680463.25	-3680463.00	0.0134	0.0039
Uranus	-14789-06-14 10:48 J	-3680094.21	-3680094.05	-3680093.86	0.0134	0.0094

Neptune	-14784-05-22 18:28 J	-3678290.76	-3678290.73	-3678290.66	0.0089	0.0088
Neptune	-14783-05-25 05:31 J	-3677923.47	-3677923.27	-3677923.04	0.0089	0.0048
Neptune	-14782-05-27 16:48 J	-3677556.05	-3677555.80	-3677555.54	0.0089	0.0008
Neptune	-14781-05-29 03:35 J	-3677188.58	-3677188.35	-3677188.11	0.0089	0.0033
Saturn	-14781-12-06 12:43 J	-3676997.20	-3676996.97	-3676996.72	0.0259	0.0068
Neptune	-14780-05-31 14:24 J	-3676821.04	-3676820.90	-3676820.74	0.0089	0.0073
Pluto	-14769-03-26 06:57 J	-3672869.35	-3672869.21	-3672869.05	0.0077	0.0062
Saturn	-14766-06-12 18:43 J	-3671695.88	-3671695.72	-3671695.53	0.0303	0.0212
Uranus	-14753-11-24 18:43 J	-3666781.76	-3666781.72	-3666781.65	0.0146	0.0142
Jupiter	-14752-05-11 00:00 J	-3666614.72	-3666614.50	-3666614.27	0.0525	0.0098
Uranus	-14752-11-30 00:00 J	-3666411.72	-3666411.50	-3666411.27	0.0146	0.0069
Saturn	-14752-12-01 21:21 J	-3666409.79	-3666409.61	-3666409.43	0.0259	0.0175
Uranus	-14751-12-05 05:02 J	-3666041.55	-3666041.29	-3666041.03	0.0145	0.0004
Uranus	-14750-12-10 09:21 J	-3665671.32	-3665671.11	-3665670.89	0.0145	0.0077
Jupiter	-14740-05-15 22:33 J	-3662226.72	-3662226.56	-3662226.39	0.0525	0.0367
Saturn	-14737-06-05 14:52 J	-3661110.07	-3661109.88	-3661109.68	0.0304	0.0175
Jupiter	-14723-11-04 23:16 J	-3655844.75	-3655844.53	-3655844.31	0.0501	0.0160
Saturn	-14722-12-08 19:55 J	-3655445.87	-3655445.67	-3655445.45	0.0259	0.0140
Jupiter	-14711-11-09 13:40 J	-3651457.13	-3651456.93	-3651456.72	0.0501	0.0247
Uranus	-14709-05-30 07:11 J	-3650889.31	-3650889.20	-3650889.07	0.0133	0.0117
Uranus	-14708-06-03 11:02 J	-3650520.25	-3650520.04	-3650519.80	0.0133	0.0064
Uranus	-14707-06-07 15:50 J	-3650151.09	-3650150.84	-3650150.59	0.0133	0.0009
Uranus	-14706-06-11 19:55 J	-3649781.89	-3649781.67	-3649781.42	0.0134	0.0046
Uranus	-14705-06-15 01:11 J	-3649412.60	-3649412.45	-3649412.28	0.0134	0.0100
Neptune	-14702-11-20 00:00 J	-3648159.67	-3648159.50	-3648159.28	0.0088	0.0059
Neptune	-14701-11-21 12:43 J	-3647792.22	-3647791.97	-3647791.71	0.0088	0.0019
Neptune	-14700-11-24 00:28 J	-3647424.72	-3647424.48	-3647424.21	0.0088	0.0021
Neptune	-14699-11-26 12:28 J	-3647057.14	-3647056.98	-3647056.76	0.0088	0.0060
Saturn	-14693-12-03 03:07 J	-3644858.60	-3644858.37	-3644858.15	0.0259	0.0106
Saturn	-14678-06-08 03:50 J	-3639558.57	-3639558.34	-3639558.10	0.0304	0.0073

Jupiter	-14669-05-10 05:45 J	-3636299.48	-3636299.26	-3636299.04	0.0524	0.0167
Uranus	-14669-11-25 05:16 J	-3636100.35	-3636100.28	-3636100.18	0.0146	0.0136
Uranus	-14668-11-30 10:19 J	-3635730.29	-3635730.07	-3635729.83	0.0146	0.0064
Uranus	-14667-12-05 15:35 J	-3635360.11	-3635359.85	-3635359.59	0.0145	0.0010
Uranus	-14666-12-10 19:55 J	-3634989.87	-3634989.67	-3634989.45	0.0145	0.0082
Saturn	-14663-12-09 23:45 J	-3633894.65	-3633894.51	-3633894.35	0.0259	0.0206
Jupiter	-14657-05-15 00:57 J	-3631911.65	-3631911.46	-3631911.26	0.0525	0.0286
Jupiter	-14640-11-04 06:43 J	-3625529.43	-3625529.22	-3625529.01	0.0502	0.0215
Mars	-14639-10-12 09:35 J	-3625187.29	-3625187.10	-3625186.91	0.1702	0.0264
Saturn	-14634-12-05 05:31 J	-3623307.52	-3623307.27	-3623307.03	0.0259	0.0044
Jupiter	-14628-11-08 20:52 J	-3621141.84	-3621141.63	-3621141.41	0.0501	0.0190
Uranus	-14625-05-30 21:21 J	-3620207.73	-3620207.61	-3620207.45	0.0133	0.0111
Uranus	-14624-06-04 01:40 J	-3619838.65	-3619838.43	-3619838.19	0.0133	0.0057
Uranus	-14623-06-08 06:14 J	-3619469.49	-3619469.24	-3619468.99	0.0133	0.0003
Uranus	-14622-06-12 10:48 J	-3619100.28	-3619100.05	-3619099.81	0.0134	0.0052
Uranus	-14621-06-15 15:50 J	-3618730.98	-3618730.84	-3618730.68	0.0134	0.0106
Neptune	-14619-05-24 10:19 J	-3618023.19	-3618023.07	-3618022.90	0.0089	0.0072
Saturn	-14619-06-09 09:50 J	-3618007.34	-3618007.09	-3618006.85	0.0304	0.0012
Neptune	-14618-05-26 21:21 J	-3617655.83	-3617655.61	-3617655.35	0.0089	0.0032
Neptune	-14617-05-28 08:52 J	-3617288.38	-3617288.13	-3617287.87	0.0089	0.0008
Neptune	-14616-05-30 19:26 J	-3616920.89	-3616920.69	-3616920.46	0.0089	0.0048
Neptune	-14615-06-02 06:28 J	-3616553.27	-3616553.23	-3616553.18	0.0089	0.0088
Pluto	-14608-09-21 07:40 J	-3613885.44	-3613885.18	-3613884.92	0.0067	0.0001
Jupiter	-14586-05-10 09:21 J	-3605984.31	-3605984.11	-3605983.90	0.0524	0.0241
Uranus	-14585-11-25 17:16 J	-3605418.88	-3605418.78	-3605418.65	0.0146	0.0130
Uranus	-14584-11-30 22:48 J	-3605048.79	-3605048.55	-3605048.31	0.0146	0.0057
Uranus	-14583-12-06 03:50 J	-3604678.59	-3604678.34	-3604678.08	0.0145	0.0016
Uranus	-14582-12-11 08:09 J	-3604308.35	-3604308.16	-3604307.95	0.0145	0.0088
Saturn	-14575-12-06 04:19 J	-3601756.57	-3601756.32	-3601756.07	0.0258	0.0013
Jupiter	-14574-05-15 06:14 J	-3601596.45	-3601596.24	-3601596.03	0.0525	0.0214

Saturn	-14560-06-10 10:19 J	-3596456.30	-3596456.07	-3596455.84	0.0304	0.0081
Mars	-14560-10-14 18:00 J	-3596329.87	-3596329.75	-3596329.63	0.1706	0.1327
Jupiter	-14557-11-03 10:48 J	-3595214.24	-3595214.05	-3595213.86	0.0502	0.0283
Saturn	-14546-12-01 10:48 J	-3591169.15	-3591169.05	-3591168.93	0.0258	0.0231
Jupiter	-14545-11-08 00:57 J	-3590826.68	-3590826.46	-3590826.23	0.0501	0.0121
Uranus	-14541-05-31 12:57 J	-3589526.10	-3589525.96	-3589525.79	0.0133	0.0103
Uranus	-14540-06-04 17:31 J	-3589157.01	-3589156.77	-3589156.54	0.0133	0.0050
Uranus	-14539-06-08 22:04 J	-3588787.83	-3588787.58	-3588787.33	0.0133	0.0005
Uranus	-14538-06-13 02:24 J	-3588418.61	-3588418.40	-3588418.16	0.0134	0.0059
Neptune	-14538-11-19 04:19 J	-3588259.38	-3588259.32	-3588259.20	0.0088	0.0082
Uranus	-14537-06-16 07:55 J	-3588049.30	-3588049.17	-3588049.03	0.0134	0.0113
Neptune	-14537-11-20 16:19 J	-3587892.03	-3587891.82	-3587891.57	0.0088	0.0043
Neptune	-14536-11-23 04:48 J	-3587524.56	-3587524.30	-3587524.04	0.0088	0.0004
Neptune	-14535-11-25 16:33 J	-3587157.03	-3587156.81	-3587156.55	0.0088	0.0036
Neptune	-14534-11-28 04:48 J	-3586789.42	-3586789.30	-3586789.15	0.0088	0.0075
Pluto	-14521-03-27 02:52 J	-3582286.64	-3582286.38	-3582286.12	0.0077	0.0009
Saturn	-14516-12-07 00:28 J	-3580205.72	-3580205.48	-3580205.23	0.0258	0.0062
Mars	-14506-04-18 08:38 J	-3576786.33	-3576786.14	-3576785.94	0.1820	0.0165
Jupiter	-14503-05-09 20:24 J	-3575668.84	-3575668.65	-3575668.46	0.0524	0.0289
Saturn	-14501-06-11 06:00 J	-3574905.46	-3574905.25	-3574905.03	0.0304	0.0140
Uranus	-14501-11-26 10:33 J	-3574737.19	-3574737.06	-3574736.90	0.0146	0.0120
Uranus	-14500-12-01 15:50 J	-3574367.08	-3574366.84	-3574366.59	0.0146	0.0048
Uranus	-14499-12-06 20:52 J	-3573996.88	-3573996.63	-3573996.37	0.0145	0.0025
Uranus	-14498-12-12 00:57 J	-3573626.63	-3573626.46	-3573626.25	0.0145	0.0097
Jupiter	-14491-05-14 20:52 J	-3571280.84	-3571280.63	-3571280.41	0.0525	0.0183
Saturn	-14487-12-02 06:14 J	-3569618.40	-3569618.24	-3569618.05	0.0258	0.0184
Jupiter	-14474-11-03 22:04 J	-3564898.75	-3564898.58	-3564898.39	0.0502	0.0323
Saturn	-14472-06-04 15:21 J	-3564319.94	-3564319.86	-3564319.76	0.0305	0.0281
Jupiter	-14462-11-08 14:38 J	-3560511.12	-3560510.89	-3560510.66	0.0501	0.0089
Uranus	-14457-06-01 04:19 J	-3558844.47	-3558844.32	-3558844.12	0.0133	0.0096

Saturn	-14457-12-07 19:26 J	-3558654.91	-3558654.69	-3558654.46	0.0258	0.0109
Uranus	-14456-06-05 08:52 J	-3558475.36	-3558475.13	-3558474.88	0.0133	0.0043
Uranus	-14455-06-09 13:40 J	-3558106.18	-3558105.93	-3558105.68	0.0133	0.0011
Neptune	-14454-05-26 01:26 J	-3557755.62	-3557755.44	-3557755.23	0.0089	0.0057
Uranus	-14454-06-13 18:14 J	-3557736.95	-3557736.74	-3557736.51	0.0134	0.0066
Neptune	-14453-05-27 12:43 J	-3557388.21	-3557387.97	-3557387.71	0.0089	0.0018
Uranus	-14453-06-16 23:16 J	-3557367.62	-3557367.53	-3557367.40	0.0134	0.0120
Neptune	-14452-05-30 00:00 J	-3557020.75	-3557020.50	-3557020.25	0.0089	0.0023
Neptune	-14451-06-01 10:48 J	-3556653.22	-3556653.05	-3556652.86	0.0089	0.0063
Jupiter	-14450-11-13 06:00 J	-3556123.28	-3556123.25	-3556123.21	0.0501	0.0495
Saturn	-14442-06-12 22:48 J	-3553354.73	-3553354.55	-3553354.36	0.0304	0.0190
Mars	-14434-10-10 20:38 J	-3550312.70	-3550312.64	-3550312.57	0.1693	0.1580
Saturn	-14428-12-03 00:43 J	-3548067.67	-3548067.47	-3548067.25	0.0258	0.0139
Jupiter	-14420-05-09 09:21 J	-3545353.29	-3545353.11	-3545352.93	0.0523	0.0323
Uranus	-14417-11-27 02:09 J	-3544055.56	-3544055.41	-3544055.23	0.0146	0.0112
Uranus	-14416-12-02 07:40 J	-3543685.42	-3543685.18	-3543684.93	0.0146	0.0039
Uranus	-14415-12-07 12:43 J	-3543315.21	-3543314.97	-3543314.71	0.0145	0.0033
Uranus	-14414-12-12 17:02 J	-3542944.95	-3542944.79	-3542944.60	0.0145	0.0105
Saturn	-14413-06-05 07:26 J	-3542769.33	-3542769.19	-3542769.02	0.0305	0.0233
Jupiter	-14408-05-14 06:28 J	-3540965.45	-3540965.23	-3540965.01	0.0524	0.0132
Saturn	-14398-12-09 13:55 J	-3537104.11	-3537103.92	-3537103.71	0.0258	0.0154
Jupiter	-14391-11-03 12:14 J	-3534583.15	-3534582.99	-3534582.82	0.0502	0.0352
Saturn	-14383-06-13 15:21 J	-3531804.00	-3531803.86	-3531803.71	0.0304	0.0239
Jupiter	-14379-11-07 22:33 J	-3530195.80	-3530195.56	-3530195.33	0.0501	0.0037
Uranus	-14373-06-01 20:09 J	-3528162.85	-3528162.66	-3528162.47	0.0133	0.0088
Neptune	-14373-11-19 20:38 J	-3527991.80	-3527991.64	-3527991.46	0.0088	0.0066
Uranus	-14372-06-06 00:14 J	-3527793.73	-3527793.49	-3527793.24	0.0133	0.0035
Neptune	-14372-11-22 08:38 J	-3527624.38	-3527624.14	-3527623.88	0.0088	0.0027
Uranus	-14371-06-10 04:48 J	-3527424.54	-3527424.30	-3527424.05	0.0133	0.0019
Neptune	-14371-11-24 20:38 J	-3527256.89	-3527256.64	-3527256.38	0.0088	0.0012

Uranus	-14370-06-14 09:21 J	-3527055.31	-3527055.11	-3527054.89	0.0134	0.0072
Neptune	-14370-11-27 08:38 J	-3526889.34	-3526889.14	-3526888.92	0.0088	0.0051
Uranus	-14369-06-17 14:09 J	-3526685.97	-3526685.91	-3526685.81	0.0134	0.0127
Saturn	-14369-12-03 19:26 J	-3526516.91	-3526516.69	-3526516.45	0.0258	0.0094
Jupiter	-14367-11-12 12:43 J	-3525808.07	-3525807.97	-3525807.85	0.0501	0.0439
Pluto	-14360-09-22 06:00 J	-3523302.45	-3523302.25	-3523302.03	0.0067	0.0039
Pluto	-14359-09-23 19:26 J	-3522935.74	-3522935.69	-3522935.57	0.0067	0.0064
Mars	-14355-10-13 04:19 J	-3521455.51	-3521455.32	-3521455.13	0.1697	0.0048
Saturn	-14354-06-07 00:28 J	-3521218.67	-3521218.48	-3521218.29	0.0305	0.0183
Saturn	-14339-12-10 09:35 J	-3515553.25	-3515553.10	-3515552.94	0.0258	0.0201
Jupiter	-14337-05-08 18:14 J	-3515037.90	-3515037.74	-3515037.58	0.0523	0.0376
Uranus	-14333-11-27 18:00 J	-3513373.93	-3513373.75	-3513373.57	0.0146	0.0103
Uranus	-14332-12-02 23:16 J	-3513003.77	-3513003.53	-3513003.27	0.0146	0.0031
Uranus	-14331-12-08 04:19 J	-3512633.55	-3512633.32	-3512633.06	0.0145	0.0042
Uranus	-14330-12-13 09:07 J	-3512263.27	-3512263.12	-3512262.95	0.0145	0.0112
Jupiter	-14325-05-13 18:43 J	-3510649.95	-3510649.72	-3510649.49	0.0524	0.0090
Saturn	-14324-06-14 08:38 J	-3510253.20	-3510253.14	-3510253.06	0.0304	0.0290
Saturn	-14310-12-05 15:50 J	-3504966.09	-3504965.84	-3504965.59	0.0258	0.0046
Jupiter	-14308-11-02 19:11 J	-3504267.84	-3504267.70	-3504267.56	0.0502	0.0405
Jupiter	-14296-11-07 09:50 J	-3499880.32	-3499880.09	-3499879.85	0.0502	0.0010
Saturn	-14295-06-07 19:40 J	-3499667.90	-3499667.68	-3499667.46	0.0305	0.0128
Neptune	-14290-05-25 05:16 J	-3497855.36	-3497855.28	-3497855.16	0.0089	0.0082
Neptune	-14289-05-26 16:33 J	-3497488.02	-3497487.81	-3497487.57	0.0089	0.0043
Uranus	-14289-06-02 10:04 J	-3497481.26	-3497481.08	-3497480.86	0.0133	0.0082
Neptune	-14288-05-29 04:04 J	-3497120.58	-3497120.33	-3497120.07	0.0089	0.0003
Uranus	-14288-06-06 14:24 J	-3497112.13	-3497111.90	-3497111.64	0.0133	0.0029
Neptune	-14287-05-31 14:52 J	-3496753.10	-3496752.88	-3496752.64	0.0089	0.0038
Uranus	-14287-06-10 18:57 J	-3496742.96	-3496742.71	-3496742.46	0.0133	0.0024
Neptune	-14286-06-03 01:40 J	-3496385.53	-3496385.43	-3496385.28	0.0089	0.0077
Uranus	-14286-06-14 23:16 J	-3496373.72	-3496373.53	-3496373.32	0.0134	0.0078

Uranus	-14285-06-18 04:04 J	-3496004.37	-3496004.33	-3496004.27	0.0134	0.0131
Jupiter	-14284-11-12 01:40 J	-3495492.57	-3495492.43	-3495492.29	0.0501	0.0404
Saturn	-14280-12-11 07:26 J	-3494002.23	-3494002.19	-3494002.14	0.0258	0.0252
Mars	-14276-10-15 12:14 J	-3492598.07	-3492597.99	-3492597.91	0.1700	0.1520
Pluto	-14273-03-27 18:57 J	-3491703.85	-3491703.71	-3491703.50	0.0077	0.0058
Jupiter	-14254-05-09 07:11 J	-3484722.34	-3484722.20	-3484722.06	0.0524	0.0411
Saturn	-14251-12-06 14:24 J	-3483415.15	-3483414.90	-3483414.65	0.0258	0.0007
Uranus	-14249-11-28 02:38 J	-3482692.56	-3482692.39	-3482692.19	0.0146	0.0099
Uranus	-14248-12-03 08:38 J	-3482322.39	-3482322.14	-3482321.89	0.0146	0.0027
Uranus	-14247-12-08 13:40 J	-3481952.16	-3481951.93	-3481951.67	0.0145	0.0046
Uranus	-14246-12-13 18:28 J	-3481581.87	-3481581.73	-3481581.56	0.0145	0.0116
Jupiter	-14242-05-14 04:33 J	-3480334.54	-3480334.31	-3480334.08	0.0524	0.0044
Saturn	-14236-06-08 18:43 J	-3478116.95	-3478116.72	-3478116.48	0.0305	0.0063
Jupiter	-14230-05-19 01:26 J	-3475946.51	-3475946.44	-3475946.36	0.0525	0.0497
Jupiter	-14225-11-02 05:31 J	-3473952.37	-3473952.27	-3473952.17	0.0502	0.0448
Mars	-14222-04-18 06:57 J	-3473055.41	-3473055.21	-3473055.02	0.1827	0.0226
Saturn	-14222-12-01 21:50 J	-3472827.67	-3472827.59	-3472827.49	0.0258	0.0238
Jupiter	-14213-11-06 20:24 J	-3469564.88	-3469564.65	-3469564.41	0.0502	0.0044
Neptune	-14208-11-21 12:57 J	-3467724.17	-3467723.96	-3467723.74	0.0088	0.0050
Neptune	-14207-11-24 00:57 J	-3467356.71	-3467356.46	-3467356.20	0.0088	0.0012
Uranus	-14206-05-30 20:38 J	-3467168.70	-3467168.64	-3467168.56	0.0132	0.0127
Neptune	-14206-11-26 12:43 J	-3466989.21	-3466988.97	-3466988.72	0.0088	0.0028
Uranus	-14205-06-03 00:43 J	-3466799.66	-3466799.47	-3466799.25	0.0133	0.0075
Neptune	-14205-11-28 00:57 J	-3466621.63	-3466621.46	-3466621.29	0.0088	0.0067
Uranus	-14204-06-07 04:48 J	-3466430.54	-3466430.30	-3466430.05	0.0133	0.0023
Uranus	-14203-06-11 09:07 J	-3466061.36	-3466061.12	-3466060.87	0.0133	0.0031
Uranus	-14202-06-15 13:11 J	-3465692.13	-3465691.95	-3465691.74	0.0134	0.0084
Jupiter	-14201-11-11 07:11 J	-3465177.37	-3465177.20	-3465177.03	0.0500	0.0345
Saturn	-14192-12-07 16:19 J	-3461864.06	-3461863.82	-3461863.58	0.0258	0.0064
Saturn	-14177-06-10 00:28 J	-3456565.72	-3456565.48	-3456565.24	0.0305	0.0019

Jupiter	-14171-05-08 11:45 J	-3454407.10	-3454407.01	-3454406.92	0.0523	0.0479
Uranus	-14165-11-28 12:14 J	-3452011.17	-3452010.99	-3452010.78	0.0146	0.0094
Uranus	-14164-12-03 18:14 J	-3451640.99	-3451640.74	-3451640.48	0.0146	0.0022
Saturn	-14163-12-03 01:11 J	-3451276.63	-3451276.45	-3451276.27	0.0258	0.0176
Uranus	-14163-12-08 23:31 J	-3451270.76	-3451270.52	-3451270.28	0.0145	0.0050
Uranus	-14162-12-14 04:04 J	-3450900.46	-3450900.33	-3450900.17	0.0145	0.0120
Jupiter	-14159-05-13 07:11 J	-3450019.43	-3450019.20	-3450018.97	0.0524	0.0034
Mars	-14150-10-11 16:04 J	-3446580.94	-3446580.83	-3446580.71	0.1688	0.1319
Jupiter	-14147-05-18 05:45 J	-3445631.39	-3445631.26	-3445631.12	0.0525	0.0425
Saturn	-14133-12-08 20:52 J	-3440312.83	-3440312.63	-3440312.40	0.0259	0.0130
Jupiter	-14130-11-06 23:16 J	-3439249.76	-3439249.53	-3439249.30	0.0501	0.0113
Neptune	-14125-05-25 20:24 J	-3437587.80	-3437587.65	-3437587.47	0.0089	0.0068
Neptune	-14124-05-28 07:11 J	-3437220.42	-3437220.20	-3437219.94	0.0089	0.0029
Neptune	-14123-05-30 18:57 J	-3436852.96	-3436852.71	-3436852.45	0.0089	0.0012
Uranus	-14122-05-31 11:16 J	-3436487.12	-3436487.03	-3436486.91	0.0132	0.0120
Neptune	-14122-06-02 06:00 J	-3436485.45	-3436485.25	-3436485.03	0.0089	0.0052
Uranus	-14121-06-03 15:21 J	-3436118.06	-3436117.86	-3436117.63	0.0133	0.0068
Uranus	-14120-06-07 19:26 J	-3435748.93	-3435748.69	-3435748.43	0.0133	0.0016
Uranus	-14119-06-11 23:31 J	-3435379.75	-3435379.52	-3435379.27	0.0133	0.0038
Saturn	-14118-06-12 11:31 J	-3435014.25	-3435014.02	-3435013.80	0.0304	0.0113
Uranus	-14118-06-16 03:50 J	-3435010.51	-3435010.34	-3435010.15	0.0134	0.0090
Jupiter	-14118-11-11 12:00 J	-3434862.20	-3434862.00	-3434861.81	0.0501	0.0281
Pluto	-14111-09-24 20:52 J	-3432352.84	-3432352.63	-3432352.38	0.0067	0.0031
Saturn	-14104-12-04 07:11 J	-3429725.42	-3429725.20	-3429724.96	0.0258	0.0109
Saturn	-14089-06-05 06:14 J	-3424428.33	-3424428.24	-3424428.14	0.0304	0.0280
Uranus	-14081-11-28 21:07 J	-3421329.81	-3421329.62	-3421329.41	0.0146	0.0089
Uranus	-14080-12-04 02:52 J	-3420959.63	-3420959.38	-3420959.12	0.0146	0.0018
Uranus	-14079-12-09 07:55 J	-3420589.40	-3420589.17	-3420588.92	0.0145	0.0053
Uranus	-14078-12-14 12:28 J	-3420219.09	-3420218.98	-3420218.83	0.0145	0.0124
Jupiter	-14076-05-12 09:21 J	-3419704.33	-3419704.11	-3419703.88	0.0525	0.0112

Saturn	-14074-12-11 04:19 J	-3418761.46	-3418761.32	-3418761.15	0.0259	0.0201
Mars	-14071-10-13 23:45 J	-3417723.69	-3417723.51	-3417723.32	0.1691	0.0201
Jupiter	-14064-05-17 06:43 J	-3415316.39	-3415316.22	-3415316.04	0.0525	0.0341
Saturn	-14059-06-14 04:19 J	-3413462.48	-3413462.32	-3413462.15	0.0304	0.0222
Jupiter	-14047-11-06 01:11 J	-3408934.67	-3408934.45	-3408934.23	0.0502	0.0188
Saturn	-14045-12-05 16:04 J	-3408174.07	-3408173.83	-3408173.58	0.0258	0.0036
Neptune	-14044-11-20 17:31 J	-3407823.90	-3407823.77	-3407823.62	0.0088	0.0074
Neptune	-14043-11-23 05:31 J	-3407456.51	-3407456.27	-3407456.03	0.0088	0.0034
Neptune	-14042-11-25 17:31 J	-3407089.03	-3407088.77	-3407088.50	0.0088	0.0005
Neptune	-14041-11-27 05:31 J	-3406721.49	-3406721.27	-3406721.04	0.0088	0.0043
Neptune	-14040-11-29 17:16 J	-3406353.86	-3406353.78	-3406353.67	0.0088	0.0082
Uranus	-14038-06-01 01:55 J	-3405805.54	-3405805.42	-3405805.27	0.0133	0.0113
Uranus	-14037-06-04 06:14 J	-3405436.46	-3405436.24	-3405436.01	0.0133	0.0061
Uranus	-14036-06-08 10:19 J	-3405067.32	-3405067.07	-3405066.82	0.0133	0.0009
Uranus	-14035-06-12 14:24 J	-3404698.13	-3404697.90	-3404697.66	0.0133	0.0044
Jupiter	-14035-11-10 14:52 J	-3404547.09	-3404546.88	-3404546.67	0.0501	0.0211
Uranus	-14034-06-16 18:43 J	-3404328.89	-3404328.72	-3404328.54	0.0134	0.0096
Saturn	-14030-06-08 01:40 J	-3402876.63	-3402876.43	-3402876.22	0.0304	0.0164
Pluto	-14024-03-30 17:45 J	-3400753.93	-3400753.76	-3400753.54	0.0077	0.0052

14TH MILLENNIUM BCE

This is a list of transits of Earth in the 14th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
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Uranus	-13997-11-29 11:45 J	-3390648.22	-3390648.01	-3390647.80	0.0146	0.0081
Uranus	-13996-12-04 17:02 J	-3390278.04	-3390277.79	-3390277.53	0.0146	0.0011
Uranus	-13995-12-09 21:50 J	-3389907.81	-3389907.59	-3389907.35	0.0145	0.0061
Uranus	-13994-12-15 02:24 J	-3389537.49	-3389537.40	-3389537.27	0.0145	0.0130
Jupiter	-13993-05-11 07:40 J	-3389389.39	-3389389.18	-3389388.97	0.0524	0.0208
Saturn	-13986-12-08 02:24 J	-3386622.65	-3386622.40	-3386622.16	0.0259	0.0042
Jupiter	-13981-05-16 02:09 J	-3385001.62	-3385001.41	-3385001.20	0.0524	0.0234
Saturn	-13971-06-10 01:11 J	-3381324.69	-3381324.45	-3381324.21	0.0304	0.0038
Jupiter	-13964-11-05 02:24 J	-3378619.60	-3378619.40	-3378619.20	0.0501	0.0264
Neptune	-13960-05-27 12:14 J	-3377320.18	-3377319.99	-3377319.77	0.0089	0.0052
Neptune	-13959-05-29 23:31 J	-3376952.77	-3376952.52	-3376952.26	0.0089	0.0013
Neptune	-13958-06-01 10:33 J	-3376585.29	-3376585.06	-3376584.81	0.0089	0.0027
Neptune	-13957-06-02 21:35 J	-3376217.76	-3376217.60	-3376217.42	0.0089	0.0067
Saturn	-13957-12-02 13:11 J	-3376035.10	-3376034.95	-3376034.78	0.0259	0.0198
Uranus	-13954-06-01 17:02 J	-3375123.93	-3375123.79	-3375123.62	0.0133	0.0106
Uranus	-13953-06-04 21:07 J	-3374754.84	-3374754.62	-3374754.38	0.0133	0.0054
Uranus	-13952-06-09 01:26 J	-3374385.69	-3374385.44	-3374385.19	0.0133	0.0003
Jupiter	-13952-11-09 14:38 J	-3374232.12	-3374231.89	-3374231.67	0.0501	0.0128
Uranus	-13951-06-13 05:16 J	-3374016.50	-3374016.28	-3374016.03	0.0133	0.0051
Uranus	-13950-06-17 09:35 J	-3373647.24	-3373647.10	-3373646.92	0.0134	0.0103
Mars	-13938-04-18 03:35 J	-3369324.53	-3369324.35	-3369324.17	0.1835	0.0673
Saturn	-13927-12-09 12:43 J	-3365071.19	-3365070.97	-3365070.74	0.0259	0.0121
Uranus	-13914-11-25 20:38 J	-3360336.67	-3360336.64	-3360336.60	0.0146	0.0145
Uranus	-13913-11-30 01:55 J	-3359966.63	-3359966.42	-3359966.19	0.0146	0.0074
Saturn	-13912-06-12 01:26 J	-3359772.67	-3359772.44	-3359772.21	0.0304	0.0091
Uranus	-13912-12-05 07:11 J	-3359596.46	-3359596.20	-3359595.94	0.0146	0.0003
Uranus	-13911-12-10 12:00 J	-3359226.23	-3359226.00	-3359225.77	0.0145	0.0067
Jupiter	-13910-05-11 01:55 J	-3359074.60	-3359074.42	-3359074.23	0.0524	0.0317
Uranus	-13910-12-15 16:19 J	-3358855.89	-3358855.82	-3358855.72	0.0145	0.0136
Jupiter	-13898-05-15 21:50 J	-3354686.81	-3354686.59	-3354686.36	0.0525	0.0129

Saturn	-13898-12-04 23:45 J	-3354483.73	-3354483.51	-3354483.29	0.0259	0.0119
Saturn	-13883-06-05 23:31 J	-3349186.57	-3349186.52	-3349186.44	0.0304	0.0291
Jupiter	-13881-11-03 23:31 J	-3348304.68	-3348304.52	-3348304.36	0.0502	0.0358
Neptune	-13879-11-22 10:04 J	-3347556.27	-3347556.08	-3347555.87	0.0088	0.0057
Neptune	-13878-11-24 22:19 J	-3347188.82	-3347188.57	-3347188.31	0.0088	0.0019
Neptune	-13877-11-26 10:19 J	-3346821.32	-3346821.07	-3346820.82	0.0088	0.0020
Neptune	-13876-11-28 22:04 J	-3346453.76	-3346453.58	-3346453.38	0.0088	0.0059
Uranus	-13870-06-02 07:40 J	-3344442.34	-3344442.18	-3344442.01	0.0133	0.0099
Uranus	-13869-06-05 11:31 J	-3344073.24	-3344073.02	-3344072.77	0.0133	0.0048
Jupiter	-13869-11-08 12:14 J	-3343917.23	-3343916.99	-3343916.76	0.0501	0.0036
Uranus	-13868-06-09 15:50 J	-3343704.09	-3343703.84	-3343703.59	0.0133	0.0004
Saturn	-13868-12-10 22:33 J	-3343519.71	-3343519.56	-3343519.39	0.0259	0.0199
Uranus	-13867-06-13 19:40 J	-3343334.89	-3343334.68	-3343334.65	0.0133	0.0057
Uranus	-13866-06-18 03:21 J	-3342965.36	-3342965.36	-3342965.33	0.0133	0.0064
Mars	-13866-10-12 13:11 J	-3342849.10	-3342848.95	-3342848.80	0.1683	0.1033
Pluto	-13863-09-25 20:09 J	-3341769.91	-3341769.66	-3341769.40	0.0067	0.0009
Jupiter	-13857-11-13 01:40 J	-3339529.54	-3339529.43	-3339529.31	0.0501	0.0430
Saturn	-13853-06-13 23:31 J	-3338220.69	-3338220.52	-3338220.35	0.0304	0.0215
Saturn	-13839-12-06 08:52 J	-3332932.38	-3332932.13	-3332931.89	0.0259	0.0043
Uranus	-13830-11-26 12:14 J	-3329655.06	-3329654.99	-3329654.87	0.0146	0.0136
Uranus	-13829-11-30 17:31 J	-3329284.98	-3329284.77	-3329284.52	0.0146	0.0066
Uranus	-13828-12-05 23:02 J	-3328914.79	-3328914.54	-3328914.28	0.0146	0.0005
Jupiter	-13827-05-10 00:00 J	-3328759.64	-3328759.50	-3328759.36	0.0523	0.0414
Uranus	-13827-12-11 03:50 J	-3328544.56	-3328544.34	-3328544.12	0.0145	0.0075
Uranus	-13826-12-16 08:24 J	-3328174.18	-3328174.15	-3328174.11	0.0145	0.0143
Saturn	-13824-06-07 19:40 J	-3327634.87	-3327634.68	-3327634.47	0.0304	0.0171
Jupiter	-13815-05-14 23:02 J	-3324371.77	-3324371.54	-3324371.31	0.0524	0.0042
Jupiter	-13803-05-19 17:45 J	-3319983.84	-3319983.76	-3319983.67	0.0525	0.0485
Jupiter	-13798-11-04 00:57 J	-3317989.56	-3317989.46	-3317989.33	0.0503	0.0434
Neptune	-13796-05-26 17:16 J	-3317419.89	-3317419.78	-3317419.63	0.0089	0.0076

Neptune	-13795-05-29 05:02 J	-3317052.52	-3317052.29	-3317052.06	0.0089	0.0037
Neptune	-13794-05-31 16:04 J	-3316685.08	-3316684.83	-3316684.57	0.0089	0.0003
Neptune	-13793-06-02 02:52 J	-3316317.59	-3316317.38	-3316317.14	0.0089	0.0043
Neptune	-13792-06-04 13:40 J	-3315950.00	-3315949.93	-3315949.80	0.0089	0.0082
Mars	-13787-10-14 20:09 J	-3313991.84	-3313991.66	-3313991.48	0.1686	0.0457
Uranus	-13786-06-02 21:07 J	-3313760.78	-3313760.62	-3313760.42	0.0133	0.0093
Jupiter	-13786-11-08 15:50 J	-3313602.07	-3313601.84	-3313601.60	0.0502	0.0035
Uranus	-13785-06-06 01:11 J	-3313391.68	-3313391.45	-3313391.20	0.0133	0.0042
Uranus	-13784-06-10 05:31 J	-3313022.52	-3313022.27	-3313022.02	0.0133	0.0010
Uranus	-13783-06-14 09:35 J	-3312653.32	-3312653.10	-3312652.87	0.0133	0.0062
Uranus	-13782-06-18 13:40 J	-3312284.04	-3312283.93	-3312283.78	0.0134	0.0114
Saturn	-13780-12-07 15:35 J	-3311381.09	-3311380.85	-3311380.60	0.0259	0.0030
Pluto	-13776-03-31 11:02 J	-3310171.28	-3310171.04	-3310170.77	0.0077	0.0012
Jupiter	-13774-11-13 05:16 J	-3309214.44	-3309214.28	-3309214.11	0.0501	0.0360
Saturn	-13765-06-09 11:31 J	-3306083.26	-3306083.02	-3306082.78	0.0304	0.0062
Saturn	-13751-12-03 01:55 J	-3300793.56	-3300793.42	-3300793.26	0.0258	0.0206
Uranus	-13746-11-26 23:31 J	-3298973.62	-3298973.52	-3298973.40	0.0146	0.0131
Uranus	-13745-12-01 05:02 J	-3298603.53	-3298603.29	-3298603.06	0.0146	0.0060
Jupiter	-13744-05-09 01:40 J	-3298444.50	-3298444.43	-3298444.35	0.0523	0.0493
Uranus	-13744-12-06 10:04 J	-3298233.34	-3298233.08	-3298232.82	0.0146	0.0010
Uranus	-13743-12-11 14:38 J	-3297863.09	-3297862.89	-3297862.66	0.0145	0.0079
Jupiter	-13732-05-13 22:19 J	-3294056.80	-3294056.57	-3294056.34	0.0524	0.0048
Saturn	-13721-12-08 19:55 J	-3289829.90	-3289829.67	-3289829.44	0.0258	0.0097
Jupiter	-13720-05-18 18:28 J	-3289668.88	-3289668.73	-3289668.58	0.0525	0.0397
Jupiter	-13715-11-03 07:26 J	-3287674.23	-3287674.19	-3287674.14	0.0503	0.0491
Neptune	-13715-11-21 15:35 J	-3287655.95	-3287655.85	-3287655.73	0.0088	0.0080
Neptune	-13714-11-24 03:50 J	-3287288.56	-3287288.34	-3287288.10	0.0088	0.0041
Neptune	-13713-11-25 16:04 J	-3286921.09	-3286920.83	-3286920.57	0.0088	0.0002
Neptune	-13712-11-28 03:35 J	-3286553.57	-3286553.35	-3286553.10	0.0088	0.0038
Neptune	-13711-11-30 15:35 J	-3286185.95	-3286185.85	-3286185.69	0.0088	0.0076

Saturn	-13706-06-11 21:07 J	-3284531.86	-3284531.62	-3284531.38	0.0304	0.0032
Jupiter	-13703-11-07 16:33 J	-3283287.03	-3283286.81	-3283286.57	0.0502	0.0114
Uranus	-13702-06-03 09:21 J	-3283079.28	-3283079.11	-3283078.90	0.0133	0.0088
Uranus	-13701-06-06 13:26 J	-3282710.17	-3282709.94	-3282709.68	0.0133	0.0037
Uranus	-13700-06-10 17:45 J	-3282341.01	-3282340.76	-3282340.51	0.0133	0.0015
Uranus	-13699-06-14 21:35 J	-3281971.81	-3281971.60	-3281971.37	0.0133	0.0067
Uranus	-13698-06-19 02:24 J	-3281602.52	-3281602.40	-3281602.29	0.0134	0.0118
Saturn	-13692-12-04 05:02 J	-3279242.49	-3279242.29	-3279242.08	0.0258	0.0143
Jupiter	-13691-11-12 06:14 J	-3278899.43	-3278899.24	-3278899.04	0.0501	0.0281
Uranus	-13662-11-27 07:55 J	-3268292.28	-3268292.17	-3268292.02	0.0146	0.0126
Saturn	-13662-12-10 21:07 J	-3268278.81	-3268278.62	-3268278.41	0.0258	0.0157
Uranus	-13661-12-01 12:57 J	-3267922.18	-3267921.96	-3267921.71	0.0146	0.0057
Uranus	-13660-12-06 18:28 J	-3267551.98	-3267551.73	-3267551.47	0.0146	0.0014
Uranus	-13659-12-11 23:02 J	-3267181.73	-3267181.54	-3267181.31	0.0145	0.0084
Mars	-13654-04-17 22:04 J	-3265593.73	-3265593.58	-3265593.43	0.1842	0.1195
Jupiter	-13649-05-13 05:02 J	-3263741.52	-3263741.29	-3263741.07	0.0524	0.0112
Saturn	-13647-06-12 23:45 J	-3262980.73	-3262980.51	-3262980.28	0.0304	0.0109
Jupiter	-13637-05-18 05:31 J	-3259353.44	-3259353.27	-3259353.10	0.0524	0.0350
Saturn	-13633-12-05 05:16 J	-3257691.51	-3257691.28	-3257691.04	0.0258	0.0085
Neptune	-13631-05-28 11:16 J	-3257152.21	-3257152.03	-3257151.83	0.0089	0.0059
Neptune	-13630-05-30 22:19 J	-3256784.81	-3256784.57	-3256784.31	0.0089	0.0020
Neptune	-13629-06-01 09:21 J	-3256417.35	-3256417.11	-3256416.85	0.0089	0.0020
Neptune	-13628-06-03 20:24 J	-3256049.83	-3256049.65	-3256049.45	0.0089	0.0058
Jupiter	-13620-11-07 01:11 J	-3252971.67	-3252971.45	-3252971.22	0.0502	0.0163
Uranus	-13619-05-30 18:14 J	-3252766.75	-3252766.74	-3252766.70	0.0132	0.0132
Uranus	-13618-06-03 22:19 J	-3252397.76	-3252397.57	-3252397.37	0.0133	0.0082
Uranus	-13617-06-07 02:09 J	-3252028.65	-3252028.41	-3252028.16	0.0133	0.0031
Uranus	-13616-06-11 06:14 J	-3251659.49	-3251659.24	-3251658.99	0.0133	0.0020
Uranus	-13615-06-15 10:33 J	-3251290.27	-3251290.06	-3251289.85	0.0133	0.0072
Pluto	-13615-09-26 20:24 J	-3251186.82	-3251186.65	-3251186.42	0.0067	0.0042

Uranus	-13614-06-19 14:24 J	-3250920.97	-3250920.90	-3250920.78	0.0133	0.0124
Pluto	-13614-09-28 10:04 J	-3250820.15	-3250820.08	-3250819.94	0.0067	0.0062
Jupiter	-13608-11-11 17:16 J	-3248583.99	-3248583.78	-3248583.58	0.0502	0.0239
Saturn	-13603-12-11 19:40 J	-3246727.81	-3246727.68	-3246727.53	0.0258	0.0211
Saturn	-13588-06-13 22:33 J	-3241429.76	-3241429.56	-3241429.36	0.0305	0.0174
Mars	-13582-10-13 11:31 J	-3239117.19	-3239117.02	-3239116.85	0.1678	0.0720
Uranus	-13578-11-27 13:55 J	-3237611.05	-3237610.92	-3237610.78	0.0146	0.0123
Uranus	-13577-12-01 18:57 J	-3237240.95	-3237240.71	-3237240.47	0.0146	0.0054
Uranus	-13576-12-07 00:00 J	-3236870.75	-3236870.50	-3236870.24	0.0146	0.0016
Mars	-13575-04-21 03:21 J	-3236735.47	-3236735.36	-3236735.25	0.1837	0.1514
Uranus	-13575-12-12 04:48 J	-3236500.50	-3236500.30	-3236500.08	0.0145	0.0085
Saturn	-13574-12-07 02:52 J	-3236140.63	-3236140.38	-3236140.13	0.0257	0.0034
Jupiter	-13566-05-13 16:04 J	-3233426.05	-3233425.83	-3233425.61	0.0523	0.0153
Saturn	-13559-06-07 06:28 J	-3230844.35	-3230844.23	-3230844.09	0.0305	0.0253
Jupiter	-13554-05-18 13:11 J	-3229038.13	-3229037.95	-3229037.75	0.0524	0.0293
Neptune	-13550-11-23 09:35 J	-3227388.27	-3227388.10	-3227387.91	0.0088	0.0063
Neptune	-13549-11-24 21:21 J	-3227020.84	-3227020.61	-3227020.34	0.0088	0.0024
Neptune	-13548-11-27 09:50 J	-3226653.34	-3226653.09	-3226652.82	0.0088	0.0015
Neptune	-13547-11-29 21:35 J	-3226285.78	-3226285.60	-3226285.37	0.0088	0.0054
Jupiter	-13537-11-06 14:09 J	-3222656.12	-3222655.91	-3222655.69	0.0502	0.0196
Uranus	-13535-05-31 06:14 J	-3222085.30	-3222085.24	-3222085.16	0.0132	0.0127
Uranus	-13534-06-04 10:04 J	-3221716.27	-3221716.08	-3221715.86	0.0133	0.0077
Uranus	-13533-06-07 14:09 J	-3221347.15	-3221346.91	-3221346.65	0.0133	0.0026
Uranus	-13532-06-11 18:28 J	-3220977.97	-3220977.73	-3220977.48	0.0133	0.0025
Uranus	-13531-06-15 22:48 J	-3220608.75	-3220608.55	-3220608.34	0.0133	0.0077
Uranus	-13530-06-20 03:21 J	-3220239.42	-3220239.36	-3220239.28	0.0134	0.0128
Saturn	-13529-06-14 16:19 J	-3219878.97	-3219878.82	-3219878.65	0.0305	0.0226
Pluto	-13528-04-01 06:57 J	-3219588.32	-3219588.21	-3219588.04	0.0077	0.0065
Jupiter	-13525-11-11 00:00 J	-3218268.71	-3218268.50	-3218268.28	0.0501	0.0184
Saturn	-13515-12-07 22:33 J	-3214589.81	-3214589.56	-3214589.31	0.0257	0.0014

Mars	-13503-10-15 18:00 J	-3210259.92	-3210259.75	-3210259.58	0.1681	0.0741
Saturn	-13500-06-08 00:00 J	-3209293.68	-3209293.50	-3209293.32	0.0305	0.0201
Uranus	-13494-11-27 22:19 J	-3206929.69	-3206929.57	-3206929.40	0.0146	0.0120
Uranus	-13493-12-02 03:35 J	-3206559.58	-3206559.35	-3206559.10	0.0146	0.0050
Uranus	-13492-12-07 08:52 J	-3206189.38	-3206189.13	-3206188.87	0.0146	0.0020
Uranus	-13491-12-12 13:55 J	-3205819.12	-3205818.92	-3205818.72	0.0145	0.0089
Saturn	-13486-12-03 03:21 J	-3204002.45	-3204002.36	-3204002.26	0.0257	0.0237
Jupiter	-13483-05-13 00:57 J	-3203110.67	-3203110.46	-3203110.24	0.0523	0.0206
Jupiter	-13471-05-18 01:40 J	-3198722.63	-3198722.43	-3198722.22	0.0524	0.0253
Saturn	-13470-06-16 08:52 J	-3198328.23	-3198328.13	-3198328.03	0.0305	0.0275
Neptune	-13467-05-27 18:43 J	-3197251.80	-3197251.72	-3197251.59	0.0089	0.0081
Neptune	-13466-05-30 06:14 J	-3196884.45	-3196884.24	-3196884.00	0.0089	0.0042
Neptune	-13465-05-31 17:31 J	-3196517.02	-3196516.77	-3196516.51	0.0089	0.0003
Neptune	-13464-06-03 04:19 J	-3196149.54	-3196149.32	-3196149.07	0.0089	0.0037
Neptune	-13463-06-05 15:21 J	-3195781.98	-3195781.86	-3195781.71	0.0089	0.0075
Saturn	-13456-12-08 17:16 J	-3193039.02	-3193038.78	-3193038.53	0.0257	0.0059
Jupiter	-13454-11-06 21:50 J	-3192340.79	-3192340.59	-3192340.39	0.0502	0.0247
Uranus	-13451-05-31 18:28 J	-3191403.82	-3191403.73	-3191403.62	0.0133	0.0121
Uranus	-13450-06-04 22:33 J	-3191034.76	-3191034.56	-3191034.34	0.0133	0.0071
Uranus	-13449-06-08 02:52 J	-3190665.63	-3190665.38	-3190665.13	0.0133	0.0020
Uranus	-13448-06-12 06:57 J	-3190296.44	-3190296.21	-3190295.95	0.0133	0.0031
Uranus	-13447-06-16 11:16 J	-3189927.21	-3189927.03	-3189926.81	0.0133	0.0083
Uranus	-13446-06-20 16:33 J	-3189557.83	-3189557.81	-3189557.79	0.0134	0.0133
Jupiter	-13442-11-11 12:28 J	-3187953.20	-3187952.98	-3187952.75	0.0502	0.0149
Saturn	-13441-06-08 15:50 J	-3187743.05	-3187742.84	-3187742.63	0.0305	0.0154
Saturn	-13427-12-03 21:50 J	-3182451.74	-3182451.59	-3182451.41	0.0257	0.0193
Uranus	-13410-11-28 10:04 J	-3176248.23	-3176248.08	-3176247.91	0.0146	0.0113
Uranus	-13409-12-02 15:07 J	-3175878.11	-3175877.87	-3175877.63	0.0146	0.0044
Uranus	-13408-12-07 20:09 J	-3175507.91	-3175507.66	-3175507.41	0.0145	0.0025
Uranus	-13407-12-13 00:28 J	-3175137.66	-3175137.48	-3175137.27	0.0145	0.0093

Jupiter	-13400-05-12 16:19 J	-3172795.02	-3172794.82	-3172794.61	0.0524	0.0230
Saturn	-13397-12-09 12:28 J	-3171488.21	-3171487.98	-3171487.75	0.0258	0.0104
Jupiter	-13388-05-17 14:38 J	-3168407.10	-3168406.89	-3168406.68	0.0524	0.0218
Neptune	-13386-11-22 16:19 J	-3167487.88	-3167487.82	-3167487.72	0.0088	0.0084
Neptune	-13385-11-24 04:19 J	-3167120.52	-3167120.32	-3167120.07	0.0088	0.0045
Neptune	-13384-11-26 16:48 J	-3166753.05	-3166752.80	-3166752.54	0.0088	0.0006
Neptune	-13383-11-29 05:02 J	-3166385.53	-3166385.29	-3166385.05	0.0088	0.0033
Saturn	-13382-06-10 09:35 J	-3166192.33	-3166192.10	-3166191.87	0.0305	0.0102
Neptune	-13382-12-01 16:33 J	-3166017.94	-3166017.81	-3166017.63	0.0088	0.0071
Jupiter	-13371-11-06 10:48 J	-3162025.24	-3162025.05	-3162024.85	0.0503	0.0280
Mars	-13370-04-17 15:07 J	-3161862.92	-3161862.87	-3161862.81	0.1849	0.1776
Saturn	-13368-12-04 17:45 J	-3160900.96	-3160900.76	-3160900.55	0.0258	0.0146
Uranus	-13367-06-01 06:28 J	-3160722.34	-3160722.23	-3160722.10	0.0133	0.0116
Uranus	-13366-06-05 10:33 J	-3160353.27	-3160353.06	-3160352.83	0.0133	0.0066
Pluto	-13366-09-29 09:07 J	-3160237.35	-3160237.12	-3160236.86	0.0067	0.0020
Uranus	-13365-06-08 15:07 J	-3159984.12	-3159983.87	-3159983.62	0.0133	0.0015
Uranus	-13364-06-12 19:26 J	-3159614.92	-3159614.69	-3159614.44	0.0133	0.0036
Uranus	-13363-06-17 00:14 J	-3159245.68	-3159245.49	-3159245.30	0.0133	0.0087
Jupiter	-13359-11-11 01:55 J	-3157637.64	-3157637.42	-3157637.19	0.0502	0.0117
Jupiter	-13347-11-15 12:28 J	-3153250.00	-3153249.98	-3153249.95	0.0501	0.0497
Saturn	-13338-12-11 08:38 J	-3149937.34	-3149937.14	-3149936.93	0.0258	0.0152
Uranus	-13326-11-28 23:45 J	-3145566.66	-3145566.51	-3145566.31	0.0146	0.0106
Uranus	-13325-12-03 05:02 J	-3145196.54	-3145196.29	-3145196.04	0.0146	0.0037
Uranus	-13324-12-08 10:04 J	-3144826.33	-3144826.08	-3144825.83	0.0145	0.0032
Saturn	-13323-06-11 06:28 J	-3144641.46	-3144641.23	-3144640.98	0.0305	0.0043
Uranus	-13323-12-13 14:24 J	-3144456.07	-3144455.90	-3144455.70	0.0145	0.0100
Jupiter	-13317-05-12 00:43 J	-3142479.66	-3142479.47	-3142479.27	0.0523	0.0282
Saturn	-13309-12-05 15:21 J	-3139350.09	-3139349.86	-3139349.63	0.0258	0.0095
Jupiter	-13305-05-16 21:07 J	-3138091.84	-3138091.62	-3138091.40	0.0524	0.0156
Neptune	-13302-05-29 14:24 J	-3136984.06	-3136983.90	-3136983.70	0.0089	0.0063

Neptune -13301-05-31 01:55 J -3136616.66 -3136616.42 -3136616.16 0.0089 0.0024
 Neptune -13300-06-02 12:57 J -3136249.20 -3136248.96 -3136248.70 0.0089 0.0015
 Neptune -13299-06-04 23:45 J -3135881.69 -3135881.51 -3135881.29 0.0089 0.0054
 Mars -13298-10-14 10:19 J -3135385.26 -3135385.07 -3135384.89 0.1673 0.0400
 Mars -13291-04-20 22:04 J -3133004.74 -3133004.58 -3133004.41 0.1844 0.1042
 Jupiter -13288-11-05 18:43 J -3131709.90 -3131709.72 -3131709.55 0.0502 0.0329
 Uranus -13283-06-01 18:43 J -3130040.86 -3130040.72 -3130040.58 0.0133 0.0110
 Uranus -13282-06-05 23:02 J -3129671.76 -3129671.54 -3129671.31 0.0133 0.0060
 Uranus -13281-06-09 03:35 J -3129302.60 -3129302.35 -3129302.10 0.0133 0.0010
 Uranus -13280-06-13 07:55 J -3128933.40 -3128933.17 -3128932.92 0.0133 0.0041
 Pluto -13279-04-04 01:26 J -3128638.66 -3128638.44 -3128638.18 0.0077 0.0030
 Uranus -13279-06-17 12:28 J -3128564.15 -3128563.98 -3128563.78 0.0133 0.0092
 Saturn -13279-12-12 07:40 J -3128386.33 -3128386.18 -3128386.03 0.0258 0.0205
 Jupiter -13276-11-10 07:55 J -3127322.40 -3127322.17 -3127321.94 0.0501 0.0060
 Saturn -13264-06-12 08:52 J -3123090.37 -3123090.13 -3123089.89 0.0305 0.0030
 Jupiter -13264-11-14 21:07 J -3122934.71 -3122934.62 -3122934.51 0.0501 0.0448
 Saturn -13250-12-07 15:35 J -3117799.09 -3117798.85 -3117798.60 0.0258 0.0039
 Uranus -13242-11-29 12:57 J -3114885.15 -3114884.96 -3114884.77 0.0146 0.0099
 Uranus -13241-12-03 17:45 J -3114515.00 -3114514.76 -3114514.50 0.0146 0.0031
 Uranus -13240-12-08 22:48 J -3114144.79 -3114144.55 -3114144.30 0.0145 0.0037
 Uranus -13239-12-14 02:52 J -3113774.54 -3113774.38 -3113774.18 0.0145 0.0106
 Jupiter -13234-05-12 06:00 J -3112164.43 -3112164.25 -3112164.08 0.0523 0.0348
 Jupiter -13222-05-17 04:19 J -3107776.55 -3107776.32 -3107776.09 0.0524 0.0099
 Neptune -13221-11-23 12:14 J -3107220.14 -3107219.99 -3107219.79 0.0088 0.0066
 Neptune -13220-11-26 00:28 J -3106852.71 -3106852.48 -3106852.22 0.0088 0.0027
 Mars -13219-10-16 16:19 J -3106527.96 -3106527.82 -3106527.67 0.1676 0.1041
 Neptune -13219-11-28 12:28 J -3106485.22 -3106484.98 -3106484.71 0.0088 0.0013
 Neptune -13218-12-01 00:28 J -3106117.68 -3106117.48 -3106117.25 0.0088 0.0051
 Saturn -13205-06-13 17:31 J -3101538.99 -3101538.77 -3101538.55 0.0305 0.0120
 Jupiter -13205-11-05 00:28 J -3101394.62 -3101394.48 -3101394.33 0.0502 0.0389

Uranus	-13199-06-02 05:16 J	-3099359.42	-3099359.28	-3099359.12	0.0133	0.0106
Uranus	-13198-06-06 09:50 J	-3098990.31	-3098990.09	-3098989.86	0.0133	0.0056
Uranus	-13197-06-09 14:24 J	-3098621.16	-3098620.90	-3098620.65	0.0133	0.0006
Uranus	-13196-06-13 18:43 J	-3098251.95	-3098251.72	-3098251.47	0.0133	0.0045
Uranus	-13195-06-17 23:02 J	-3097882.70	-3097882.54	-3097882.35	0.0133	0.0096
Jupiter	-13193-11-09 14:09 J	-3097007.15	-3097006.91	-3097006.68	0.0502	0.0006
Saturn	-13191-12-08 19:26 J	-3096247.93	-3096247.69	-3096247.44	0.0258	0.0026
Jupiter	-13181-11-14 03:50 J	-3092619.48	-3092619.34	-3092619.19	0.0501	0.0392
Saturn	-13176-06-07 10:19 J	-3090953.16	-3090953.07	-3090952.97	0.0304	0.0279
Saturn	-13162-12-04 05:31 J	-3085660.39	-3085660.27	-3085660.13	0.0259	0.0218
Uranus	-13158-11-29 22:33 J	-3084203.76	-3084203.56	-3084203.37	0.0146	0.0094
Uranus	-13157-12-04 03:21 J	-3083833.60	-3083833.36	-3083833.10	0.0146	0.0027
Uranus	-13156-12-09 08:09 J	-3083463.39	-3083463.16	-3083462.90	0.0145	0.0043
Uranus	-13155-12-14 12:57 J	-3083093.12	-3083092.96	-3083092.78	0.0145	0.0109
Jupiter	-13151-05-11 07:40 J	-3081849.31	-3081849.18	-3081849.04	0.0523	0.0426
Saturn	-13146-06-16 07:55 J	-3079987.33	-3079987.17	-3079987.01	0.0304	0.0225
Jupiter	-13139-05-16 05:31 J	-3077461.50	-3077461.27	-3077461.04	0.0524	0.0017
Neptune	-13138-05-29 00:14 J	-3077083.56	-3077083.49	-3077083.38	0.0089	0.0083
Neptune	-13137-05-30 11:45 J	-3076716.22	-3076716.01	-3076715.78	0.0089	0.0044
Neptune	-13136-06-01 23:02 J	-3076348.79	-3076348.54	-3076348.28	0.0089	0.0006
Neptune	-13135-06-04 09:50 J	-3075981.31	-3075981.09	-3075980.83	0.0089	0.0034
Neptune	-13134-06-06 21:07 J	-3075613.76	-3075613.62	-3075613.46	0.0089	0.0073
Saturn	-13132-12-10 02:38 J	-3074696.62	-3074696.39	-3074696.16	0.0258	0.0096
Jupiter	-13127-05-21 00:28 J	-3073073.60	-3073073.48	-3073073.36	0.0524	0.0450
Jupiter	-13122-11-05 04:33 J	-3071079.41	-3071079.31	-3071079.21	0.0503	0.0453
Pluto	-13118-09-30 09:35 J	-3069654.34	-3069654.10	-3069653.84	0.0067	0.0014
Saturn	-13117-06-09 04:19 J	-3069401.51	-3069401.32	-3069401.11	0.0304	0.0166
Uranus	-13115-06-02 15:50 J	-3068678.00	-3068677.84	-3068677.67	0.0132	0.0101
Uranus	-13114-06-06 20:09 J	-3068308.88	-3068308.66	-3068308.42	0.0133	0.0052
Uranus	-13113-06-10 00:43 J	-3067939.72	-3067939.47	-3067939.22	0.0133	0.0002

Uranus	-13112-06-14 04:48 J	-3067570.52	-3067570.30	-3067570.05	0.0133	0.0049
Uranus	-13111-06-18 09:21 J	-3067201.27	-3067201.11	-3067200.93	0.0133	0.0099
Jupiter	-13110-11-09 17:02 J	-3066692.02	-3066691.79	-3066691.56	0.0501	0.0068
Saturn	-13103-12-05 13:40 J	-3064109.12	-3064108.93	-3064108.71	0.0259	0.0145
Jupiter	-13098-11-14 05:02 J	-3062304.47	-3062304.29	-3062304.10	0.0501	0.0316
Mars	-13093-10-12 05:16 J	-3060510.37	-3060510.28	-3060510.19	0.1666	0.1445
Uranus	-13074-11-30 04:04 J	-3053522.51	-3053522.33	-3053522.11	0.0146	0.0092
Uranus	-13073-12-04 09:21 J	-3053152.36	-3053152.11	-3053151.85	0.0146	0.0024
Saturn	-13073-12-11 12:00 J	-3053145.17	-3053145.00	-3053144.80	0.0258	0.0174
Uranus	-13072-12-09 14:24 J	-3052782.15	-3052781.90	-3052781.66	0.0145	0.0044
Uranus	-13071-12-14 18:14 J	-3052411.88	-3052411.74	-3052411.55	0.0145	0.0111
Saturn	-13058-06-12 02:24 J	-3047849.63	-3047849.40	-3047849.16	0.0304	0.0043
Neptune	-13057-11-22 20:52 J	-3047319.67	-3047319.63	-3047319.53	0.0088	0.0085
Jupiter	-13056-05-15 01:11 J	-3047146.68	-3047146.45	-3047146.22	0.0524	0.0085
Neptune	-13056-11-25 09:07 J	-3046952.33	-3046952.12	-3046951.89	0.0088	0.0047
Neptune	-13055-11-27 21:07 J	-3046584.88	-3046584.62	-3046584.36	0.0088	0.0008
Neptune	-13054-11-30 08:52 J	-3046217.36	-3046217.13	-3046216.87	0.0088	0.0031
Neptune	-13053-12-01 21:07 J	-3045849.77	-3045849.62	-3045849.45	0.0088	0.0068
Jupiter	-13044-05-19 21:21 J	-3042758.78	-3042758.61	-3042758.43	0.0525	0.0352
Saturn	-13044-12-07 00:28 J	-3042557.72	-3042557.48	-3042557.24	0.0259	0.0066
Pluto	-13031-04-04 20:09 J	-3038055.89	-3038055.66	-3038055.40	0.0077	0.0028
Uranus	-13031-06-03 01:26 J	-3037996.60	-3037996.44	-3037996.26	0.0132	0.0097
Uranus	-13030-06-07 06:00 J	-3037627.48	-3037627.25	-3037627.01	0.0133	0.0048
Uranus	-13029-06-10 10:19 J	-3037258.32	-3037258.07	-3037257.81	0.0133	0.0003
Uranus	-13028-06-14 14:38 J	-3036889.11	-3036888.89	-3036888.65	0.0133	0.0052
Uranus	-13027-06-18 18:43 J	-3036519.86	-3036519.72	-3036519.53	0.0133	0.0103
Jupiter	-13027-11-08 15:21 J	-3036377.08	-3036376.86	-3036376.64	0.0502	0.0156
Jupiter	-13015-11-13 03:35 J	-3031989.56	-3031989.35	-3031989.14	0.0501	0.0228
Mars	-13014-10-15 10:04 J	-3031653.27	-3031653.08	-3031652.90	0.1669	0.0069
Saturn	-13014-12-13 23:02 J	-3031593.57	-3031593.54	-3031593.47	0.0258	0.0254

Mars -13007-04-20 14:38 J -3029274.08 -3029273.89 -3029273.70 0.1852 0.0479

13TH MILLENNIUM BCE

This is a list of transits of Earth in the 13th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Saturn	-12999-06-14 03:21 J		-3026297.59	-3026297.36	-3026297.12	0.0304	0.0090	
Uranus	-12990-11-30 09:35 J		-3022841.29	-3022841.10	-3022840.89	0.0146	0.0089	
Uranus	-12989-12-04 14:38 J		-3022471.14	-3022470.89	-3022470.63	0.0146	0.0022	
Uranus	-12988-12-09 18:57 J		-3022100.94	-3022100.71	-3022100.45	0.0145	0.0047	
Uranus	-12987-12-14 23:45 J		-3021730.66	-3021730.51	-3021730.34	0.0145	0.0112	
Saturn	-12985-12-08 11:45 J		-3021006.26	-3021006.01	-3021005.76	0.0259	0.0016	
Jupiter	-12973-05-13 21:21 J		-3016831.82	-3016831.61	-3016831.39	0.0524	0.0189	
Neptune	-12973-05-29 21:21 J		-3016815.76	-3016815.61	-3016815.41	0.0089	0.0064	
Neptune	-12972-06-01 09:07 J		-3016448.35	-3016448.12	-3016447.86	0.0089	0.0025	
Neptune	-12971-06-03 20:38 J		-3016080.89	-3016080.64	-3016080.38	0.0089	0.0014	
Neptune	-12970-06-06 07:55 J		-3015713.37	-3015713.17	-3015712.96	0.0089	0.0053	
Saturn	-12970-06-08 01:11 J		-3015711.50	-3015711.45	-3015711.38	0.0304	0.0294	
Jupiter	-12961-05-18 20:09 J		-3012443.86	-3012443.66	-3012443.46	0.0524	0.0257	
Saturn	-12956-12-04 00:00 J		-3010418.62	-3010418.50	-3010418.35	0.0259	0.0218	
Uranus	-12947-06-03 11:16 J		-3007315.19	-3007315.03	-3007314.83	0.0133	0.0093	
Uranus	-12946-06-07 15:50 J		-3006946.06	-3006945.84	-3006945.59	0.0133	0.0044	
Uranus	-12945-06-10 20:24 J		-3006576.90	-3006576.65	-3006576.39	0.0133	0.0007	
Uranus	-12944-06-15 00:43 J		-3006207.69	-3006207.47	-3006207.23	0.0133	0.0056	

Jupiter	-12944-11-07 15:35 J	-3006062.05	-3006061.85	-3006061.64	0.0502	0.0235
Uranus	-12943-06-19 05:02 J	-3005838.43	-3005838.29	-3005838.13	0.0133	0.0106
Saturn	-12940-06-16 02:38 J	-3004745.55	-3004745.39	-3004745.22	0.0304	0.0218
Mars	-12935-10-17 14:52 J	-3002795.99	-3002795.88	-3002795.77	0.1671	0.1344
Jupiter	-12932-11-12 05:16 J	-3001674.50	-3001674.28	-3001674.06	0.0501	0.0153
Saturn	-12926-12-10 21:50 J	-2999454.81	-2999454.59	-2999454.35	0.0259	0.0096
Saturn	-12911-06-10 00:00 J	-2994159.70	-2994159.50	-2994159.30	0.0304	0.0167
Uranus	-12906-11-30 17:16 J	-2992159.97	-2992159.78	-2992159.56	0.0146	0.0086
Uranus	-12905-12-04 22:04 J	-2991789.83	-2991789.58	-2991789.32	0.0146	0.0018
Uranus	-12904-12-10 02:38 J	-2991419.63	-2991419.39	-2991419.15	0.0145	0.0049
Uranus	-12903-12-15 06:28 J	-2991049.36	-2991049.23	-2991049.05	0.0145	0.0115
Saturn	-12897-12-05 09:50 J	-2988867.29	-2988867.09	-2988866.87	0.0259	0.0140
Neptune	-12892-11-24 18:43 J	-2987051.88	-2987051.72	-2987051.54	0.0088	0.0066
Neptune	-12891-11-27 06:43 J	-2986684.46	-2986684.22	-2986683.96	0.0088	0.0028
Jupiter	-12890-05-13 19:26 J	-2986516.89	-2986516.69	-2986516.50	0.0523	0.0280
Neptune	-12890-11-29 18:43 J	-2986316.97	-2986316.72	-2986316.45	0.0088	0.0011
Neptune	-12889-12-01 06:28 J	-2985949.43	-2985949.23	-2985948.99	0.0088	0.0050
Neptune	-12888-12-03 18:28 J	-2985581.75	-2985581.73	-2985581.68	0.0088	0.0087
Jupiter	-12878-05-18 15:35 J	-2982129.07	-2982128.85	-2982128.63	0.0524	0.0155
Pluto	-12870-10-01 08:38 J	-2979071.27	-2979071.14	-2979070.95	0.0066	0.0052
Pluto	-12869-10-01 22:19 J	-2978704.71	-2978704.57	-2978704.38	0.0067	0.0051
Saturn	-12867-12-12 06:14 J	-2977903.42	-2977903.24	-2977903.05	0.0258	0.0171
Uranus	-12863-06-03 20:38 J	-2976633.81	-2976633.64	-2976633.44	0.0133	0.0089
Uranus	-12862-06-08 01:11 J	-2976264.68	-2976264.45	-2976264.20	0.0133	0.0040
Uranus	-12861-06-11 05:45 J	-2975895.51	-2975895.26	-2975895.01	0.0133	0.0010
Jupiter	-12861-11-06 18:43 J	-2975746.90	-2975746.72	-2975746.53	0.0502	0.0305
Uranus	-12860-06-15 10:04 J	-2975526.29	-2975526.08	-2975525.84	0.0133	0.0060
Uranus	-12859-06-19 14:38 J	-2975157.02	-2975156.89	-2975156.73	0.0134	0.0109
Saturn	-12852-06-11 17:16 J	-2972608.01	-2972607.78	-2972607.54	0.0304	0.0054
Jupiter	-12849-11-11 03:21 J	-2971359.59	-2971359.36	-2971359.12	0.0502	0.0066

Saturn	-12838-12-07 17:16 J	-2967316.02	-2967315.78	-2967315.54	0.0258	0.0066
Jupiter	-12837-11-15 16:04 J	-2966971.93	-2966971.83	-2966971.72	0.0501	0.0448
Uranus	-12822-12-01 03:50 J	-2961478.54	-2961478.34	-2961478.11	0.0146	0.0080
Uranus	-12821-12-05 08:24 J	-2961108.40	-2961108.15	-2961107.89	0.0146	0.0014
Uranus	-12820-12-10 12:28 J	-2960738.21	-2960737.98	-2960737.73	0.0145	0.0053
Uranus	-12819-12-15 16:19 J	-2960367.94	-2960367.82	-2960367.65	0.0145	0.0119
Neptune	-12809-05-29 08:24 J	-2956915.21	-2956915.15	-2956915.03	0.0089	0.0083
Mars	-12809-10-13 05:31 J	-2956778.41	-2956778.27	-2956778.12	0.1662	0.1083
Neptune	-12808-05-31 20:09 J	-2956547.87	-2956547.66	-2956547.43	0.0089	0.0044
Saturn	-12808-12-13 11:31 J	-2956352.10	-2956352.02	-2956351.92	0.0258	0.0240
Jupiter	-12807-05-12 17:31 J	-2956201.93	-2956201.77	-2956201.60	0.0523	0.0373
Neptune	-12807-06-03 07:40 J	-2956180.44	-2956180.18	-2956179.93	0.0089	0.0005
Neptune	-12806-06-05 18:43 J	-2955812.95	-2955812.72	-2955812.48	0.0089	0.0033
Neptune	-12805-06-07 05:31 J	-2955445.39	-2955445.27	-2955445.09	0.0089	0.0072
Jupiter	-12795-05-17 17:31 J	-2951814.00	-2951813.77	-2951813.54	0.0524	0.0073
Saturn	-12793-06-13 05:31 J	-2951056.51	-2951056.27	-2951056.03	0.0304	0.0047
Jupiter	-12783-05-22 17:45 J	-2947425.77	-2947425.76	-2947425.75	0.0524	0.0524
Pluto	-12782-04-07 14:52 J	-2947105.95	-2947105.88	-2947105.75	0.0077	0.0071
Uranus	-12779-06-04 06:57 J	-2945952.40	-2945952.21	-2945952.01	0.0133	0.0084
Saturn	-12779-12-08 21:21 J	-2945764.86	-2945764.61	-2945764.36	0.0258	0.0003
Uranus	-12778-06-08 11:16 J	-2945583.26	-2945583.03	-2945582.77	0.0133	0.0036
Jupiter	-12778-11-06 18:28 J	-2945431.87	-2945431.73	-2945431.58	0.0503	0.0387
Uranus	-12777-06-11 15:50 J	-2945214.08	-2945213.84	-2945213.58	0.0133	0.0015
Uranus	-12776-06-15 20:24 J	-2944844.86	-2944844.65	-2944844.41	0.0133	0.0063
Uranus	-12775-06-20 00:43 J	-2944475.58	-2944475.47	-2944475.31	0.0134	0.0113
Jupiter	-12766-11-11 08:24 J	-2941044.38	-2941044.15	-2941043.91	0.0502	0.0009
Jupiter	-12754-11-15 23:45 J	-2936656.65	-2936656.51	-2936656.36	0.0501	0.0393
Saturn	-12750-12-04 05:16 J	-2935177.34	-2935177.28	-2935177.20	0.0258	0.0246
Uranus	-12739-11-26 11:45 J	-2931167.06	-2931167.01	-2931166.92	0.0146	0.0140
Uranus	-12738-12-01 16:19 J	-2930797.03	-2930796.82	-2930796.59	0.0146	0.0074

Uranus	-12737-12-05 20:38 J	-2930426.90	-2930426.64	-2930426.39	0.0145	0.0008
Uranus	-12736-12-11 00:28 J	-2930056.70	-2930056.48	-2930056.23	0.0145	0.0058
Uranus	-12735-12-16 04:48 J	-2929686.43	-2929686.30	-2929686.17	0.0145	0.0123
Saturn	-12734-06-15 10:48 J	-2929505.26	-2929505.05	-2929504.82	0.0304	0.0131
Mars	-12730-10-16 10:33 J	-2927921.25	-2927921.06	-2927920.88	0.1664	0.0291
Neptune	-12728-11-24 04:19 J	-2927151.37	-2927151.32	-2927151.22	0.0088	0.0085
Neptune	-12727-11-26 16:19 J	-2926784.02	-2926783.82	-2926783.58	0.0088	0.0047
Neptune	-12726-11-29 04:48 J	-2926416.56	-2926416.30	-2926416.04	0.0088	0.0008
Neptune	-12725-11-30 16:19 J	-2926049.05	-2926048.82	-2926048.56	0.0088	0.0031
Jupiter	-12724-05-12 03:21 J	-2925886.49	-2925886.36	-2925886.22	0.0523	0.0419
Neptune	-12724-12-03 04:04 J	-2925681.47	-2925681.33	-2925681.14	0.0088	0.0069
Mars	-12723-04-20 04:48 J	-2925543.50	-2925543.30	-2925543.10	0.1859	0.0176
Saturn	-12720-12-09 22:19 J	-2924213.81	-2924213.57	-2924213.33	0.0258	0.0059
Jupiter	-12712-05-17 00:57 J	-2921498.70	-2921498.46	-2921498.23	0.0523	0.0019
Saturn	-12705-06-07 22:04 J	-2918919.65	-2918919.58	-2918919.50	0.0304	0.0288
Jupiter	-12700-05-21 21:50 J	-2917110.69	-2917110.59	-2917110.47	0.0524	0.0455
Uranus	-12696-05-31 11:31 J	-2915640.07	-2915640.02	-2915639.96	0.0133	0.0129
Uranus	-12695-06-04 15:50 J	-2915271.03	-2915270.84	-2915270.63	0.0133	0.0081
Jupiter	-12695-11-06 04:04 J	-2915116.44	-2915116.33	-2915116.20	0.0503	0.0431
Uranus	-12694-06-08 20:38 J	-2914901.88	-2914901.64	-2914901.39	0.0133	0.0032
Uranus	-12693-06-12 00:57 J	-2914532.70	-2914532.46	-2914532.20	0.0133	0.0018
Uranus	-12692-06-16 05:31 J	-2914163.47	-2914163.27	-2914163.04	0.0133	0.0067
Uranus	-12691-06-20 10:04 J	-2913794.18	-2913794.08	-2913793.93	0.0134	0.0116
Saturn	-12691-12-05 05:02 J	-2913626.45	-2913626.29	-2913626.12	0.0258	0.0189
Jupiter	-12683-11-10 18:57 J	-2910728.94	-2910728.71	-2910728.48	0.0502	0.0040
Saturn	-12675-06-16 10:48 J	-2907954.23	-2907954.05	-2907953.86	0.0304	0.0199
Jupiter	-12671-11-15 04:04 J	-2906341.50	-2906341.33	-2906341.15	0.0501	0.0330
Saturn	-12661-12-10 20:09 J	-2902662.87	-2902662.66	-2902662.43	0.0258	0.0113
Uranus	-12655-11-26 22:19 J	-2900485.65	-2900485.57	-2900485.45	0.0146	0.0135
Uranus	-12654-12-02 02:38 J	-2900115.60	-2900115.39	-2900115.15	0.0146	0.0069

Uranus	-12653-12-06 07:11 J	-2899745.46	-2899745.20	-2899744.94	0.0145	0.0003
Uranus	-12652-12-11 11:02 J	-2899375.26	-2899375.04	-2899374.80	0.0145	0.0063
Mars	-12651-10-18 14:38 J	-2899063.90	-2899063.89	-2899063.88	0.1667	0.1662
Uranus	-12651-12-16 14:52 J	-2899004.97	-2899004.88	-2899004.74	0.0145	0.0128
Saturn	-12646-06-09 19:11 J	-2897368.86	-2897368.70	-2897368.54	0.0305	0.0227
Neptune	-12644-05-31 07:26 J	-2896647.35	-2896647.19	-2896646.99	0.0089	0.0063
Neptune	-12643-06-02 19:11 J	-2896279.95	-2896279.70	-2896279.45	0.0089	0.0024
Neptune	-12642-06-05 06:28 J	-2895912.48	-2895912.23	-2895911.98	0.0089	0.0014
Jupiter	-12641-05-11 10:33 J	-2895571.15	-2895571.06	-2895570.96	0.0522	0.0474
Neptune	-12641-06-06 17:16 J	-2895544.97	-2895544.78	-2895544.56	0.0089	0.0053
Saturn	-12632-12-06 02:09 J	-2892075.61	-2892075.41	-2892075.19	0.0258	0.0138
Jupiter	-12629-05-16 07:26 J	-2891183.42	-2891183.19	-2891182.96	0.0523	0.0042
Pluto	-12621-10-03 01:40 J	-2888121.67	-2888121.43	-2888121.19	0.0067	0.0024
Jupiter	-12617-05-21 08:09 J	-2886795.31	-2886795.16	-2886795.02	0.0524	0.0406
Saturn	-12616-06-17 06:28 J	-2886403.35	-2886403.23	-2886403.09	0.0305	0.0257
Uranus	-12612-05-31 19:55 J	-2884958.73	-2884958.67	-2884958.56	0.0133	0.0126
Jupiter	-12612-11-05 11:02 J	-2884801.10	-2884801.04	-2884800.98	0.0503	0.0482
Uranus	-12611-06-05 00:43 J	-2884589.67	-2884589.47	-2884589.26	0.0133	0.0077
Uranus	-12610-06-09 05:16 J	-2884220.52	-2884220.28	-2884220.03	0.0133	0.0029
Uranus	-12609-06-12 09:50 J	-2883851.34	-2883851.09	-2883850.84	0.0133	0.0020
Uranus	-12608-06-16 14:09 J	-2883482.11	-2883481.91	-2883481.68	0.0133	0.0070
Uranus	-12607-06-20 19:11 J	-2883112.81	-2883112.70	-2883112.58	0.0134	0.0118
Saturn	-12602-12-12 16:33 J	-2881111.99	-2881111.81	-2881111.61	0.0258	0.0161
Jupiter	-12600-11-10 00:57 J	-2880413.69	-2880413.46	-2880413.23	0.0502	0.0096
Jupiter	-12588-11-14 15:21 J	-2876026.04	-2876025.86	-2876025.66	0.0502	0.0292
Saturn	-12587-06-10 13:11 J	-2875818.15	-2875817.95	-2875817.75	0.0305	0.0174
Saturn	-12573-12-06 21:50 J	-2870524.82	-2870524.59	-2870524.36	0.0258	0.0091
Uranus	-12571-11-27 05:45 J	-2869804.36	-2869804.26	-2869804.13	0.0146	0.0131
Uranus	-12570-12-02 10:04 J	-2869434.30	-2869434.08	-2869433.84	0.0146	0.0066
Uranus	-12569-12-06 14:24 J	-2869064.15	-2869063.90	-2869063.64	0.0145	0.0002

Uranus	-12568-12-11 18:28 J	-2868693.95	-2868693.73	-2868693.49	0.0145	0.0066
Uranus	-12567-12-16 22:48 J	-2868323.65	-2868323.55	-2868323.43	0.0145	0.0130
Neptune	-12563-11-26 03:07 J	-2866883.53	-2866883.37	-2866883.18	0.0088	0.0065
Neptune	-12562-11-28 15:07 J	-2866516.11	-2866515.87	-2866515.61	0.0088	0.0027
Neptune	-12561-11-30 03:07 J	-2866148.62	-2866148.37	-2866148.11	0.0088	0.0012
Neptune	-12560-12-02 15:07 J	-2865781.08	-2865780.87	-2865780.65	0.0088	0.0050
Neptune	-12559-12-05 03:07 J	-2865413.39	-2865413.37	-2865413.33	0.0088	0.0088
Jupiter	-12558-05-11 21:50 J	-2865255.62	-2865255.59	-2865255.56	0.0522	0.0516
Jupiter	-12546-05-16 22:48 J	-2860867.78	-2860867.55	-2860867.32	0.0524	0.0066
Saturn	-12543-12-13 12:00 J	-2859561.14	-2859561.00	-2859560.84	0.0257	0.0207
Pluto	-12534-04-08 12:14 J	-2856523.22	-2856522.99	-2856522.72	0.0077	0.0022
Jupiter	-12534-05-21 21:50 J	-2856479.75	-2856479.59	-2856479.43	0.0524	0.0374
Uranus	-12528-06-01 04:04 J	-2854277.42	-2854277.33	-2854277.22	0.0133	0.0122
Saturn	-12528-06-11 05:31 J	-2854267.49	-2854267.27	-2854267.05	0.0305	0.0126
Uranus	-12527-06-05 08:38 J	-2853908.35	-2853908.14	-2853907.93	0.0133	0.0074
Uranus	-12526-06-09 13:11 J	-2853539.20	-2853538.95	-2853538.70	0.0133	0.0026
Uranus	-12525-06-12 17:31 J	-2853170.01	-2853169.77	-2853169.51	0.0133	0.0023
Mars	-12525-10-14 06:14 J	-2853046.41	-2853046.24	-2853046.07	0.1657	0.0718
Uranus	-12524-06-16 22:19 J	-2852800.78	-2852800.57	-2852800.36	0.0133	0.0072
Uranus	-12523-06-21 02:38 J	-2852431.48	-2852431.39	-2852431.27	0.0133	0.0121
Jupiter	-12517-11-09 14:38 J	-2850098.12	-2850097.89	-2850097.66	0.0503	0.0126
Saturn	-12514-12-08 17:02 J	-2848974.04	-2848973.79	-2848973.54	0.0258	0.0045
Jupiter	-12505-11-14 05:45 J	-2845710.46	-2845710.26	-2845710.06	0.0502	0.0263
Uranus	-12487-11-27 09:35 J	-2839123.20	-2839123.10	-2839122.96	0.0146	0.0129
Uranus	-12486-12-02 13:55 J	-2838753.14	-2838752.92	-2838752.68	0.0146	0.0064
Uranus	-12485-12-06 18:28 J	-2838382.99	-2838382.73	-2838382.48	0.0145	0.0003
Uranus	-12484-12-11 22:19 J	-2838012.78	-2838012.57	-2838012.33	0.0145	0.0067
Saturn	-12484-12-14 07:11 J	-2838010.24	-2838010.20	-2838010.15	0.0258	0.0253
Uranus	-12483-12-17 02:24 J	-2837642.49	-2837642.40	-2837642.28	0.0145	0.0132
Neptune	-12480-05-30 19:11 J	-2836746.78	-2836746.70	-2836746.58	0.0089	0.0082

Neptune	-12479-06-02 06:28 J	-2836379.43	-2836379.23	-2836378.99	0.0089	0.0043
Neptune	-12478-06-04 18:00 J	-2836012.00	-2836011.75	-2836011.49	0.0089	0.0005
Neptune	-12477-06-06 05:02 J	-2835644.51	-2835644.29	-2835644.04	0.0089	0.0034
Neptune	-12476-06-08 16:19 J	-2835276.96	-2835276.82	-2835276.66	0.0089	0.0073
Saturn	-12469-06-11 22:04 J	-2832716.81	-2832716.58	-2832716.34	0.0305	0.0077
Jupiter	-12463-05-16 09:21 J	-2830552.33	-2830552.11	-2830551.88	0.0523	0.0110
Saturn	-12455-12-09 12:43 J	-2827423.22	-2827422.97	-2827422.72	0.0258	0.0003
Jupiter	-12451-05-21 06:14 J	-2826164.42	-2826164.24	-2826164.05	0.0524	0.0323
Mars	-12446-10-17 10:33 J	-2824189.23	-2824189.06	-2824188.88	0.1660	0.0638
Uranus	-12444-06-01 12:00 J	-2823596.09	-2823596.00	-2823595.86	0.0133	0.0119
Uranus	-12443-06-05 16:48 J	-2823227.00	-2823226.80	-2823226.57	0.0133	0.0071
Uranus	-12442-06-09 21:21 J	-2822857.85	-2822857.61	-2822857.35	0.0133	0.0023
Uranus	-12441-06-13 02:09 J	-2822488.66	-2822488.41	-2822488.16	0.0133	0.0026
Uranus	-12440-06-17 06:28 J	-2822119.42	-2822119.23	-2822119.01	0.0133	0.0075
Mars	-12439-04-19 16:33 J	-2821812.99	-2821812.81	-2821812.64	0.1865	0.0916
Uranus	-12439-06-21 11:02 J	-2821750.11	-2821750.04	-2821749.92	0.0133	0.0124
Jupiter	-12434-11-10 00:14 J	-2819782.71	-2819782.49	-2819782.27	0.0502	0.0168
Saturn	-12426-12-04 19:11 J	-2816835.75	-2816835.70	-2816835.62	0.0259	0.0250
Jupiter	-12422-11-14 13:26 J	-2815395.14	-2815394.94	-2815394.72	0.0501	0.0215
Saturn	-12410-06-13 18:28 J	-2811165.97	-2811165.73	-2811165.49	0.0305	0.0018
Uranus	-12403-11-27 13:40 J	-2808442.03	-2808441.93	-2808441.78	0.0146	0.0127
Uranus	-12402-12-02 18:14 J	-2808071.97	-2808071.74	-2808071.51	0.0146	0.0062
Uranus	-12401-12-06 22:33 J	-2807701.81	-2807701.56	-2807701.30	0.0145	0.0004
Uranus	-12400-12-12 02:38 J	-2807331.61	-2807331.39	-2807331.15	0.0145	0.0069
Neptune	-12399-11-25 13:11 J	-2806983.01	-2806982.95	-2806982.84	0.0088	0.0083
Uranus	-12399-12-17 06:43 J	-2806961.30	-2806961.22	-2806961.10	0.0145	0.0133
Neptune	-12398-11-28 01:11 J	-2806615.65	-2806615.45	-2806615.20	0.0088	0.0046
Neptune	-12397-11-29 13:40 J	-2806248.18	-2806247.93	-2806247.66	0.0088	0.0007
Neptune	-12396-12-02 01:40 J	-2805880.66	-2805880.43	-2805880.17	0.0088	0.0031
Saturn	-12396-12-10 09:50 J	-2805872.33	-2805872.09	-2805871.85	0.0258	0.0052

Neptune	-12395-12-04 13:11 J	-2805513.08	-2805512.95	-2805512.76	0.0088	0.0070
Jupiter	-12380-05-15 18:14 J	-2800236.96	-2800236.74	-2800236.52	0.0523	0.0160
Pluto	-12373-10-04 05:02 J	-2797538.54	-2797538.29	-2797538.03	0.0067	0.0001
Jupiter	-12368-05-20 17:45 J	-2795848.96	-2795848.76	-2795848.57	0.0524	0.0283
Saturn	-12367-12-05 17:16 J	-2795284.94	-2795284.78	-2795284.62	0.0259	0.0198
Uranus	-12360-06-01 19:55 J	-2792914.79	-2792914.67	-2792914.54	0.0133	0.0115
Uranus	-12359-06-06 00:14 J	-2792545.69	-2792545.49	-2792545.26	0.0133	0.0068
Uranus	-12358-06-10 05:16 J	-2792176.53	-2792176.28	-2792176.03	0.0133	0.0019
Uranus	-12357-06-13 10:04 J	-2791807.32	-2791807.08	-2791806.83	0.0133	0.0029
Uranus	-12356-06-17 14:52 J	-2791438.08	-2791437.88	-2791437.67	0.0133	0.0078
Uranus	-12355-06-21 19:40 J	-2791068.75	-2791068.68	-2791068.59	0.0133	0.0126
Saturn	-12351-06-14 18:14 J	-2789614.98	-2789614.74	-2789614.50	0.0304	0.0049
Jupiter	-12351-11-09 09:50 J	-2789467.30	-2789467.09	-2789466.88	0.0502	0.0214
Jupiter	-12339-11-13 23:45 J	-2785079.73	-2785079.51	-2785079.29	0.0502	0.0170
Saturn	-12337-12-11 08:52 J	-2784321.35	-2784321.13	-2784320.90	0.0258	0.0106
Uranus	-12319-11-27 21:07 J	-2777760.75	-2777760.62	-2777760.48	0.0146	0.0123
Uranus	-12318-12-03 00:57 J	-2777390.69	-2777390.46	-2777390.22	0.0146	0.0059
Uranus	-12317-12-07 05:31 J	-2777020.53	-2777020.27	-2777020.01	0.0145	0.0006
Uranus	-12316-12-12 09:35 J	-2776650.32	-2776650.10	-2776649.87	0.0145	0.0071
Neptune	-12315-06-01 18:43 J	-2776478.88	-2776478.72	-2776478.51	0.0089	0.0061
Uranus	-12315-12-17 13:40 J	-2776280.01	-2776279.93	-2776279.83	0.0145	0.0135
Neptune	-12314-06-04 06:14 J	-2776111.47	-2776111.24	-2776110.98	0.0089	0.0023
Neptune	-12313-06-05 17:31 J	-2775744.01	-2775743.77	-2775743.51	0.0089	0.0016
Neptune	-12312-06-08 04:19 J	-2775376.50	-2775376.32	-2775376.09	0.0089	0.0055
Saturn	-12308-12-06 17:16 J	-2773733.98	-2773733.78	-2773733.56	0.0259	0.0142
Jupiter	-12297-05-15 00:43 J	-2769921.68	-2769921.47	-2769921.26	0.0523	0.0219
Saturn	-12292-06-16 00:28 J	-2768063.70	-2768063.48	-2768063.26	0.0304	0.0133
Pluto	-12286-04-09 11:16 J	-2765940.27	-2765940.03	-2765939.77	0.0077	0.0020
Jupiter	-12285-05-19 23:16 J	-2765533.75	-2765533.53	-2765533.32	0.0524	0.0217
Saturn	-12278-12-13 10:33 J	-2762770.24	-2762770.06	-2762769.86	0.0258	0.0167

Uranus	-12276-06-02 04:04 J	-2762233.44	-2762233.33	-2762233.17	0.0133	0.0112
Uranus	-12275-06-06 09:07 J	-2761864.33	-2761864.12	-2761863.89	0.0133	0.0064
Uranus	-12274-06-10 14:09 J	-2761495.16	-2761494.91	-2761494.65	0.0133	0.0016
Uranus	-12273-06-13 18:57 J	-2761125.95	-2761125.71	-2761125.46	0.0133	0.0033
Uranus	-12272-06-18 00:14 J	-2760756.69	-2760756.49	-2760756.29	0.0133	0.0081
Uranus	-12271-06-22 05:02 J	-2760387.34	-2760387.29	-2760387.22	0.0134	0.0129
Jupiter	-12268-11-08 18:00 J	-2759151.95	-2759151.75	-2759151.56	0.0503	0.0264
Saturn	-12263-06-09 16:19 J	-2757477.92	-2757477.82	-2757477.70	0.0303	0.0269
Jupiter	-12256-11-13 05:45 J	-2754764.49	-2754764.26	-2754764.03	0.0501	0.0112
Saturn	-12249-12-07 20:24 J	-2752182.88	-2752182.65	-2752182.41	0.0259	0.0079
Jupiter	-12244-11-17 18:00 J	-2750376.79	-2750376.75	-2750376.69	0.0501	0.0488
Mars	-12241-10-15 07:55 J	-2749314.36	-2749314.17	-2749313.99	0.1653	0.0338
Uranus	-12235-11-28 07:11 J	-2747079.33	-2747079.20	-2747079.03	0.0146	0.0118
Neptune	-12234-11-27 12:00 J	-2746715.16	-2746715.00	-2746714.80	0.0088	0.0063
Uranus	-12234-12-03 11:16 J	-2746709.25	-2746709.03	-2746708.78	0.0146	0.0054
Saturn	-12233-06-17 12:57 J	-2746512.11	-2746511.96	-2746511.80	0.0304	0.0233
Neptune	-12233-11-29 00:14 J	-2746347.73	-2746347.49	-2746347.23	0.0088	0.0026
Uranus	-12233-12-07 15:50 J	-2746339.09	-2746338.84	-2746338.58	0.0145	0.0012
Neptune	-12232-12-01 12:28 J	-2745980.24	-2745979.98	-2745979.72	0.0088	0.0013
Uranus	-12232-12-12 19:40 J	-2745968.88	-2745968.68	-2745968.45	0.0145	0.0076
Neptune	-12231-12-04 00:14 J	-2745612.69	-2745612.49	-2745612.27	0.0088	0.0050
Uranus	-12231-12-18 00:00 J	-2745598.56	-2745598.50	-2745598.42	0.0145	0.0139
Neptune	-12230-12-06 12:28 J	-2745244.98	-2745244.98	-2745244.97	0.0088	0.0088
Saturn	-12219-12-14 15:35 J	-2741218.94	-2741218.85	-2741218.74	0.0258	0.0235
Jupiter	-12214-05-15 00:28 J	-2739606.67	-2739606.48	-2739606.29	0.0523	0.0302
Saturn	-12204-06-11 07:55 J	-2735926.36	-2735926.17	-2735925.95	0.0303	0.0161
Jupiter	-12202-05-19 22:19 J	-2735218.80	-2735218.57	-2735218.35	0.0524	0.0131
Uranus	-12192-06-02 12:43 J	-2731552.10	-2731551.97	-2731551.80	0.0133	0.0108
Uranus	-12191-06-06 17:45 J	-2731182.97	-2731182.76	-2731182.52	0.0133	0.0060
Uranus	-12190-06-10 23:02 J	-2730813.79	-2730813.54	-2730813.29	0.0133	0.0012

Saturn	-12190-12-10 02:38 J	-2730631.63	-2730631.39	-2730631.14	0.0259	0.0009
Uranus	-12189-06-14 03:50 J	-2730444.57	-2730444.34	-2730444.09	0.0133	0.0036
Uranus	-12188-06-18 08:38 J	-2730075.32	-2730075.14	-2730074.93	0.0133	0.0084
Uranus	-12187-06-22 13:40 J	-2729705.95	-2729705.93	-2729705.87	0.0134	0.0132
Jupiter	-12185-11-07 21:07 J	-2728836.79	-2728836.62	-2728836.44	0.0502	0.0331
Jupiter	-12173-11-12 07:11 J	-2724449.43	-2724449.20	-2724448.96	0.0502	0.0037
Mars	-12162-10-18 11:31 J	-2720457.17	-2720457.02	-2720456.87	0.1656	0.0989
Jupiter	-12161-11-16 19:26 J	-2720061.82	-2720061.69	-2720061.56	0.0501	0.0411
Saturn	-12161-12-04 13:11 J	-2720044.01	-2720043.95	-2720043.87	0.0260	0.0248
Mars	-12155-04-19 02:24 J	-2718082.48	-2718082.40	-2718082.33	0.1872	0.1737
Neptune	-12151-06-01 06:28 J	-2716578.32	-2716578.23	-2716578.09	0.0089	0.0079
Uranus	-12151-11-28 18:57 J	-2716397.86	-2716397.71	-2716397.53	0.0146	0.0112
Neptune	-12150-06-03 18:00 J	-2716210.96	-2716210.75	-2716210.51	0.0089	0.0041
Uranus	-12150-12-03 23:02 J	-2716027.77	-2716027.54	-2716027.28	0.0146	0.0048
Neptune	-12149-06-05 05:31 J	-2715843.52	-2715843.27	-2715843.01	0.0089	0.0003
Uranus	-12149-12-08 03:35 J	-2715657.60	-2715657.35	-2715657.09	0.0145	0.0017
Neptune	-12148-06-07 16:33 J	-2715476.03	-2715475.81	-2715475.56	0.0089	0.0036
Uranus	-12148-12-13 07:26 J	-2715287.39	-2715287.19	-2715286.96	0.0145	0.0081
Neptune	-12147-06-10 03:50 J	-2715108.48	-2715108.34	-2715108.19	0.0089	0.0074
Uranus	-12147-12-18 11:31 J	-2714917.03	-2714917.02	-2714916.98	0.0145	0.0144
Saturn	-12145-06-13 04:48 J	-2714374.54	-2714374.30	-2714374.06	0.0303	0.0041
Jupiter	-12131-05-13 20:24 J	-2709291.79	-2709291.65	-2709291.49	0.0523	0.0401
Saturn	-12131-12-11 11:16 J	-2709080.26	-2709080.03	-2709079.78	0.0259	0.0070
Pluto	-12125-10-05 12:57 J	-2706955.21	-2706954.96	-2706954.70	0.0067	0.0011
Jupiter	-12119-05-18 19:40 J	-2704903.91	-2704903.68	-2704903.45	0.0524	0.0034
Uranus	-12108-06-02 21:35 J	-2700870.73	-2700870.60	-2700870.42	0.0133	0.0104
Jupiter	-12107-05-23 18:00 J	-2700515.84	-2700515.75	-2700515.64	0.0524	0.0469
Uranus	-12107-06-07 03:07 J	-2700501.59	-2700501.37	-2700501.14	0.0133	0.0056
Uranus	-12106-06-11 08:09 J	-2700132.41	-2700132.16	-2700131.90	0.0133	0.0009
Uranus	-12105-06-14 13:11 J	-2699763.19	-2699762.95	-2699762.71	0.0133	0.0039

Uranus	-12104-06-18 17:45 J	-2699393.93	-2699393.76	-2699393.55	0.0133	0.0087
Jupiter	-12102-11-07 19:11 J	-2698521.82	-2698521.70	-2698521.56	0.0503	0.0418
Saturn	-12102-12-06 23:02 J	-2698492.72	-2698492.54	-2698492.34	0.0260	0.0169
Jupiter	-12090-11-12 08:09 J	-2694134.39	-2694134.16	-2694133.93	0.0502	0.0040
Saturn	-12086-06-16 04:33 J	-2692822.54	-2692822.31	-2692822.08	0.0304	0.0089
Jupiter	-12078-11-16 20:52 J	-2689746.79	-2689746.63	-2689746.45	0.0501	0.0337
Mars	-12076-04-22 12:14 J	-2689224.14	-2689223.99	-2689223.85	0.1868	0.1281
Saturn	-12072-12-12 21:50 J	-2687528.79	-2687528.59	-2687528.38	0.0259	0.0149
Neptune	-12070-11-26 23:02 J	-2686814.61	-2686814.54	-2686814.41	0.0088	0.0082
Neptune	-12069-11-28 11:16 J	-2686447.25	-2686447.03	-2686446.79	0.0088	0.0043
Neptune	-12068-11-30 23:16 J	-2686079.79	-2686079.53	-2686079.27	0.0088	0.0006
Uranus	-12067-11-29 05:02 J	-2685716.45	-2685716.29	-2685716.10	0.0146	0.0107
Neptune	-12067-12-03 11:02 J	-2685712.27	-2685712.04	-2685711.79	0.0088	0.0032
Uranus	-12066-12-04 09:35 J	-2685346.34	-2685346.10	-2685345.85	0.0146	0.0043
Neptune	-12066-12-05 23:16 J	-2685344.69	-2685344.53	-2685344.37	0.0088	0.0070
Uranus	-12065-12-08 14:09 J	-2684976.16	-2684975.91	-2684975.66	0.0145	0.0022
Uranus	-12064-12-13 18:00 J	-2684605.95	-2684605.75	-2684605.54	0.0145	0.0085
Saturn	-12057-06-09 03:07 J	-2682236.43	-2682236.37	-2682236.30	0.0303	0.0291
Jupiter	-12048-05-12 19:40 J	-2678976.75	-2678976.68	-2678976.59	0.0523	0.0488
Saturn	-12043-12-08 10:19 J	-2676941.30	-2676941.07	-2676940.83	0.0259	0.0087
Pluto	-12038-04-10 15:07 J	-2675357.08	-2675356.87	-2675356.64	0.0077	0.0043
Jupiter	-12036-05-17 15:21 J	-2674589.09	-2674588.86	-2674588.63	0.0523	0.0065
Mars	-12036-10-14 06:57 J	-2674439.33	-2674439.21	-2674439.09	0.1648	0.1252
Saturn	-12027-06-18 05:02 J	-2671270.45	-2671270.29	-2671270.12	0.0304	0.0221
Jupiter	-12024-05-22 12:00 J	-2670201.17	-2670201.00	-2670200.83	0.0524	0.0361
Uranus	-12024-06-03 06:14 J	-2670189.40	-2670189.24	-2670189.07	0.0133	0.0100
Uranus	-12023-06-07 11:16 J	-2669820.25	-2669820.03	-2669819.79	0.0133	0.0053
Uranus	-12022-06-11 16:19 J	-2669451.07	-2669450.82	-2669450.57	0.0133	0.0005
Uranus	-12021-06-14 20:52 J	-2669081.86	-2669081.63	-2669081.38	0.0133	0.0042
Uranus	-12020-06-19 01:40 J	-2668712.61	-2668712.43	-2668712.23	0.0133	0.0090

Jupiter -12019-11-06 21:21 J -2668206.66 -2668206.61 -2668206.56 0.0503 0.0490

Saturn -12013-12-14 08:38 J -2665977.24 -2665977.14 -2665977.02 0.0259 0.0231

Jupiter -12007-11-11 09:35 J -2663819.33 -2663819.10 -2663818.87 0.0502 0.0115

12TH MILLENNIUM BCE

This is a list of transits of Earth in the 12th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Saturn	-11998-06-12 03:07 J	-2660684.57	-2660684.37	-2660684.17	0.0303	0.0161		
Jupiter	-11995-11-15 18:00 J	-2659431.95	-2659431.75	-2659431.54	0.0501	0.0246		
Neptune	-11986-06-03 06:00 J	-2656310.42	-2656310.25	-2656310.04	0.0089	0.0059		
Neptune	-11985-06-04 17:31 J	-2655943.01	-2655942.77	-2655942.51	0.0089	0.0021		
Neptune	-11984-06-07 04:48 J	-2655575.55	-2655575.30	-2655575.04	0.0089	0.0017		
Saturn	-11984-12-09 21:07 J	-2655389.87	-2655389.62	-2655389.37	0.0259	0.0006		
Neptune	-11983-06-09 15:50 J	-2655208.02	-2655207.84	-2655207.62	0.0089	0.0055		
Uranus	-11983-11-29 12:14 J	-2655035.16	-2655034.99	-2655034.80	0.0146	0.0103		
Uranus	-11982-12-04 16:48 J	-2654665.04	-2654664.80	-2654664.55	0.0146	0.0039		
Uranus	-11981-12-08 21:07 J	-2654294.87	-2654294.62	-2654294.36	0.0145	0.0025		
Uranus	-11980-12-14 01:11 J	-2653924.65	-2653924.45	-2653924.24	0.0145	0.0088		
Mars	-11957-10-16 10:04 J	-2645582.27	-2645582.08	-2645581.90	0.1650	0.0059		
Saturn	-11955-12-05 08:52 J	-2644802.20	-2644802.13	-2644802.04	0.0260	0.0246		
Jupiter	-11953-05-16 09:50 J	-2644274.31	-2644274.09	-2644273.87	0.0523	0.0170		
Jupiter	-11941-05-21 09:35 J	-2639886.30	-2639886.10	-2639885.90	0.0524	0.0264		
Uranus	-11940-06-03 14:52 J	-2639508.04	-2639507.88	-2639507.69	0.0132	0.0096		

Uranus	-11939-06-07 19:55 J	-2639138.89	-2639138.67	-2639138.43	0.0133	0.0049
Saturn	-11939-06-13 23:02 J	-2639132.78	-2639132.54	-2639132.30	0.0303	0.0041
Uranus	-11938-06-12 00:57 J	-2638769.72	-2638769.46	-2638769.21	0.0133	0.0002
Uranus	-11937-06-15 05:31 J	-2638400.51	-2638400.27	-2638400.03	0.0133	0.0045
Uranus	-11936-06-19 09:50 J	-2638031.26	-2638031.09	-2638030.89	0.0133	0.0092
Saturn	-11925-12-11 06:28 J	-2633838.47	-2633838.23	-2633837.99	0.0259	0.0072
Jupiter	-11924-11-10 06:43 J	-2633504.43	-2633504.22	-2633504.01	0.0503	0.0205
Jupiter	-11912-11-14 19:26 J	-2629116.90	-2629116.69	-2629116.46	0.0502	0.0173
Neptune	-11905-11-27 21:50 J	-2626546.77	-2626546.59	-2626546.40	0.0088	0.0062
Neptune	-11904-11-30 09:21 J	-2626179.34	-2626179.11	-2626178.85	0.0088	0.0025
Neptune	-11903-12-02 21:21 J	-2625811.86	-2625811.61	-2625811.35	0.0088	0.0014
Neptune	-11902-12-05 09:07 J	-2625444.31	-2625444.12	-2625443.89	0.0088	0.0051
Uranus	-11899-11-29 17:02 J	-2624353.97	-2624353.79	-2624353.60	0.0146	0.0100
Uranus	-11898-12-04 21:21 J	-2623983.85	-2623983.61	-2623983.36	0.0146	0.0037
Uranus	-11897-12-09 01:55 J	-2623613.67	-2623613.42	-2623613.17	0.0145	0.0027
Saturn	-11896-12-06 17:16 J	-2623250.96	-2623250.78	-2623250.59	0.0259	0.0170
Uranus	-11896-12-14 05:31 J	-2623243.45	-2623243.27	-2623243.05	0.0145	0.0090
Saturn	-11880-06-15 13:26 J	-2617581.18	-2617580.94	-2617580.70	0.0304	0.0064
Mars	-11878-10-19 13:26 J	-2616725.04	-2616724.94	-2616724.83	0.1652	0.1364
Pluto	-11877-10-06 22:04 J	-2616371.82	-2616371.58	-2616371.32	0.0067	0.0017
Jupiter	-11870-05-16 15:07 J	-2613959.08	-2613958.87	-2613958.66	0.0523	0.0234
Saturn	-11866-12-13 13:11 J	-2612287.15	-2612286.95	-2612286.73	0.0259	0.0145
Jupiter	-11858-05-21 12:14 J	-2609571.20	-2609570.99	-2609570.77	0.0523	0.0193
Uranus	-11856-06-03 23:31 J	-2608826.70	-2608826.52	-2608826.34	0.0132	0.0092
Uranus	-11855-06-08 04:04 J	-2608457.55	-2608457.33	-2608457.08	0.0133	0.0046
Uranus	-11854-06-12 08:52 J	-2608088.38	-2608088.13	-2608087.88	0.0133	0.0002
Uranus	-11853-06-15 13:26 J	-2607719.17	-2607718.94	-2607718.70	0.0133	0.0048
Uranus	-11852-06-19 17:45 J	-2607349.91	-2607349.76	-2607349.56	0.0133	0.0095
Jupiter	-11841-11-09 12:57 J	-2603189.16	-2603188.96	-2603188.76	0.0503	0.0262
Saturn	-11837-12-07 22:33 J	-2601699.78	-2601699.56	-2601699.33	0.0259	0.0101

Jupiter	-11829-11-14 02:38 J	-2598801.62	-2598801.39	-2598801.16	0.0502	0.0118
Neptune	-11822-06-02 17:31 J	-2596409.89	-2596409.77	-2596409.65	0.0089	0.0077
Neptune	-11821-06-04 04:33 J	-2596042.52	-2596042.31	-2596042.06	0.0089	0.0040
Saturn	-11821-06-16 22:33 J	-2596029.77	-2596029.56	-2596029.35	0.0304	0.0156
Neptune	-11820-06-06 16:33 J	-2595675.06	-2595674.81	-2595674.55	0.0089	0.0002
Neptune	-11819-06-09 03:35 J	-2595307.57	-2595307.35	-2595307.11	0.0089	0.0037
Neptune	-11818-06-11 14:52 J	-2594940.01	-2594939.88	-2594939.73	0.0089	0.0074
Jupiter	-11817-11-18 11:16 J	-2594414.10	-2594414.03	-2594413.96	0.0501	0.0478
Uranus	-11815-11-29 22:19 J	-2593672.74	-2593672.57	-2593672.36	0.0146	0.0098
Uranus	-11814-12-05 02:52 J	-2593302.62	-2593302.38	-2593302.12	0.0146	0.0035
Uranus	-11813-12-09 07:11 J	-2592932.45	-2592932.20	-2592931.95	0.0146	0.0029
Uranus	-11812-12-14 10:48 J	-2592562.23	-2592562.05	-2592561.83	0.0145	0.0093
Saturn	-11807-12-14 16:33 J	-2590735.94	-2590735.81	-2590735.65	0.0258	0.0209
Mars	-11792-04-21 21:35 J	-2585493.80	-2585493.60	-2585493.41	0.1874	0.0478
Saturn	-11792-06-10 10:04 J	-2585444.20	-2585444.08	-2585443.95	0.0303	0.0260
Pluto	-11790-04-11 23:16 J	-2584773.72	-2584773.53	-2584773.32	0.0078	0.0051
Jupiter	-11787-05-15 18:14 J	-2583643.92	-2583643.74	-2583643.54	0.0522	0.0302
Saturn	-11778-12-10 00:14 J	-2580148.73	-2580148.49	-2580148.24	0.0259	0.0040
Jupiter	-11775-05-20 14:52 J	-2579256.11	-2579255.88	-2579255.65	0.0523	0.0119
Uranus	-11772-06-04 07:55 J	-2578145.33	-2578145.17	-2578144.96	0.0133	0.0089
Uranus	-11771-06-08 13:11 J	-2577776.19	-2577775.95	-2577775.71	0.0133	0.0042
Uranus	-11770-06-12 18:00 J	-2577407.00	-2577406.75	-2577406.50	0.0133	0.0005
Uranus	-11769-06-15 22:19 J	-2577037.79	-2577037.57	-2577037.32	0.0133	0.0052
Uranus	-11768-06-20 02:52 J	-2576668.53	-2576668.38	-2576668.19	0.0133	0.0098
Saturn	-11762-06-19 00:28 J	-2574478.64	-2574478.48	-2574478.32	0.0304	0.0229
Jupiter	-11758-11-09 17:02 J	-2572873.97	-2572873.79	-2572873.61	0.0503	0.0323
Mars	-11752-10-15 09:50 J	-2570707.25	-2570707.09	-2570706.93	0.1644	0.0836
Jupiter	-11746-11-14 06:00 J	-2568486.48	-2568486.25	-2568486.01	0.0502	0.0054
Neptune	-11741-11-27 08:24 J	-2566646.25	-2566646.15	-2566646.03	0.0088	0.0080
Neptune	-11740-11-29 20:09 J	-2566278.88	-2566278.66	-2566278.42	0.0088	0.0042

Neptune	-11739-12-02 08:09 J	-2565911.42	-2565911.16	-2565910.90	0.0088	0.0005
Neptune	-11738-12-04 19:40 J	-2565543.91	-2565543.68	-2565543.43	0.0088	0.0033
Neptune	-11737-12-06 07:40 J	-2565176.33	-2565176.18	-2565176.02	0.0088	0.0070
Jupiter	-11734-11-18 19:55 J	-2564098.78	-2564098.67	-2564098.54	0.0502	0.0431
Saturn	-11733-06-11 09:21 J	-2563893.29	-2563893.11	-2563892.91	0.0304	0.0194
Uranus	-11731-11-30 07:26 J	-2562991.38	-2562991.19	-2562990.99	0.0146	0.0093
Uranus	-11730-12-05 11:31 J	-2562621.27	-2562621.02	-2562620.77	0.0146	0.0030
Uranus	-11729-12-09 15:21 J	-2562251.10	-2562250.86	-2562250.60	0.0146	0.0033
Uranus	-11728-12-14 18:57 J	-2561880.88	-2561880.71	-2561880.50	0.0145	0.0096
Saturn	-11719-12-10 22:48 J	-2558597.80	-2558597.55	-2558597.30	0.0259	0.0014
Jupiter	-11704-05-15 02:52 J	-2553328.56	-2553328.38	-2553328.21	0.0522	0.0353
Saturn	-11703-06-19 21:21 J	-2552927.67	-2552927.61	-2552927.54	0.0304	0.0290
Jupiter	-11692-05-20 04:19 J	-2548940.55	-2548940.32	-2548940.09	0.0524	0.0088
Saturn	-11690-12-06 05:02 J	-2548010.37	-2548010.29	-2548010.18	0.0259	0.0239
Uranus	-11689-05-31 12:00 J	-2547833.02	-2547833.00	-2547832.93	0.0133	0.0131
Uranus	-11688-06-04 17:02 J	-2547463.97	-2547463.79	-2547463.58	0.0133	0.0085
Uranus	-11687-06-08 22:19 J	-2547094.81	-2547094.57	-2547094.33	0.0133	0.0038
Uranus	-11686-06-13 02:52 J	-2546725.63	-2546725.38	-2546725.13	0.0133	0.0008
Uranus	-11685-06-16 07:40 J	-2546356.41	-2546356.18	-2546355.95	0.0133	0.0054
Uranus	-11684-06-20 12:00 J	-2545987.14	-2545987.00	-2545986.82	0.0133	0.0101
Jupiter	-11680-05-25 03:21 J	-2544552.38	-2544552.36	-2544552.33	0.0524	0.0519
Jupiter	-11675-11-09 03:35 J	-2542558.51	-2542558.35	-2542558.19	0.0503	0.0363
Saturn	-11674-06-13 03:50 J	-2542342.55	-2542342.34	-2542342.12	0.0304	0.0140
Mars	-11673-10-17 12:43 J	-2541850.15	-2541849.97	-2541849.79	0.1646	0.0444
Jupiter	-11663-11-13 18:43 J	-2538170.95	-2538170.72	-2538170.48	0.0503	0.0021
Saturn	-11660-12-11 18:28 J	-2537046.97	-2537046.73	-2537046.49	0.0258	0.0062
Neptune	-11657-06-03 15:35 J	-2536142.04	-2536141.85	-2536141.65	0.0089	0.0058
Neptune	-11656-06-06 03:07 J	-2535774.62	-2535774.37	-2535774.12	0.0089	0.0020
Neptune	-11655-06-08 14:52 J	-2535407.13	-2535406.88	-2535406.63	0.0089	0.0017
Neptune	-11654-06-11 01:40 J	-2535039.61	-2535039.43	-2535039.21	0.0089	0.0055

Jupiter	-11651-11-18 09:21 J	-2533783.24	-2533783.11	-2533782.96	0.0502	0.0400
Uranus	-11647-11-30 19:26 J	-2532309.88	-2532309.69	-2532309.47	0.0146	0.0087
Uranus	-11646-12-05 23:31 J	-2531939.77	-2531939.52	-2531939.26	0.0146	0.0025
Uranus	-11645-12-10 03:21 J	-2531569.61	-2531569.36	-2531569.11	0.0146	0.0038
Uranus	-11644-12-15 06:57 J	-2531199.38	-2531199.21	-2531199.01	0.0145	0.0100
Saturn	-11631-12-07 00:14 J	-2526459.65	-2526459.49	-2526459.32	0.0259	0.0193
Pluto	-11629-10-08 11:45 J	-2525788.27	-2525788.01	-2525787.76	0.0067	0.0009
Jupiter	-11621-05-14 16:19 J	-2523012.98	-2523012.82	-2523012.67	0.0522	0.0383
Saturn	-11615-06-13 20:24 J	-2520791.88	-2520791.65	-2520791.42	0.0304	0.0091
Jupiter	-11609-05-19 15:07 J	-2518625.11	-2518624.87	-2518624.64	0.0523	0.0046
Uranus	-11605-05-31 22:19 J	-2517151.63	-2517151.57	-2517151.47	0.0133	0.0126
Uranus	-11604-06-05 03:35 J	-2516782.55	-2516782.35	-2516782.14	0.0133	0.0080
Uranus	-11603-06-09 08:24 J	-2516413.39	-2516413.15	-2516412.90	0.0133	0.0034
Uranus	-11602-06-13 13:11 J	-2516044.20	-2516043.95	-2516043.70	0.0133	0.0012
Uranus	-11601-06-16 18:00 J	-2515674.97	-2515674.75	-2515674.52	0.0133	0.0058
Saturn	-11601-12-12 12:28 J	-2515496.20	-2515495.98	-2515495.74	0.0258	0.0107
Uranus	-11600-06-20 22:33 J	-2515305.71	-2515305.56	-2515305.40	0.0133	0.0105
Jupiter	-11597-05-24 12:00 J	-2514237.09	-2514237.00	-2514236.89	0.0524	0.0469
Jupiter	-11592-11-08 18:00 J	-2512242.89	-2512242.75	-2512242.60	0.0503	0.0389
Jupiter	-11580-11-13 04:33 J	-2507855.54	-2507855.31	-2507855.07	0.0502	0.0022
Neptune	-11576-11-29 05:31 J	-2506378.43	-2506378.27	-2506378.06	0.0088	0.0062
Neptune	-11575-12-01 17:31 J	-2506011.00	-2506010.77	-2506010.50	0.0088	0.0024
Neptune	-11574-12-04 05:31 J	-2505643.52	-2505643.27	-2505643.01	0.0088	0.0014
Neptune	-11573-12-05 17:16 J	-2505275.99	-2505275.78	-2505275.56	0.0088	0.0051
Saturn	-11572-12-07 18:00 J	-2504908.94	-2504908.75	-2504908.54	0.0259	0.0149
Neptune	-11572-12-08 04:48 J	-2504908.30	-2504908.30	-2504908.26	0.0088	0.0088
Jupiter	-11568-11-17 17:45 J	-2503467.91	-2503467.76	-2503467.58	0.0501	0.0354
Uranus	-11564-11-26 03:50 J	-2501998.36	-2501998.34	-2501998.26	0.0146	0.0143
Uranus	-11563-12-01 08:09 J	-2501628.36	-2501628.16	-2501627.94	0.0146	0.0081
Uranus	-11562-12-06 12:00 J	-2501258.25	-2501258.00	-2501257.74	0.0146	0.0019

Uranus	-11561-12-10 15:50 J	-2500888.07	-2500887.84	-2500887.59	0.0146	0.0044
Uranus	-11560-12-15 19:40 J	-2500517.84	-2500517.68	-2500517.49	0.0145	0.0106
Saturn	-11556-06-14 12:00 J	-2499241.24	-2499241.00	-2499240.76	0.0304	0.0044
Pluto	-11542-04-13 11:02 J	-2494190.23	-2494190.04	-2494189.80	0.0078	0.0044
Saturn	-11542-12-14 06:43 J	-2493945.41	-2493945.22	-2493945.01	0.0258	0.0150
Jupiter	-11538-05-15 00:57 J	-2492697.58	-2492697.46	-2492697.32	0.0522	0.0430
Jupiter	-11526-05-20 01:40 J	-2488309.66	-2488309.43	-2488309.20	0.0523	0.0004
Uranus	-11521-06-01 08:09 J	-2486470.24	-2486470.16	-2486470.05	0.0132	0.0122
Uranus	-11520-06-05 13:11 J	-2486101.16	-2486100.95	-2486100.74	0.0133	0.0076
Uranus	-11519-06-09 17:45 J	-2485732.00	-2485731.76	-2485731.50	0.0133	0.0031
Uranus	-11518-06-13 22:33 J	-2485362.81	-2485362.56	-2485362.31	0.0133	0.0016
Uranus	-11517-06-17 03:07 J	-2484993.58	-2484993.37	-2484993.13	0.0133	0.0062
Uranus	-11516-06-21 07:40 J	-2484624.30	-2484624.18	-2484624.01	0.0133	0.0109
Jupiter	-11514-05-25 02:09 J	-2483921.52	-2483921.41	-2483921.27	0.0525	0.0441
Saturn	-11513-12-08 12:28 J	-2483358.20	-2483357.98	-2483357.75	0.0260	0.0105
Jupiter	-11509-11-08 03:35 J	-2481927.46	-2481927.35	-2481927.22	0.0503	0.0430
Mars	-11508-04-21 05:45 J	-2481763.46	-2481763.26	-2481763.06	0.1880	0.0375
Saturn	-11497-06-15 06:00 J	-2477690.49	-2477690.25	-2477690.00	0.0304	0.0010
Jupiter	-11497-11-12 16:33 J	-2477540.04	-2477539.81	-2477539.57	0.0502	0.0059
Neptune	-11493-06-03 01:40 J	-2476241.53	-2476241.43	-2476241.28	0.0089	0.0077
Neptune	-11492-06-05 13:40 J	-2475874.15	-2475873.93	-2475873.69	0.0089	0.0039
Neptune	-11491-06-08 01:11 J	-2475506.71	-2475506.45	-2475506.19	0.0089	0.0002
Neptune	-11490-06-10 12:28 J	-2475139.20	-2475138.98	-2475138.74	0.0089	0.0036
Neptune	-11489-06-11 23:31 J	-2474771.63	-2474771.52	-2474771.35	0.0089	0.0075
Jupiter	-11485-11-17 06:57 J	-2473152.39	-2473152.21	-2473152.03	0.0502	0.0319
Saturn	-11483-12-15 01:40 J	-2472394.57	-2472394.43	-2472394.25	0.0258	0.0197
Uranus	-11480-11-26 15:21 J	-2471316.94	-2471316.86	-2471316.77	0.0146	0.0138
Uranus	-11479-12-01 18:57 J	-2470946.91	-2470946.71	-2470946.48	0.0146	0.0076
Uranus	-11478-12-06 23:16 J	-2470576.78	-2470576.53	-2470576.27	0.0146	0.0014
Uranus	-11477-12-11 03:07 J	-2470206.60	-2470206.37	-2470206.12	0.0146	0.0049

Uranus	-11476-12-16 07:11 J	-2469836.35	-2469836.20	-2469836.02	0.0145	0.0111
Mars	-11468-10-16 13:40 J	-2466975.11	-2466974.93	-2466974.74	0.1641	0.0412
Jupiter	-11455-05-14 12:14 J	-2462382.09	-2462381.99	-2462381.89	0.0523	0.0470
Saturn	-11454-12-10 08:24 J	-2461807.38	-2461807.15	-2461806.90	0.0260	0.0057
Jupiter	-11443-05-19 12:28 J	-2457994.21	-2457993.98	-2457993.75	0.0523	0.0039
Saturn	-11438-06-17 04:04 J	-2456139.57	-2456139.33	-2456139.10	0.0303	0.0071
Uranus	-11437-06-01 18:28 J	-2455788.84	-2455788.73	-2455788.61	0.0132	0.0117
Uranus	-11436-06-05 23:02 J	-2455419.74	-2455419.54	-2455419.32	0.0132	0.0072
Uranus	-11435-06-10 03:50 J	-2455050.58	-2455050.34	-2455050.09	0.0133	0.0026
Uranus	-11434-06-14 08:24 J	-2454681.39	-2454681.15	-2454680.89	0.0133	0.0020
Uranus	-11433-06-17 12:57 J	-2454312.16	-2454311.96	-2454311.72	0.0133	0.0066
Uranus	-11432-06-21 17:45 J	-2453942.88	-2453942.76	-2453942.61	0.0133	0.0111
Jupiter	-11431-05-24 11:45 J	-2453606.16	-2453606.01	-2453605.86	0.0524	0.0390
Jupiter	-11426-11-08 14:24 J	-2451611.98	-2451611.90	-2451611.82	0.0503	0.0471
Saturn	-11424-12-15 23:02 J	-2450843.59	-2450843.54	-2450843.45	0.0259	0.0248
Jupiter	-11414-11-13 04:33 J	-2447224.54	-2447224.31	-2447224.08	0.0503	0.0094
Neptune	-11412-11-28 14:38 J	-2446477.96	-2446477.89	-2446477.75	0.0088	0.0081
Neptune	-11411-12-01 03:07 J	-2446110.59	-2446110.37	-2446110.14	0.0088	0.0043
Neptune	-11410-12-03 14:38 J	-2445743.14	-2445742.89	-2445742.63	0.0088	0.0006
Neptune	-11409-12-05 02:24 J	-2445375.64	-2445375.40	-2445375.15	0.0088	0.0031
Neptune	-11408-12-07 13:55 J	-2445008.06	-2445007.92	-2445007.73	0.0088	0.0069
Jupiter	-11402-11-17 15:50 J	-2442837.03	-2442836.84	-2442836.64	0.0501	0.0272
Uranus	-11396-11-26 22:33 J	-2440635.65	-2440635.56	-2440635.44	0.0146	0.0134
Uranus	-11395-12-02 02:38 J	-2440265.61	-2440265.39	-2440265.16	0.0146	0.0072
Saturn	-11395-12-11 07:11 J	-2440256.45	-2440256.20	-2440255.95	0.0260	0.0003
Uranus	-11394-12-07 06:43 J	-2439895.47	-2439895.22	-2439894.96	0.0146	0.0010
Uranus	-11393-12-11 11:02 J	-2439525.28	-2439525.04	-2439524.80	0.0146	0.0052
Uranus	-11392-12-16 15:07 J	-2439155.02	-2439154.87	-2439154.70	0.0145	0.0113
Mars	-11389-10-18 16:19 J	-2438117.98	-2438117.82	-2438117.66	0.1643	0.0858
Pluto	-11381-10-10 02:52 J	-2435204.64	-2435204.38	-2435204.12	0.0067	0.0005

Saturn	-11379-06-18 06:43 J	-2434588.43	-2434588.22	-2434588.00	0.0303	0.0147
Saturn	-11366-12-06 13:11 J	-2429669.00	-2429668.95	-2429668.89	0.0260	0.0254
Jupiter	-11360-05-18 16:33 J	-2427679.04	-2427678.81	-2427678.58	0.0523	0.0105
Uranus	-11353-06-02 04:04 J	-2425107.45	-2425107.33	-2425107.19	0.0132	0.0113
Uranus	-11352-06-06 08:38 J	-2424738.35	-2424738.14	-2424737.91	0.0132	0.0068
Uranus	-11351-06-10 13:26 J	-2424369.19	-2424368.94	-2424368.69	0.0132	0.0022
Saturn	-11350-06-11 22:33 J	-2424002.68	-2424002.56	-2424002.43	0.0302	0.0254
Uranus	-11350-06-14 18:00 J	-2424000.00	-2423999.75	-2423999.50	0.0133	0.0023
Uranus	-11349-06-17 22:33 J	-2423630.77	-2423630.56	-2423630.34	0.0133	0.0069
Jupiter	-11348-05-23 15:21 J	-2423291.04	-2423290.86	-2423290.67	0.0524	0.0323
Uranus	-11348-06-22 03:21 J	-2423261.48	-2423261.36	-2423261.23	0.0133	0.0114
Saturn	-11336-12-12 08:52 J	-2418705.37	-2418705.13	-2418704.88	0.0260	0.0059
Jupiter	-11331-11-12 11:16 J	-2416909.25	-2416909.03	-2416908.81	0.0502	0.0148
Neptune	-11328-06-04 22:48 J	-2415973.72	-2415973.55	-2415973.34	0.0089	0.0059
Neptune	-11327-06-07 10:33 J	-2415606.30	-2415606.06	-2415605.80	0.0089	0.0022
Neptune	-11326-06-09 22:19 J	-2415238.82	-2415238.57	-2415238.32	0.0089	0.0016
Neptune	-11325-06-11 09:07 J	-2414871.30	-2414871.12	-2414870.90	0.0089	0.0054
Saturn	-11320-06-19 16:48 J	-2413036.93	-2413036.80	-2413036.64	0.0303	0.0242
Jupiter	-11319-11-16 21:50 J	-2412521.80	-2412521.59	-2412521.37	0.0502	0.0214
Uranus	-11312-11-27 04:19 J	-2409954.41	-2409954.32	-2409954.19	0.0146	0.0131
Uranus	-11311-12-02 08:24 J	-2409584.37	-2409584.15	-2409583.92	0.0146	0.0070
Uranus	-11310-12-07 12:57 J	-2409214.22	-2409213.96	-2409213.71	0.0146	0.0008
Uranus	-11309-12-11 17:02 J	-2408844.02	-2408843.79	-2408843.54	0.0146	0.0055
Uranus	-11308-12-16 21:07 J	-2408473.75	-2408473.62	-2408473.44	0.0145	0.0117
Saturn	-11307-12-07 16:33 J	-2408117.97	-2408117.81	-2408117.63	0.0261	0.0189
Pluto	-11294-04-15 04:33 J	-2403606.55	-2403606.31	-2403606.04	0.0078	0.0018
Saturn	-11291-06-13 11:16 J	-2402451.23	-2402451.03	-2402450.82	0.0302	0.0154
Jupiter	-11277-05-17 16:48 J	-2397364.01	-2397363.80	-2397363.58	0.0524	0.0187
Saturn	-11277-12-13 13:55 J	-2397154.13	-2397153.92	-2397153.70	0.0260	0.0128
Uranus	-11269-06-02 14:38 J	-2394426.03	-2394425.89	-2394425.74	0.0132	0.0108

Uranus	-11268-06-06 18:57 J	-2394056.92	-2394056.71	-2394056.47	0.0132	0.0063
Uranus	-11267-06-11 00:00 J	-2393687.75	-2393687.50	-2393687.25	0.0132	0.0018
Uranus	-11266-06-15 04:33 J	-2393318.56	-2393318.31	-2393318.06	0.0133	0.0028
Jupiter	-11265-05-22 16:33 J	-2392976.01	-2392975.81	-2392975.59	0.0524	0.0243
Uranus	-11265-06-18 09:21 J	-2392949.32	-2392949.11	-2392948.90	0.0133	0.0073
Uranus	-11264-06-22 13:55 J	-2392580.02	-2392579.92	-2392579.80	0.0133	0.0118
Mars	-11263-10-15 15:21 J	-2392099.98	-2392099.86	-2392099.74	0.1636	0.1236
Jupiter	-11248-11-11 13:26 J	-2386594.15	-2386593.94	-2386593.73	0.0503	0.0221
Saturn	-11248-12-08 23:16 J	-2386566.74	-2386566.53	-2386566.30	0.0261	0.0117
Neptune	-11247-11-30 11:02 J	-2386210.21	-2386210.04	-2386209.84	0.0088	0.0062
Neptune	-11246-12-02 23:02 J	-2385842.78	-2385842.54	-2385842.29	0.0088	0.0025
Neptune	-11245-12-04 11:02 J	-2385475.30	-2385475.04	-2385474.78	0.0088	0.0012
Neptune	-11244-12-06 22:33 J	-2385107.77	-2385107.56	-2385107.34	0.0088	0.0049
Neptune	-11243-12-09 10:19 J	-2384740.12	-2384740.07	-2384740.00	0.0088	0.0086
Jupiter	-11236-11-16 01:55 J	-2382206.64	-2382206.42	-2382206.20	0.0502	0.0149
Saturn	-11232-06-15 06:28 J	-2380899.47	-2380899.23	-2380898.99	0.0302	0.0038
Uranus	-11228-11-27 11:16 J	-2379273.13	-2379273.03	-2379272.88	0.0146	0.0128
Uranus	-11227-12-02 15:21 J	-2378903.07	-2378902.86	-2378902.62	0.0146	0.0067
Uranus	-11226-12-07 19:55 J	-2378532.92	-2378532.67	-2378532.41	0.0146	0.0005
Uranus	-11225-12-12 00:14 J	-2378162.72	-2378162.49	-2378162.25	0.0146	0.0058
Mars	-11224-04-20 12:14 J	-2378033.13	-2378032.99	-2378032.84	0.1886	0.1298
Uranus	-11224-12-17 04:48 J	-2377792.44	-2377792.30	-2377792.14	0.0145	0.0119
Saturn	-11218-12-15 21:50 J	-2375602.73	-2375602.59	-2375602.43	0.0260	0.0204
Jupiter	-11194-05-17 17:16 J	-2367048.98	-2367048.78	-2367048.58	0.0523	0.0268
Saturn	-11189-12-10 08:38 J	-2365015.39	-2365015.14	-2365014.89	0.0261	0.0038
Uranus	-11185-06-03 00:28 J	-2363744.63	-2363744.48	-2363744.31	0.0132	0.0104
Uranus	-11184-06-07 05:16 J	-2363375.50	-2363375.28	-2363375.05	0.0132	0.0059
Mars	-11184-10-17 18:14 J	-2363242.93	-2363242.74	-2363242.55	0.1638	0.0026
Uranus	-11183-06-11 10:19 J	-2363006.33	-2363006.07	-2363005.82	0.0132	0.0014
Jupiter	-11182-05-22 13:26 J	-2362661.16	-2362660.94	-2362660.72	0.0524	0.0148

Uranus	-11182-06-15 14:52 J	-2362637.12	-2362636.88	-2362636.63	0.0133	0.0032
Uranus	-11181-06-18 19:26 J	-2362267.88	-2362267.69	-2362267.47	0.0133	0.0077
Uranus	-11180-06-23 00:00 J	-2361898.57	-2361898.50	-2361898.37	0.0133	0.0122
Saturn	-11173-06-17 04:33 J	-2359347.54	-2359347.31	-2359347.07	0.0302	0.0089
Jupiter	-11165-11-10 16:19 J	-2356279.01	-2356278.82	-2356278.63	0.0502	0.0289
Neptune	-11164-06-04 08:09 J	-2356073.26	-2356073.16	-2356073.02	0.0089	0.0079
Neptune	-11163-06-06 19:40 J	-2355705.89	-2355705.68	-2355705.44	0.0089	0.0041
Neptune	-11162-06-09 07:26 J	-2355338.45	-2355338.19	-2355337.93	0.0089	0.0003
Neptune	-11161-06-10 18:28 J	-2354970.95	-2354970.73	-2354970.48	0.0089	0.0034
Neptune	-11160-06-13 05:45 J	-2354603.40	-2354603.26	-2354603.10	0.0089	0.0072
Jupiter	-11153-11-15 04:04 J	-2351891.56	-2351891.33	-2351891.10	0.0502	0.0077
Saturn	-11144-06-11 04:19 J	-2348761.38	-2348761.32	-2348761.23	0.0301	0.0286
Uranus	-11144-11-27 22:48 J	-2348591.69	-2348591.55	-2348591.41	0.0146	0.0122
Uranus	-11143-12-03 02:38 J	-2348221.62	-2348221.39	-2348221.16	0.0146	0.0061
Uranus	-11142-12-08 07:11 J	-2347851.46	-2347851.20	-2347850.95	0.0146	0.0002
Jupiter	-11141-11-19 12:28 J	-2347504.10	-2347503.98	-2347503.86	0.0501	0.0428
Uranus	-11141-12-12 11:31 J	-2347481.25	-2347481.02	-2347480.79	0.0146	0.0062
Uranus	-11140-12-17 15:21 J	-2347110.97	-2347110.86	-2347110.70	0.0146	0.0124
Pluto	-11133-10-11 21:50 J	-2344620.80	-2344620.59	-2344620.35	0.0067	0.0032
Saturn	-11130-12-12 19:11 J	-2343463.94	-2343463.70	-2343463.45	0.0260	0.0044
Saturn	-11114-06-20 05:02 J	-2337795.45	-2337795.29	-2337795.12	0.0303	0.0220
Jupiter	-11111-05-16 10:48 J	-2336734.21	-2336734.05	-2336733.88	0.0522	0.0370
Mars	-11105-10-19 20:24 J	-2334385.76	-2334385.65	-2334385.53	0.1640	0.1273
Uranus	-11101-06-03 12:00 J	-2333063.15	-2333063.00	-2333062.82	0.0132	0.0099
Saturn	-11101-12-07 07:11 J	-2332876.36	-2332876.20	-2332876.04	0.0261	0.0199
Uranus	-11100-06-07 17:02 J	-2332694.01	-2332693.79	-2332693.55	0.0132	0.0054
Jupiter	-11099-05-21 06:28 J	-2332346.46	-2332346.23	-2332346.00	0.0524	0.0039
Uranus	-11099-06-11 22:19 J	-2332324.83	-2332324.57	-2332324.32	0.0133	0.0009
Uranus	-11098-06-16 02:38 J	-2331955.62	-2331955.39	-2331955.13	0.0133	0.0037
Uranus	-11097-06-19 07:26 J	-2331586.37	-2331586.19	-2331585.97	0.0133	0.0082

Uranus	-11096-06-23 12:14 J	-2331217.05	-2331216.99	-2331216.89	0.0133	0.0126
Jupiter	-11087-05-26 06:00 J	-2327958.35	-2327958.25	-2327958.14	0.0524	0.0465
Saturn	-11085-06-13 04:19 J	-2327209.52	-2327209.32	-2327209.11	0.0301	0.0158
Neptune	-11083-11-29 18:00 J	-2326309.81	-2326309.75	-2326309.63	0.0088	0.0083
Jupiter	-11082-11-10 13:11 J	-2325964.10	-2325963.95	-2325963.79	0.0503	0.0377
Neptune	-11082-12-02 06:14 J	-2325942.45	-2325942.24	-2325942.01	0.0088	0.0046
Neptune	-11081-12-03 18:14 J	-2325575.00	-2325574.74	-2325574.48	0.0088	0.0009
Neptune	-11080-12-06 05:45 J	-2325207.49	-2325207.26	-2325207.00	0.0088	0.0029
Neptune	-11079-12-08 17:16 J	-2324839.93	-2324839.78	-2324839.58	0.0088	0.0065
Saturn	-11071-12-14 06:00 J	-2321912.46	-2321912.25	-2321912.02	0.0260	0.0126
Jupiter	-11070-11-15 00:28 J	-2321576.72	-2321576.48	-2321576.25	0.0502	0.0016
Uranus	-11060-11-28 12:28 J	-2317910.13	-2317909.98	-2317909.82	0.0146	0.0114
Uranus	-11059-12-03 16:19 J	-2317540.04	-2317539.82	-2317539.57	0.0146	0.0054
Jupiter	-11058-11-19 12:28 J	-2317189.15	-2317188.98	-2317188.82	0.0502	0.0351
Uranus	-11058-12-08 21:07 J	-2317169.88	-2317169.62	-2317169.37	0.0146	0.0008
Uranus	-11057-12-13 01:11 J	-2316799.67	-2316799.45	-2316799.22	0.0146	0.0069
Uranus	-11056-12-18 05:45 J	-2316429.37	-2316429.26	-2316429.14	0.0146	0.0129
Pluto	-11046-04-17 00:57 J	-2313022.69	-2313022.46	-2313022.19	0.0077	0.0022
Saturn	-11042-12-09 18:14 J	-2311324.96	-2311324.74	-2311324.52	0.0261	0.0116
Jupiter	-11028-05-15 06:28 J	-2306419.32	-2306419.23	-2306419.12	0.0522	0.0469
Saturn	-11026-06-16 02:09 J	-2305657.65	-2305657.41	-2305657.17	0.0302	0.0034
Uranus	-11017-06-03 23:45 J	-2302381.67	-2302381.51	-2302381.31	0.0132	0.0094
Jupiter	-11016-05-20 07:26 J	-2302031.42	-2302031.19	-2302030.96	0.0523	0.0038
Uranus	-11016-06-08 05:02 J	-2302012.52	-2302012.29	-2302012.05	0.0132	0.0049
Uranus	-11015-06-12 10:04 J	-2301643.33	-2301643.08	-2301642.83	0.0132	0.0004
Uranus	-11014-06-16 14:52 J	-2301274.12	-2301273.88	-2301273.64	0.0133	0.0041
Uranus	-11013-06-19 19:40 J	-2300904.87	-2300904.68	-2300904.49	0.0133	0.0085
Uranus	-11012-06-23 23:45 J	-2300535.54	-2300535.51	-2300535.43	0.0133	0.0130
Saturn	-11012-12-15 16:19 J	-2300360.97	-2300360.82	-2300360.67	0.0260	0.0205
Jupiter	-11004-05-25 04:33 J	-2297643.47	-2297643.31	-2297643.15	0.0524	0.0378

11TH MILLENNIUM BCE

This is a list of transits of Earth in the 11th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Neptune	-10999-06-06 03:35 J		-2295805.52	-2295805.35	-2295805.15	0.0089	0.0061	
Jupiter	-10999-11-09 13:26 J		-2295649.03	-2295648.94	-2295648.83	0.0503	0.0453	
Neptune	-10998-06-08 15:21 J		-2295438.10	-2295437.86	-2295437.60	0.0089	0.0024	
Neptune	-10997-06-10 02:52 J		-2295070.63	-2295070.38	-2295070.13	0.0089	0.0013	
Neptune	-10996-06-12 13:55 J		-2294703.11	-2294702.92	-2294702.69	0.0089	0.0051	
Neptune	-10995-06-15 01:11 J		-2294335.46	-2294335.45	-2294335.39	0.0089	0.0088	
Jupiter	-10987-11-14 03:35 J		-2291261.58	-2291261.35	-2291261.12	0.0503	0.0082	
Saturn	-10983-12-11 03:21 J		-2289773.61	-2289773.36	-2289773.11	0.0261	0.0037	
Mars	-10979-10-16 19:55 J		-2288367.83	-2288367.67	-2288367.50	0.1633	0.0795	
Uranus	-10976-11-29 02:09 J		-2287228.56	-2287228.41	-2287228.22	0.0146	0.0109	
Jupiter	-10975-11-18 16:04 J		-2286874.02	-2286873.83	-2286873.64	0.0502	0.0285	
Uranus	-10975-12-04 06:28 J		-2286858.46	-2286858.23	-2286857.98	0.0146	0.0048	
Uranus	-10974-12-09 11:16 J		-2286488.28	-2286488.03	-2286487.77	0.0146	0.0014	
Uranus	-10973-12-13 15:35 J		-2286118.06	-2286117.85	-2286117.62	0.0146	0.0075	
Uranus	-10972-12-18 20:09 J		-2285747.75	-2285747.66	-2285747.56	0.0146	0.0135	
Saturn	-10967-06-17 18:43 J		-2284105.95	-2284105.72	-2284105.48	0.0302	0.0078	
Uranus	-10934-06-01 07:26 J		-2272069.20	-2272069.19	-2272069.14	0.0132	0.0131	
Jupiter	-10933-05-19 06:00 J		-2271716.48	-2271716.25	-2271716.02	0.0523	0.0123	
Uranus	-10933-06-04 12:43 J		-2271700.15	-2271699.97	-2271699.77	0.0132	0.0087	

Uranus	-10932-06-08 17:31 J	-2271331.00	-2271330.77	-2271330.52	0.0132	0.0044
Uranus	-10931-06-12 22:48 J	-2270961.81	-2270961.55	-2270961.30	0.0132	0.0002
Uranus	-10930-06-17 03:07 J	-2270592.60	-2270592.37	-2270592.12	0.0133	0.0046
Uranus	-10929-06-20 07:55 J	-2270223.35	-2270223.17	-2270222.98	0.0133	0.0090
Saturn	-10924-12-12 09:50 J	-2268222.33	-2268222.09	-2268221.84	0.0260	0.0035
Jupiter	-10921-05-24 02:09 J	-2267328.60	-2267328.41	-2267328.22	0.0524	0.0287
Neptune	-10918-12-01 13:11 J	-2266042.11	-2266041.95	-2266041.76	0.0088	0.0066
Neptune	-10917-12-03 00:57 J	-2265674.69	-2265674.46	-2265674.20	0.0088	0.0029
Neptune	-10916-12-05 12:43 J	-2265307.22	-2265306.97	-2265306.71	0.0088	0.0008
Neptune	-10915-12-08 00:28 J	-2264939.69	-2264939.48	-2264939.25	0.0088	0.0044
Neptune	-10914-12-10 12:00 J	-2264572.07	-2264572.00	-2264571.88	0.0088	0.0081
Saturn	-10908-06-19 06:00 J	-2262554.44	-2262554.25	-2262554.05	0.0302	0.0175
Jupiter	-10904-11-13 04:04 J	-2260946.55	-2260946.33	-2260946.11	0.0503	0.0155
Mars	-10900-10-18 22:19 J	-2259510.75	-2259510.57	-2259510.39	0.1635	0.0453
Saturn	-10895-12-07 18:57 J	-2257634.84	-2257634.71	-2257634.56	0.0261	0.0214
Jupiter	-10892-11-17 15:50 J	-2256559.05	-2256558.84	-2256558.62	0.0502	0.0209
Uranus	-10892-11-29 14:38 J	-2256547.07	-2256546.89	-2256546.70	0.0146	0.0102
Uranus	-10891-12-04 18:57 J	-2256176.94	-2256176.71	-2256176.45	0.0146	0.0042
Uranus	-10890-12-09 23:45 J	-2255806.76	-2255806.51	-2255806.25	0.0146	0.0020
Uranus	-10889-12-14 03:50 J	-2255436.53	-2255436.34	-2255436.11	0.0146	0.0081
Uranus	-10888-12-19 08:52 J	-2255066.19	-2255066.13	-2255066.06	0.0146	0.0140
Pluto	-10886-10-13 06:28 J	-2254403.44	-2254403.23	-2254403.00	0.0066	0.0035
Saturn	-10879-06-12 19:40 J	-2251968.82	-2251968.68	-2251968.52	0.0302	0.0234
Saturn	-10865-12-13 13:55 J	-2246671.15	-2246670.92	-2246670.70	0.0260	0.0100
Mars	-10861-04-23 07:55 J	-2245444.35	-2245444.17	-2245444.00	0.1887	0.1006
Jupiter	-10850-05-19 09:35 J	-2241401.31	-2241401.10	-2241400.88	0.0523	0.0190
Uranus	-10850-06-01 19:40 J	-2241387.74	-2241387.68	-2241387.59	0.0132	0.0126
Uranus	-10849-06-05 00:43 J	-2241018.65	-2241018.47	-2241018.26	0.0132	0.0082
Saturn	-10849-06-20 11:02 J	-2241003.16	-2241003.04	-2241002.90	0.0303	0.0256
Uranus	-10848-06-09 05:45 J	-2240649.50	-2240649.26	-2240649.01	0.0132	0.0038

Uranus	-10847-06-13 10:33 J	-2240280.32	-2240280.06	-2240279.81	0.0132	0.0006
Uranus	-10846-06-17 14:38 J	-2239911.11	-2239910.89	-2239910.64	0.0132	0.0050
Uranus	-10845-06-20 18:57 J	-2239541.87	-2239541.71	-2239541.52	0.0133	0.0094
Jupiter	-10838-05-24 11:31 J	-2237013.22	-2237013.02	-2237012.81	0.0524	0.0243
Saturn	-10836-12-08 21:35 J	-2236083.79	-2236083.60	-2236083.39	0.0261	0.0151
Neptune	-10835-06-05 10:33 J	-2235905.13	-2235905.06	-2235904.94	0.0089	0.0082
Neptune	-10834-06-07 22:04 J	-2235537.78	-2235537.58	-2235537.34	0.0089	0.0045
Neptune	-10833-06-09 10:04 J	-2235170.33	-2235170.08	-2235169.82	0.0089	0.0008
Neptune	-10832-06-11 21:35 J	-2234802.84	-2234802.60	-2234802.36	0.0089	0.0029
Neptune	-10831-06-14 08:09 J	-2234435.30	-2234435.16	-2234434.96	0.0089	0.0068
Jupiter	-10821-11-12 11:16 J	-2230631.24	-2230631.03	-2230630.82	0.0503	0.0207
Saturn	-10820-06-13 21:50 J	-2230417.79	-2230417.59	-2230417.38	0.0302	0.0161
Jupiter	-10809-11-17 01:40 J	-2226243.65	-2226243.43	-2226243.21	0.0502	0.0165
Uranus	-10808-11-29 23:16 J	-2225865.72	-2225865.53	-2225865.34	0.0146	0.0098
Uranus	-10807-12-05 03:35 J	-2225495.59	-2225495.35	-2225495.09	0.0146	0.0038
Uranus	-10806-12-10 08:38 J	-2225125.39	-2225125.14	-2225124.89	0.0146	0.0024
Saturn	-10806-12-15 14:09 J	-2225120.09	-2225119.91	-2225119.70	0.0259	0.0159
Uranus	-10805-12-14 12:57 J	-2224755.16	-2224754.96	-2224754.74	0.0146	0.0084
Uranus	-10804-12-19 17:16 J	-2224384.80	-2224384.78	-2224384.72	0.0146	0.0144
Saturn	-10777-12-09 21:07 J	-2214532.84	-2214532.62	-2214532.38	0.0261	0.0096
Mars	-10774-10-16 00:14 J	-2213492.55	-2213492.49	-2213492.43	0.1629	0.1538
Jupiter	-10767-05-18 20:38 J	-2211085.84	-2211085.64	-2211085.42	0.0523	0.0228
Uranus	-10766-06-02 09:07 J	-2210706.22	-2210706.12	-2210706.01	0.0132	0.0119
Uranus	-10765-06-05 13:40 J	-2210337.12	-2210336.93	-2210336.71	0.0132	0.0076
Uranus	-10764-06-09 18:28 J	-2209967.97	-2209967.73	-2209967.48	0.0132	0.0033
Uranus	-10763-06-13 23:02 J	-2209598.79	-2209598.54	-2209598.28	0.0132	0.0012
Uranus	-10762-06-18 03:07 J	-2209229.59	-2209229.37	-2209229.13	0.0132	0.0055
Saturn	-10761-06-14 18:28 J	-2208866.96	-2208866.73	-2208866.50	0.0302	0.0102
Uranus	-10761-06-21 07:26 J	-2208860.35	-2208860.19	-2208860.01	0.0133	0.0099
Jupiter	-10755-05-23 19:40 J	-2206697.89	-2206697.68	-2206697.46	0.0523	0.0191

Neptune	-10754-11-30 19:26 J	-2206141.72	-2206141.69	-2206141.62	0.0088	0.0086
Neptune	-10753-12-02 06:28 J	-2205774.42	-2205774.23	-2205773.99	0.0088	0.0051
Neptune	-10752-12-04 18:43 J	-2205406.98	-2205406.72	-2205406.46	0.0088	0.0013
Neptune	-10751-12-07 06:14 J	-2205039.48	-2205039.24	-2205038.98	0.0088	0.0023
Neptune	-10750-12-09 18:00 J	-2204671.94	-2204671.75	-2204671.56	0.0088	0.0060
Saturn	-10747-12-16 12:00 J	-2203569.13	-2203569.00	-2203568.84	0.0259	0.0211
Jupiter	-10738-11-13 00:00 J	-2200315.70	-2200315.50	-2200315.29	0.0503	0.0239
Jupiter	-10726-11-17 09:35 J	-2195928.32	-2195928.10	-2195927.87	0.0502	0.0118
Uranus	-10724-11-30 06:57 J	-2195184.39	-2195184.21	-2195184.00	0.0146	0.0094
Uranus	-10723-12-05 11:31 J	-2194814.26	-2194814.02	-2194813.76	0.0146	0.0034
Uranus	-10722-12-10 16:19 J	-2194444.06	-2194443.82	-2194443.56	0.0146	0.0028
Uranus	-10721-12-14 20:38 J	-2194073.83	-2194073.64	-2194073.43	0.0146	0.0088
Saturn	-10718-12-11 18:14 J	-2192981.98	-2192981.74	-2192981.50	0.0260	0.0045
Jupiter	-10714-11-21 22:33 J	-2191540.61	-2191540.56	-2191540.49	0.0501	0.0484
Saturn	-10702-06-16 12:00 J	-2187316.24	-2187316.00	-2187315.76	0.0302	0.0052
Mars	-10695-10-18 01:26 J	-2184635.62	-2184635.44	-2184635.26	0.1631	0.0342
Saturn	-10688-12-17 07:55 J	-2182018.19	-2182018.17	-2182018.14	0.0259	0.0258
Jupiter	-10684-05-18 04:48 J	-2180770.50	-2180770.30	-2180770.10	0.0522	0.0277
Uranus	-10682-06-02 21:07 J	-2180024.73	-2180024.62	-2180024.48	0.0132	0.0114
Uranus	-10681-06-06 01:55 J	-2179655.61	-2179655.42	-2179655.19	0.0132	0.0072
Uranus	-10680-06-10 06:57 J	-2179286.46	-2179286.21	-2179285.96	0.0132	0.0027
Uranus	-10679-06-14 11:16 J	-2178917.28	-2178917.03	-2178916.78	0.0132	0.0016
Uranus	-10678-06-18 15:21 J	-2178548.07	-2178547.86	-2178547.62	0.0132	0.0060
Uranus	-10677-06-21 19:40 J	-2178178.83	-2178178.68	-2178178.51	0.0133	0.0103
Jupiter	-10672-05-23 05:45 J	-2176382.48	-2176382.26	-2176382.04	0.0523	0.0148
Neptune	-10670-06-07 04:19 J	-2175637.48	-2175637.32	-2175637.14	0.0089	0.0066
Neptune	-10669-06-08 16:04 J	-2175270.07	-2175269.83	-2175269.58	0.0089	0.0029
Neptune	-10668-06-11 03:50 J	-2174902.60	-2174902.34	-2174902.08	0.0089	0.0008
Neptune	-10667-06-13 14:52 J	-2174535.08	-2174534.88	-2174534.64	0.0089	0.0046
Neptune	-10666-06-16 01:55 J	-2174167.49	-2174167.42	-2174167.29	0.0089	0.0083

Saturn	-10659-12-12 13:26 J	-2171431.19	-2171430.94	-2171430.69	0.0261	0.0002
Jupiter	-10655-11-12 09:21 J	-2170000.30	-2170000.11	-2169999.91	0.0503	0.0281
Saturn	-10643-06-17 04:48 J	-2165765.54	-2165765.30	-2165765.05	0.0302	0.0005
Jupiter	-10643-11-16 22:04 J	-2165612.81	-2165612.58	-2165612.35	0.0502	0.0084
Uranus	-10640-11-30 15:50 J	-2164503.02	-2164502.84	-2164502.62	0.0147	0.0090
Uranus	-10639-12-05 20:24 J	-2164132.89	-2164132.65	-2164132.39	0.0146	0.0030
Pluto	-10638-10-15 08:24 J	-2163819.39	-2163819.15	-2163818.89	0.0067	0.0014
Uranus	-10638-12-11 00:57 J	-2163762.70	-2163762.46	-2163762.20	0.0146	0.0031
Uranus	-10637-12-15 05:45 J	-2163392.46	-2163392.26	-2163392.06	0.0146	0.0091
Jupiter	-10631-11-21 12:14 J	-2161225.08	-2161224.99	-2161224.88	0.0502	0.0452
Saturn	-10630-12-07 15:21 J	-2160843.86	-2160843.86	-2160843.84	0.0261	0.0261
Mars	-10616-10-20 02:52 J	-2155778.54	-2155778.38	-2155778.22	0.1632	0.0881
Jupiter	-10601-05-17 17:31 J	-2150454.95	-2150454.77	-2150454.58	0.0523	0.0310
Saturn	-10600-12-13 07:40 J	-2149880.42	-2149880.18	-2149879.93	0.0261	0.0047
Uranus	-10598-06-03 10:33 J	-2149343.19	-2149343.06	-2149342.90	0.0132	0.0108
Uranus	-10597-06-06 15:21 J	-2148974.07	-2148973.86	-2148973.63	0.0132	0.0066
Uranus	-10596-06-10 20:09 J	-2148604.91	-2148604.66	-2148604.41	0.0132	0.0022
Uranus	-10595-06-15 00:43 J	-2148235.72	-2148235.47	-2148235.22	0.0132	0.0021
Uranus	-10594-06-19 04:48 J	-2147866.51	-2147866.30	-2147866.07	0.0132	0.0065
Uranus	-10593-06-22 09:07 J	-2147497.26	-2147497.12	-2147496.97	0.0133	0.0108
Jupiter	-10589-05-22 18:57 J	-2146066.94	-2146066.71	-2146066.48	0.0524	0.0115
Neptune	-10589-12-01 12:57 J	-2145874.10	-2145873.96	-2145873.79	0.0088	0.0071
Neptune	-10588-12-04 00:28 J	-2145506.71	-2145506.48	-2145506.23	0.0088	0.0035
Neptune	-10587-12-06 12:00 J	-2145139.25	-2145139.00	-2145138.74	0.0088	0.0003
Neptune	-10586-12-08 23:16 J	-2144771.75	-2144771.53	-2144771.28	0.0088	0.0039
Neptune	-10585-12-10 11:02 J	-2144404.17	-2144404.04	-2144403.90	0.0088	0.0075
Saturn	-10584-06-17 21:50 J	-2144214.83	-2144214.59	-2144214.35	0.0302	0.0049
Mars	-10577-04-22 10:19 J	-2141714.28	-2141714.07	-2141713.87	0.1892	0.0047
Jupiter	-10572-11-11 22:04 J	-2139684.76	-2139684.58	-2139684.40	0.0503	0.0315
Saturn	-10571-12-08 09:35 J	-2139293.23	-2139293.10	-2139292.95	0.0262	0.0216

Jupiter	-10560-11-16 12:14 J	-2135297.23	-2135296.99	-2135296.76	0.0502	0.0056
Uranus	-10557-11-26 02:24 J	-2134191.46	-2134191.40	-2134191.33	0.0147	0.0141
Uranus	-10556-12-01 06:28 J	-2133821.44	-2133821.23	-2133821.02	0.0146	0.0082
Uranus	-10555-12-06 10:33 J	-2133451.31	-2133451.06	-2133450.81	0.0146	0.0023
Uranus	-10554-12-11 14:52 J	-2133081.12	-2133080.88	-2133080.63	0.0146	0.0037
Uranus	-10553-12-15 19:11 J	-2132710.88	-2132710.70	-2132710.50	0.0146	0.0097
Pluto	-10551-04-19 06:57 J	-2132221.46	-2132221.21	-2132220.94	0.0078	0.0011
Jupiter	-10548-11-20 22:48 J	-2130909.67	-2130909.55	-2130909.41	0.0501	0.0412
Saturn	-10541-12-14 02:38 J	-2128329.62	-2128329.39	-2128329.16	0.0261	0.0093
Saturn	-10525-06-18 18:14 J	-2122663.96	-2122663.74	-2122663.51	0.0302	0.0108
Jupiter	-10518-05-18 04:19 J	-2120139.49	-2120139.32	-2120139.15	0.0523	0.0352
Uranus	-10514-06-04 00:28 J	-2118661.63	-2118661.48	-2118661.31	0.0132	0.0102
Uranus	-10513-06-07 05:16 J	-2118292.50	-2118292.28	-2118292.05	0.0132	0.0059
Uranus	-10512-06-11 10:04 J	-2117923.33	-2117923.08	-2117922.83	0.0132	0.0016
Saturn	-10512-12-09 05:02 J	-2117742.47	-2117742.29	-2117742.10	0.0262	0.0168
Uranus	-10511-06-15 14:24 J	-2117554.15	-2117553.90	-2117553.65	0.0132	0.0027
Uranus	-10510-06-19 18:43 J	-2117184.93	-2117184.72	-2117184.50	0.0133	0.0070
Uranus	-10509-06-22 22:48 J	-2116815.66	-2116815.55	-2116815.40	0.0133	0.0113
Jupiter	-10506-05-23 01:55 J	-2115751.65	-2115751.42	-2115751.19	0.0523	0.0061
Neptune	-10506-06-06 08:24 J	-2115737.15	-2115737.15	-2115737.11	0.0089	0.0089
Neptune	-10505-06-07 20:09 J	-2115369.85	-2115369.66	-2115369.43	0.0089	0.0052
Neptune	-10504-06-10 08:24 J	-2115002.40	-2115002.15	-2115001.89	0.0089	0.0015
Neptune	-10503-06-12 19:55 J	-2114634.91	-2114634.67	-2114634.42	0.0089	0.0022
Neptune	-10502-06-15 07:26 J	-2114267.37	-2114267.19	-2114266.99	0.0089	0.0060
Saturn	-10496-06-12 06:57 J	-2112078.24	-2112078.21	-2112078.18	0.0300	0.0297
Jupiter	-10494-05-28 01:55 J	-2111363.50	-2111363.42	-2111363.33	0.0524	0.0483
Mars	-10490-10-17 05:16 J	-2109760.41	-2109760.28	-2109760.14	0.1627	0.1088
Jupiter	-10489-11-11 08:52 J	-2109369.29	-2109369.13	-2109368.96	0.0503	0.0353
Saturn	-10482-12-15 23:02 J	-2106778.74	-2106778.54	-2106778.33	0.0261	0.0144
Jupiter	-10477-11-15 21:35 J	-2104981.83	-2104981.60	-2104981.37	0.0502	0.0010

Uranus	-10473-11-26 17:02 J	-2103509.88	-2103509.79	-2103509.68	0.0147	0.0134
Uranus	-10472-12-01 20:52 J	-2103139.83	-2103139.63	-2103139.39	0.0147	0.0076
Uranus	-10471-12-07 01:26 J	-2102769.69	-2102769.44	-2102769.18	0.0146	0.0016
Uranus	-10470-12-12 05:45 J	-2102399.50	-2102399.26	-2102399.01	0.0146	0.0044
Uranus	-10469-12-16 10:19 J	-2102029.25	-2102029.07	-2102028.89	0.0146	0.0103
Saturn	-10466-06-20 19:11 J	-2101112.90	-2101112.70	-2101112.51	0.0302	0.0179
Jupiter	-10465-11-20 08:52 J	-2100594.29	-2100594.13	-2100593.97	0.0501	0.0367
Saturn	-10453-12-10 02:52 J	-2096191.60	-2096191.38	-2096191.15	0.0262	0.0115
Saturn	-10437-06-13 11:02 J	-2090527.20	-2090527.04	-2090526.87	0.0300	0.0219
Jupiter	-10435-05-17 08:38 J	-2089824.27	-2089824.14	-2089823.99	0.0522	0.0414
Uranus	-10430-06-04 15:21 J	-2087980.03	-2087979.86	-2087979.68	0.0132	0.0096
Uranus	-10429-06-07 19:55 J	-2087610.89	-2087610.67	-2087610.42	0.0132	0.0053
Uranus	-10428-06-12 00:43 J	-2087241.72	-2087241.47	-2087241.21	0.0132	0.0010
Uranus	-10427-06-16 05:16 J	-2086872.53	-2086872.28	-2086872.04	0.0132	0.0033
Uranus	-10426-06-20 09:35 J	-2086503.30	-2086503.10	-2086502.89	0.0132	0.0076
Uranus	-10425-06-23 13:40 J	-2086134.03	-2086133.93	-2086133.80	0.0133	0.0119
Neptune	-10424-12-03 06:00 J	-2085606.45	-2085606.25	-2085606.05	0.0088	0.0056
Jupiter	-10423-05-22 06:57 J	-2085436.44	-2085436.21	-2085435.98	0.0524	0.0003
Neptune	-10423-12-05 17:31 J	-2085239.02	-2085238.77	-2085238.52	0.0088	0.0020
Saturn	-10423-12-16 22:19 J	-2085227.72	-2085227.57	-2085227.40	0.0261	0.0201
Neptune	-10422-12-08 04:47 J	-2084871.56	-2084871.30	-2084871.05	0.0088	0.0017
Neptune	-10421-12-09 16:19 J	-2084504.03	-2084503.82	-2084503.61	0.0088	0.0053
Jupiter	-10411-05-27 07:55 J	-2081048.31	-2081048.17	-2081048.03	0.0525	0.0420
Mars	-10411-10-19 06:43 J	-2080903.41	-2080903.22	-2080903.04	0.1628	0.0110
Saturn	-10407-06-22 01:55 J	-2079561.53	-2079561.42	-2079561.31	0.0302	0.0265
Jupiter	-10406-11-11 16:04 J	-2079053.96	-2079053.83	-2079053.69	0.0503	0.0406
Jupiter	-10394-11-16 04:04 J	-2074666.56	-2074666.33	-2074666.10	0.0502	0.0046
Saturn	-10394-12-12 03:50 J	-2074640.58	-2074640.34	-2074640.10	0.0262	0.0054
Pluto	-10391-10-16 00:28 J	-2073601.69	-2073601.48	-2073601.23	0.0066	0.0028
Uranus	-10389-11-27 09:21 J	-2072828.23	-2072828.11	-2072827.97	0.0147	0.0126

Uranus	-10388-12-02 13:12 J	-2072458.16	-2072457.95	-2072457.71	0.0147	0.0068
Uranus	-10387-12-07 17:45 J	-2072088.01	-2072087.76	-2072087.50	0.0147	0.0008
Uranus	-10386-12-12 22:04 J	-2071717.81	-2071717.58	-2071717.33	0.0146	0.0052
Uranus	-10385-12-17 02:38 J	-2071347.54	-2071347.39	-2071347.21	0.0146	0.0110
Jupiter	-10382-11-20 16:33 J	-2070278.99	-2070278.81	-2070278.63	0.0502	0.0317
Saturn	-10378-06-15 20:24 J	-2068975.86	-2068975.65	-2068975.42	0.0300	0.0128
Jupiter	-10352-05-16 10:19 J	-2059509.15	-2059509.07	-2059508.99	0.0523	0.0490
Uranus	-10347-06-01 00:57 J	-2057667.47	-2057667.46	-2057667.43	0.0132	0.0131
Uranus	-10346-06-05 06:00 J	-2057298.43	-2057298.25	-2057298.06	0.0132	0.0089
Uranus	-10345-06-08 10:19 J	-2056929.29	-2056929.07	-2056928.82	0.0132	0.0047
Uranus	-10344-06-12 15:21 J	-2056560.12	-2056559.86	-2056559.61	0.0132	0.0004
Uranus	-10343-06-16 19:40 J	-2056190.93	-2056190.68	-2056190.44	0.0132	0.0039
Uranus	-10342-06-20 23:45 J	-2055821.70	-2055821.51	-2055821.30	0.0132	0.0081
Neptune	-10341-06-07 00:28 J	-2055469.61	-2055469.48	-2055469.33	0.0089	0.0074
Uranus	-10341-06-24 04:04 J	-2055452.40	-2055452.33	-2055452.23	0.0133	0.0124
Jupiter	-10340-05-21 10:33 J	-2055121.29	-2055121.06	-2055120.82	0.0523	0.0072
Neptune	-10340-06-09 12:14 J	-2055102.22	-2055101.99	-2055101.75	0.0089	0.0037
Neptune	-10339-06-12 00:14 J	-2054734.74	-2054734.49	-2054734.23	0.0089	0.0001
Neptune	-10338-06-14 11:45 J	-2054367.23	-2054367.01	-2054366.77	0.0089	0.0037
Neptune	-10337-06-15 23:16 J	-2053999.66	-2053999.53	-2053999.37	0.0089	0.0073
Saturn	-10335-12-13 08:24 J	-2053089.40	-2053089.15	-2053088.90	0.0262	0.0016
Mars	-10332-10-21 07:55 J	-2052046.27	-2052046.17	-2052046.06	0.1630	0.1320
Jupiter	-10328-05-26 07:40 J	-2050733.35	-2050733.18	-2050733.00	0.0524	0.0339
Jupiter	-10323-11-10 21:07 J	-2048738.70	-2048738.62	-2048738.53	0.0503	0.0465
Saturn	-10319-06-17 12:28 J	-2047424.22	-2047423.98	-2047423.73	0.0300	0.0019
Jupiter	-10311-11-15 09:50 J	-2044351.32	-2044351.09	-2044350.86	0.0502	0.0104
Saturn	-10306-12-08 17:16 J	-2042501.88	-2042501.78	-2042501.67	0.0263	0.0235
Uranus	-10305-11-27 20:52 J	-2042146.76	-2042146.63	-2042146.47	0.0147	0.0120
Pluto	-10304-04-19 16:33 J	-2042003.82	-2042003.81	-2042003.74	0.0078	0.0077
Uranus	-10304-12-03 00:57 J	-2041776.68	-2041776.46	-2041776.22	0.0147	0.0062

Uranus	-10303-12-08 05:31 J	-2041406.52	-2041406.27	-2041406.01	0.0147	0.0004
Uranus	-10302-12-13 10:04 J	-2041036.31	-2041036.08	-2041035.84	0.0146	0.0057
Uranus	-10301-12-17 14:52 J	-2040666.02	-2040665.88	-2040665.71	0.0146	0.0115
Jupiter	-10299-11-19 21:07 J	-2039963.81	-2039963.62	-2039963.41	0.0501	0.0253
Mars	-10293-04-21 11:45 J	-2037984.18	-2037984.01	-2037983.85	0.1897	0.1146
Saturn	-10276-12-14 16:19 J	-2031538.04	-2031537.82	-2031537.58	0.0262	0.0093
Uranus	-10263-06-01 15:21 J	-2026985.91	-2026985.86	-2026985.75	0.0132	0.0125
Uranus	-10262-06-05 20:52 J	-2026616.83	-2026616.63	-2026616.43	0.0132	0.0082
Uranus	-10261-06-09 01:26 J	-2026247.68	-2026247.44	-2026247.20	0.0132	0.0040
Uranus	-10260-06-13 05:45 J	-2025878.51	-2025878.26	-2025878.01	0.0132	0.0002
Saturn	-10260-06-19 09:07 J	-2025872.34	-2025872.12	-2025871.88	0.0301	0.0104
Neptune	-10260-12-02 10:33 J	-2025706.16	-2025706.06	-2025705.91	0.0088	0.0077
Uranus	-10259-06-17 09:50 J	-2025509.32	-2025509.09	-2025508.84	0.0132	0.0045
Neptune	-10259-12-04 21:50 J	-2025338.80	-2025338.59	-2025338.34	0.0088	0.0042
Uranus	-10258-06-21 14:09 J	-2025140.08	-2025139.91	-2025139.71	0.0132	0.0087
Neptune	-10258-12-07 09:50 J	-2024971.35	-2024971.09	-2024970.83	0.0088	0.0005
Jupiter	-10257-05-20 06:14 J	-2024806.46	-2024806.24	-2024806.02	0.0523	0.0165
Uranus	-10257-06-24 18:14 J	-2024770.77	-2024770.74	-2024770.67	0.0132	0.0130
Neptune	-10257-12-08 20:52 J	-2024603.86	-2024603.63	-2024603.37	0.0088	0.0031
Neptune	-10256-12-11 07:55 J	-2024236.31	-2024236.17	-2024235.97	0.0088	0.0067
Saturn	-10247-12-10 03:07 J	-2020950.57	-2020950.37	-2020950.17	0.0263	0.0155
Jupiter	-10245-05-25 02:24 J	-2020418.61	-2020418.40	-2020418.19	0.0524	0.0238
Saturn	-10231-06-13 10:19 J	-2015286.17	-2015286.07	-2015285.95	0.0299	0.0265
Jupiter	-10228-11-14 08:52 J	-2014036.34	-2014036.13	-2014035.91	0.0502	0.0185
Uranus	-10221-11-28 07:26 J	-2011465.32	-2011465.19	-2011465.01	0.0147	0.0115
Uranus	-10220-12-03 12:00 J	-2011095.23	-2011095.00	-2011094.76	0.0147	0.0056
Uranus	-10219-12-08 16:19 J	-2010725.07	-2010724.82	-2010724.56	0.0147	0.0004
Uranus	-10218-12-13 21:07 J	-2010354.85	-2010354.62	-2010354.38	0.0146	0.0062
Saturn	-10217-12-16 03:07 J	-2009986.55	-2009986.37	-2009986.18	0.0262	0.0174
Uranus	-10217-12-18 01:55 J	-2009984.55	-2009984.42	-2009984.26	0.0146	0.0120

Jupiter	-10216-11-18 19:26 J	-2009648.91	-2009648.69	-2009648.47	0.0502	0.0169
Mars	-10206-10-18 10:47 J	-2006028.22	-2006028.05	-2006027.87	0.1625	0.0630
Saturn	-10201-06-21 08:09 J	-2004320.30	-2004320.16	-2004319.99	0.0301	0.0232
Saturn	-10188-12-11 14:52 J	-1999399.11	-1999398.88	-1999398.64	0.0263	0.0070
Uranus	-10179-06-02 06:00 J	-1996304.35	-1996304.25	-1996304.12	0.0132	0.0118
Uranus	-10178-06-06 11:02 J	-1995935.23	-1995935.04	-1995934.82	0.0132	0.0076
Uranus	-10177-06-09 15:35 J	-1995566.09	-1995565.85	-1995565.60	0.0132	0.0034
Neptune	-10176-06-08 15:07 J	-1995202.03	-1995201.87	-1995201.66	0.0089	0.0061
Uranus	-10176-06-13 20:09 J	-1995196.91	-1995196.66	-1995196.40	0.0132	0.0009
Neptune	-10175-06-11 03:07 J	-1994834.61	-1994834.37	-1994834.11	0.0089	0.0024
Uranus	-10175-06-18 00:28 J	-1994827.71	-1994827.48	-1994827.24	0.0132	0.0051
Jupiter	-10174-05-20 00:57 J	-1994491.66	-1994491.46	-1994491.26	0.0523	0.0265
Neptune	-10174-06-13 15:07 J	-1994467.12	-1994466.87	-1994466.61	0.0089	0.0013
Uranus	-10174-06-22 04:33 J	-1994458.47	-1994458.31	-1994458.11	0.0132	0.0093
Neptune	-10173-06-15 02:24 J	-1994099.59	-1994099.40	-1994099.16	0.0089	0.0051
Saturn	-10172-06-15 09:50 J	-1993734.30	-1993734.09	-1993733.87	0.0299	0.0138
Neptune	-10172-06-17 14:09 J	-1993731.95	-1993731.91	-1993731.83	0.0089	0.0087
Jupiter	-10162-05-25 01:40 J	-1990103.65	-1990103.43	-1990103.20	0.0524	0.0156
Saturn	-10158-12-18 15:07 J	-1988434.89	-1988434.87	-1988434.83	0.0261	0.0259
Jupiter	-10145-11-13 08:38 J	-1983721.34	-1983721.14	-1983720.94	0.0503	0.0261
Pluto	-10144-10-16 21:07 J	-1983383.74	-1983383.62	-1983383.45	0.0066	0.0055
Pluto	-10143-10-18 10:04 J	-1983017.23	-1983017.08	-1983016.87	0.0067	0.0048
Uranus	-10137-11-28 15:07 J	-1980784.01	-1980783.87	-1980783.68	0.0147	0.0111
Uranus	-10136-12-03 19:12 J	-1980413.92	-1980413.70	-1980413.45	0.0147	0.0053
Uranus	-10135-12-09 00:00 J	-1980043.75	-1980043.50	-1980043.24	0.0147	0.0007
Uranus	-10134-12-14 04:47 J	-1979673.52	-1979673.30	-1979673.06	0.0146	0.0065
Jupiter	-10133-11-17 21:35 J	-1979333.83	-1979333.60	-1979333.37	0.0502	0.0099
Uranus	-10133-12-18 09:50 J	-1979303.21	-1979303.09	-1979302.95	0.0146	0.0124
Saturn	-10129-12-13 03:07 J	-1977847.62	-1977847.37	-1977847.12	0.0262	0.0016
Mars	-10127-10-20 12:00 J	-1977171.18	-1977171.00	-1977170.82	0.1626	0.0553

Jupiter	-10121-11-22 09:07 J	-1974946.21	-1974946.12	-1974946.01	0.0501	0.0453
Saturn	-10113-06-17 08:24 J	-1972182.40	-1972182.15	-1972181.91	0.0300	0.0014
Saturn	-10100-12-08 12:43 J	-1967260.07	-1967259.97	-1967259.85	0.0263	0.0233
Uranus	-10095-06-02 19:55 J	-1965622.78	-1965622.67	-1965622.51	0.0132	0.0112
Neptune	-10095-12-04 03:07 J	-1965438.53	-1965438.37	-1965438.17	0.0088	0.0063
Uranus	-10094-06-07 01:12 J	-1965253.65	-1965253.45	-1965253.22	0.0132	0.0070
Neptune	-10094-12-06 14:52 J	-1965071.12	-1965070.88	-1965070.63	0.0088	0.0027
Uranus	-10093-06-10 06:00 J	-1964884.49	-1964884.25	-1964883.99	0.0132	0.0028
Neptune	-10093-12-08 02:09 J	-1964703.66	-1964703.41	-1964703.15	0.0088	0.0010
Uranus	-10092-06-14 10:33 J	-1964515.30	-1964515.06	-1964514.80	0.0132	0.0015
Neptune	-10092-12-10 13:26 J	-1964336.15	-1964335.94	-1964335.71	0.0088	0.0045
Jupiter	-10091-05-18 23:16 J	-1964176.70	-1964176.53	-1964176.35	0.0522	0.0346
Uranus	-10091-06-18 14:52 J	-1964146.09	-1964145.88	-1964145.64	0.0132	0.0057
Neptune	-10091-12-13 00:14 J	-1963968.56	-1963968.49	-1963968.36	0.0088	0.0082
Uranus	-10090-06-22 19:40 J	-1963776.84	-1963776.68	-1963776.51	0.0132	0.0099
Jupiter	-10079-05-23 20:52 J	-1959788.86	-1959788.63	-1959788.40	0.0523	0.0060
Saturn	-10070-12-15 14:09 J	-1956296.14	-1956295.91	-1956295.68	0.0262	0.0098
Jupiter	-10067-05-28 16:33 J	-1955400.92	-1955400.81	-1955400.70	0.0524	0.0460
Jupiter	-10062-11-13 12:00 J	-1953406.18	-1953406.00	-1953405.82	0.0503	0.0325
Pluto	-10056-04-22 10:04 J	-1951419.28	-1951419.08	-1951418.84	0.0078	0.0042
Saturn	-10054-06-20 03:35 J	-1950630.58	-1950630.35	-1950630.12	0.0300	0.0102
Uranus	-10053-11-29 04:04 J	-1950102.50	-1950102.33	-1950102.14	0.0147	0.0104
Uranus	-10052-12-04 08:09 J	-1949732.40	-1949732.16	-1949731.91	0.0147	0.0046
Uranus	-10051-12-09 12:43 J	-1949362.22	-1949361.97	-1949361.72	0.0147	0.0012
Jupiter	-10050-11-17 19:40 J	-1949018.92	-1949018.68	-1949018.45	0.0502	0.0018
Uranus	-10050-12-14 17:16 J	-1948991.99	-1948991.78	-1948991.54	0.0146	0.0071
Uranus	-10049-12-18 22:33 J	-1948621.68	-1948621.56	-1948621.44	0.0146	0.0129
Saturn	-10041-12-09 23:31 J	-1945708.72	-1945708.52	-1945708.31	0.0263	0.0152
Jupiter	-10038-11-22 06:28 J	-1944631.38	-1944631.23	-1944631.07	0.0501	0.0370
Saturn	-10025-06-12 23:16 J	-1940044.60	-1940044.53	-1940044.46	0.0299	0.0286

Neptune	-10012-06-07 18:14 J	-1935301.80	-1935301.74	-1935301.63	0.0089	0.0084
Uranus	-10011-06-03 10:33 J	-1934941.20	-1934941.06	-1934940.90	0.0132	0.0105
Neptune	-10011-06-10 06:28 J	-1934934.44	-1934934.23	-1934934.00	0.0089	0.0047
Saturn	-10011-12-16 22:19 J	-1934744.75	-1934744.57	-1934744.38	0.0261	0.0174
Uranus	-10010-06-07 15:50 J	-1934572.06	-1934571.84	-1934571.61	0.0132	0.0064
Neptune	-10010-06-12 18:28 J	-1934566.98	-1934566.73	-1934566.47	0.0089	0.0011
Uranus	-10009-06-10 20:38 J	-1934202.89	-1934202.64	-1934202.39	0.0132	0.0021
Neptune	-10009-06-14 05:45 J	-1934199.49	-1934199.26	-1934199.00	0.0089	0.0027
Jupiter	-10008-05-17 18:57 J	-1933861.83	-1933861.71	-1933861.58	0.0522	0.0438
Uranus	-10008-06-15 01:26 J	-1933833.69	-1933833.44	-1933833.19	0.0132	0.0021
Neptune	-10008-06-16 17:16 J	-1933831.94	-1933831.78	-1933831.58	0.0089	0.0063
Uranus	-10007-06-19 06:14 J	-1933464.47	-1933464.24	-1933464.02	0.0132	0.0063
Uranus	-10006-06-23 10:19 J	-1933095.21	-1933095.07	-1933094.90	0.0132	0.0105
Mars	-10001-10-16 16:47 J	-1931152.91	-1931152.80	-1931152.70	0.1622	0.1332

10TH MILLENNIUM BCE

This is a list of transits of Earth in the 10th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-9996-05-22 19:26 J	-1929473.92	-1929473.69	-1929473.45	0.0523	0.0025		
Saturn	-9995-06-21 16:47 J	-1929078.97	-1929078.80	-1929078.62	0.0301	0.0203		
Jupiter	-9984-05-27 21:35 J	-1925085.75	-1925085.60	-1925085.45	0.0524	0.0400		
Saturn	-9982-12-12 07:12 J	-1924157.44	-1924157.20	-1924156.97	0.0263	0.0078		
Jupiter	-9979-11-12 11:16 J	-1923091.17	-1923091.03	-1923090.89	0.0503	0.0400		

Uranus	-9969-11-29 17:45 J	-1919420.93	-1919420.76	-1919420.55	0.0147	0.0097
Uranus	-9968-12-04 21:50 J	-1919050.83	-1919050.59	-1919050.34	0.0147	0.0040
Jupiter	-9967-11-16 23:02 J	-1918703.77	-1918703.54	-1918703.31	0.0503	0.0046
Uranus	-9967-12-10 02:24 J	-1918680.65	-1918680.40	-1918680.15	0.0146	0.0019
Saturn	-9966-06-15 08:52 J	-1918493.30	-1918493.13	-1918492.94	0.0300	0.0195
Uranus	-9966-12-15 06:57 J	-1918310.42	-1918310.21	-1918309.98	0.0146	0.0077
Uranus	-9965-12-19 11:31 J	-1917940.10	-1917940.02	-1917939.91	0.0146	0.0134
Jupiter	-9955-11-21 12:43 J	-1914316.14	-1914315.97	-1914315.78	0.0502	0.0315
Saturn	-9952-12-18 03:35 J	-1913193.43	-1913193.35	-1913193.26	0.0261	0.0242
Saturn	-9936-06-23 00:00 J	-1907527.55	-1907527.50	-1907527.42	0.0301	0.0290
Neptune	-9931-12-03 08:09 J	-1905538.24	-1905538.16	-1905538.08	0.0088	0.0084
Mars	-9930-04-25 04:19 J	-1905395.48	-1905395.32	-1905395.15	0.1898	0.1133
Neptune	-9930-12-05 19:12 J	-1905170.90	-1905170.70	-1905170.47	0.0088	0.0048
Neptune	-9929-12-07 06:57 J	-1904803.46	-1904803.21	-1904802.95	0.0088	0.0012
Neptune	-9928-12-09 18:00 J	-1904435.99	-1904435.75	-1904435.49	0.0088	0.0023
Uranus	-9927-06-04 01:26 J	-1904259.59	-1904259.44	-1904259.25	0.0132	0.0099
Neptune	-9927-12-12 05:16 J	-1904068.45	-1904068.28	-1904068.06	0.0088	0.0059
Uranus	-9926-06-08 06:43 J	-1903890.43	-1903890.22	-1903889.98	0.0132	0.0057
Jupiter	-9925-05-17 02:24 J	-1903546.47	-1903546.40	-1903546.31	0.0522	0.0487
Uranus	-9925-06-11 12:00 J	-1903521.25	-1903521.00	-1903520.75	0.0132	0.0015
Uranus	-9924-06-15 16:47 J	-1903152.04	-1903151.80	-1903151.54	0.0132	0.0027
Uranus	-9923-06-19 21:07 J	-1902782.81	-1902782.62	-1902782.38	0.0132	0.0070
Saturn	-9923-12-13 10:47 J	-1902606.29	-1902606.05	-1902605.80	0.0262	0.0013
Uranus	-9922-06-24 01:55 J	-1902413.54	-1902413.42	-1902413.27	0.0132	0.0111
Mars	-9922-10-19 17:02 J	-1902295.97	-1902295.79	-1902295.60	0.1623	0.0165
Jupiter	-9913-05-22 02:38 J	-1899158.62	-1899158.39	-1899158.16	0.0523	0.0074
Saturn	-9907-06-16 12:28 J	-1896942.20	-1896941.98	-1896941.75	0.0300	0.0119
Jupiter	-9901-05-27 01:40 J	-1894770.61	-1894770.43	-1894770.25	0.0524	0.0335
Pluto	-9896-10-19 11:02 J	-1892799.24	-1892799.04	-1892798.80	0.0067	0.0034
Jupiter	-9896-11-11 19:12 J	-1892775.80	-1892775.70	-1892775.59	0.0504	0.0448

Uranus	-9886-11-26 07:26 J	-1889109.19	-1889109.19	-1889109.13	0.0146	0.0146
Uranus	-9885-11-30 11:16 J	-1888739.22	-1888739.03	-1888738.81	0.0147	0.0089
Jupiter	-9884-11-16 08:52 J	-1888388.36	-1888388.13	-1888387.90	0.0503	0.0087
Uranus	-9884-12-05 15:35 J	-1888369.10	-1888368.85	-1888368.60	0.0147	0.0031
Uranus	-9883-12-10 20:09 J	-1887998.91	-1887998.66	-1887998.41	0.0146	0.0027
Uranus	-9882-12-16 00:43 J	-1887628.67	-1887628.47	-1887628.26	0.0146	0.0085
Uranus	-9881-12-20 05:31 J	-1887258.32	-1887258.27	-1887258.21	0.0146	0.0142
Jupiter	-9872-11-20 17:31 J	-1884000.96	-1884000.77	-1884000.56	0.0502	0.0258
Saturn	-9864-12-14 11:16 J	-1881055.27	-1881055.03	-1881054.78	0.0262	0.0047
Saturn	-9848-06-17 11:02 J	-1875391.27	-1875391.04	-1875390.80	0.0300	0.0055
Neptune	-9847-06-09 09:50 J	-1875034.23	-1875034.09	-1875033.92	0.0089	0.0070
Neptune	-9846-06-11 21:50 J	-1874666.82	-1874666.59	-1874666.35	0.0089	0.0033
Neptune	-9845-06-13 09:50 J	-1874299.35	-1874299.09	-1874298.84	0.0089	0.0003
Neptune	-9844-06-15 21:21 J	-1873931.84	-1873931.61	-1873931.38	0.0089	0.0040
Uranus	-9843-06-04 17:16 J	-1873577.97	-1873577.78	-1873577.60	0.0132	0.0092
Neptune	-9843-06-18 08:38 J	-1873564.25	-1873564.14	-1873563.98	0.0089	0.0076
Mars	-9843-10-21 18:14 J	-1873438.88	-1873438.74	-1873438.60	0.1624	0.1018
Uranus	-9842-06-08 22:19 J	-1873208.79	-1873208.57	-1873208.32	0.0132	0.0050
Uranus	-9841-06-12 03:35 J	-1872839.61	-1872839.35	-1872839.10	0.0132	0.0008
Uranus	-9840-06-16 08:24 J	-1872470.39	-1872470.15	-1872469.90	0.0132	0.0034
Uranus	-9839-06-20 12:43 J	-1872101.16	-1872100.97	-1872100.74	0.0132	0.0076
Uranus	-9838-06-24 17:16 J	-1871731.88	-1871731.78	-1871731.64	0.0132	0.0116
Saturn	-9835-12-09 13:55 J	-1870468.05	-1870467.92	-1870467.77	0.0263	0.0217
Jupiter	-9830-05-22 07:40 J	-1868843.40	-1868843.18	-1868842.95	0.0523	0.0133
Jupiter	-9818-05-27 08:52 J	-1864455.32	-1864455.13	-1864454.93	0.0524	0.0284
Jupiter	-9813-11-11 03:35 J	-1862460.39	-1862460.35	-1862460.30	0.0503	0.0491
Pluto	-9809-04-23 08:52 J	-1861201.37	-1861201.13	-1861200.87	0.0078	0.0023
Saturn	-9805-12-15 08:24 J	-1859504.37	-1859504.15	-1859503.91	0.0262	0.0098
Uranus	-9802-11-26 22:19 J	-1858427.65	-1858427.57	-1858427.48	0.0146	0.0138
Jupiter	-9801-11-15 16:19 J	-1858073.04	-1858072.82	-1858072.59	0.0502	0.0135

Uranus	-9801-12-01 01:55 J	-1858057.62	-1858057.42	-1858057.20	0.0146	0.0082
Uranus	-9800-12-06 06:00 J	-1857687.50	-1857687.25	-1857686.99	0.0146	0.0024
Uranus	-9799-12-11 10:33 J	-1857317.30	-1857317.06	-1857316.81	0.0146	0.0034
Uranus	-9798-12-16 15:21 J	-1856947.06	-1856946.86	-1856946.66	0.0146	0.0091
Saturn	-9789-06-18 05:16 J	-1853840.52	-1853840.28	-1853840.03	0.0300	0.0005
Jupiter	-9789-11-20 04:33 J	-1853685.52	-1853685.31	-1853685.10	0.0502	0.0218
Saturn	-9776-12-10 10:04 J	-1848917.26	-1848917.08	-1848916.89	0.0263	0.0168
Neptune	-9766-12-05 00:14 J	-1845270.62	-1845270.49	-1845270.31	0.0088	0.0070
Neptune	-9765-12-06 12:00 J	-1844903.24	-1844903.00	-1844902.76	0.0088	0.0034
Neptune	-9764-12-08 23:31 J	-1844535.78	-1844535.52	-1844535.26	0.0088	0.0002
Neptune	-9763-12-11 10:47 J	-1844168.27	-1844168.05	-1844167.81	0.0088	0.0038
Neptune	-9762-12-13 21:50 J	-1843800.71	-1843800.59	-1843800.42	0.0088	0.0074
Uranus	-9760-06-01 02:09 J	-1843265.46	-1843265.41	-1843265.32	0.0132	0.0127
Uranus	-9759-06-05 07:55 J	-1842896.35	-1842896.17	-1842895.97	0.0132	0.0085
Uranus	-9758-06-09 13:26 J	-1842527.18	-1842526.94	-1842526.70	0.0132	0.0043
Uranus	-9757-06-12 18:28 J	-1842157.99	-1842157.73	-1842157.48	0.0132	0.0003
Uranus	-9756-06-16 23:16 J	-1841788.77	-1841788.53	-1841788.29	0.0132	0.0039
Uranus	-9755-06-21 03:35 J	-1841419.55	-1841419.35	-1841419.15	0.0132	0.0081
Uranus	-9754-06-25 07:40 J	-1841050.26	-1841050.18	-1841050.06	0.0132	0.0122
Jupiter	-9747-05-21 20:24 J	-1838527.87	-1838527.65	-1838527.43	0.0523	0.0165
Saturn	-9746-12-17 04:04 J	-1837953.54	-1837953.33	-1837953.12	0.0262	0.0145
Jupiter	-9735-05-26 22:04 J	-1834139.78	-1834139.58	-1834139.37	0.0524	0.0252
Saturn	-9730-06-19 22:04 J	-1832289.82	-1832289.58	-1832289.34	0.0300	0.0047
Jupiter	-9718-11-16 05:16 J	-1827757.49	-1827757.28	-1827757.06	0.0503	0.0168
Uranus	-9718-11-27 11:45 J	-1827746.12	-1827746.01	-1827745.90	0.0146	0.0131
Mars	-9717-10-17 23:16 J	-1827420.68	-1827420.53	-1827420.37	0.1620	0.0852
Uranus	-9717-12-01 15:07 J	-1827376.08	-1827375.87	-1827375.64	0.0146	0.0075
Saturn	-9717-12-11 04:33 J	-1827366.53	-1827366.31	-1827366.09	0.0263	0.0122
Uranus	-9716-12-06 19:26 J	-1827005.94	-1827005.69	-1827005.44	0.0147	0.0018
Uranus	-9715-12-12 00:00 J	-1826635.75	-1826635.50	-1826635.25	0.0146	0.0040

Uranus	-9714-12-17 04:04 J	-1826265.50	-1826265.33	-1826265.12	0.0146	0.0097
Jupiter	-9706-11-20 18:57 J	-1823369.92	-1823369.71	-1823369.49	0.0502	0.0192
Saturn	-9687-12-17 22:19 J	-1816402.72	-1816402.57	-1816402.39	0.0262	0.0192
Neptune	-9682-06-11 01:26 J	-1814766.62	-1814766.44	-1814766.22	0.0089	0.0056
Neptune	-9681-06-12 13:12 J	-1814399.18	-1814398.95	-1814398.68	0.0089	0.0021
Neptune	-9680-06-15 01:12 J	-1814031.70	-1814031.45	-1814031.19	0.0089	0.0017
Neptune	-9679-06-17 12:28 J	-1813664.16	-1813663.98	-1813663.75	0.0089	0.0053
Neptune	-9678-06-20 00:28 J	-1813296.48	-1813296.48	-1813296.47	0.0089	0.0089
Uranus	-9676-06-01 17:16 J	-1812583.89	-1812583.78	-1812583.67	0.0132	0.0119
Uranus	-9675-06-05 22:33 J	-1812214.76	-1812214.56	-1812214.35	0.0132	0.0078
Uranus	-9674-06-10 03:50 J	-1811845.58	-1811845.34	-1811845.09	0.0132	0.0037
Uranus	-9673-06-13 08:52 J	-1811476.38	-1811476.13	-1811475.87	0.0132	0.0004
Uranus	-9672-06-17 13:26 J	-1811107.17	-1811106.94	-1811106.69	0.0132	0.0045
Saturn	-9671-06-20 14:52 J	-1810739.11	-1810738.88	-1810738.65	0.0300	0.0097
Uranus	-9671-06-21 17:45 J	-1810737.94	-1810737.76	-1810737.56	0.0132	0.0086
Uranus	-9670-06-25 22:04 J	-1810368.64	-1810368.58	-1810368.50	0.0132	0.0127
Jupiter	-9664-05-21 08:24 J	-1808212.36	-1808212.15	-1808211.93	0.0523	0.0201
Saturn	-9658-12-12 22:47 J	-1805815.78	-1805815.55	-1805815.30	0.0263	0.0077
Jupiter	-9652-05-26 06:57 J	-1803824.43	-1803824.21	-1803824.00	0.0523	0.0204
Pluto	-9650-10-20 03:07 J	-1802947.38	-1802947.37	-1802947.29	0.0066	0.0066
Pluto	-9649-10-20 17:02 J	-1802581.00	-1802580.79	-1802580.57	0.0067	0.0036
Mars	-9646-04-24 03:50 J	-1801665.55	-1801665.34	-1801665.13	0.1902	0.0021
Mars	-9638-10-20 23:45 J	-1798563.70	-1798563.51	-1798563.33	0.1621	0.0311
Jupiter	-9635-11-15 17:31 J	-1797441.98	-1797441.77	-1797441.55	0.0502	0.0202
Uranus	-9634-11-27 19:40 J	-1797064.79	-1797064.68	-1797064.54	0.0146	0.0127
Uranus	-9633-12-01 23:16 J	-1796694.74	-1796694.53	-1796694.30	0.0146	0.0071
Uranus	-9632-12-07 03:21 J	-1796324.61	-1796324.36	-1796324.10	0.0146	0.0014
Uranus	-9631-12-12 07:40 J	-1795954.42	-1795954.18	-1795953.93	0.0146	0.0044
Uranus	-9630-12-17 12:14 J	-1795584.18	-1795583.99	-1795583.81	0.0146	0.0100
Saturn	-9628-12-18 17:16 J	-1794851.88	-1794851.78	-1794851.68	0.0262	0.0238

Jupiter	-9623-11-20 06:14 J	-1793054.46	-1793054.24	-1793054.02	0.0502	0.0153
Saturn	-9612-06-21 09:35 J	-1789188.30	-1789188.10	-1789187.88	0.0300	0.0152
Jupiter	-9611-11-24 17:45 J	-1788666.76	-1788666.76	-1788666.76	0.0501	0.0501
Neptune	-9601-12-05 16:47 J	-1785002.98	-1785002.80	-1785002.57	0.0088	0.0055
Neptune	-9600-12-08 04:33 J	-1784635.56	-1784635.31	-1784635.05	0.0088	0.0019
Neptune	-9599-12-10 16:04 J	-1784268.08	-1784267.83	-1784267.57	0.0088	0.0016
Saturn	-9599-12-13 18:14 J	-1784264.98	-1784264.74	-1784264.49	0.0263	0.0028
Neptune	-9598-12-13 03:07 J	-1783900.55	-1783900.37	-1783900.13	0.0088	0.0052
Neptune	-9597-12-14 14:38 J	-1783532.90	-1783532.89	-1783532.83	0.0088	0.0087
Uranus	-9592-06-02 06:28 J	-1781902.35	-1781902.23	-1781902.10	0.0132	0.0113
Uranus	-9591-06-06 11:45 J	-1781533.21	-1781533.01	-1781532.78	0.0132	0.0073
Uranus	-9590-06-10 17:16 J	-1781164.02	-1781163.78	-1781163.53	0.0132	0.0031
Uranus	-9589-06-13 22:19 J	-1780794.82	-1780794.57	-1780794.32	0.0132	0.0010
Uranus	-9588-06-18 02:38 J	-1780425.61	-1780425.39	-1780425.14	0.0132	0.0051
Uranus	-9587-06-22 06:57 J	-1780056.38	-1780056.21	-1780056.02	0.0132	0.0091
Uranus	-9586-06-26 11:16 J	-1779687.04	-1779687.03	-1779686.99	0.0132	0.0132
Saturn	-9583-06-15 00:00 J	-1778602.63	-1778602.50	-1778602.36	0.0298	0.0246
Jupiter	-9581-05-20 16:04 J	-1777897.03	-1777896.83	-1777896.62	0.0523	0.0250
Jupiter	-9569-05-25 15:50 J	-1773509.06	-1773508.84	-1773508.62	0.0524	0.0156
Pluto	-9562-04-25 12:14 J	-1770983.23	-1770982.99	-1770982.72	0.0078	0.0021
Mars	-9559-10-23 00:43 J	-1769706.54	-1769706.47	-1769706.39	0.1622	0.1487
Saturn	-9553-06-22 09:21 J	-1767637.26	-1767637.11	-1767636.93	0.0300	0.0220
Jupiter	-9552-11-15 04:19 J	-1767126.52	-1767126.32	-1767126.11	0.0503	0.0242
Uranus	-9550-11-28 05:02 J	-1766383.41	-1766383.29	-1766383.13	0.0146	0.0122
Uranus	-9549-12-02 08:38 J	-1766013.36	-1766013.14	-1766012.91	0.0146	0.0066
Uranus	-9548-12-07 12:28 J	-1765643.23	-1765642.98	-1765642.72	0.0146	0.0009
Uranus	-9547-12-12 16:33 J	-1765273.04	-1765272.81	-1765272.56	0.0146	0.0047
Uranus	-9546-12-17 20:38 J	-1764902.81	-1764902.64	-1764902.45	0.0146	0.0104
Jupiter	-9540-11-19 16:33 J	-1762739.04	-1762738.81	-1762738.59	0.0502	0.0110
Saturn	-9540-12-14 15:21 J	-1762714.11	-1762713.86	-1762713.62	0.0263	0.0025

Jupiter	-9528-11-24 04:47 J	-1758351.37	-1758351.30	-1758351.20	0.0501	0.0465
Saturn	-9524-06-16 01:40 J	-1757051.62	-1757051.43	-1757051.23	0.0298	0.0174
Neptune	-9518-06-10 06:28 J	-1754866.34	-1754866.23	-1754866.09	0.0089	0.0077
Neptune	-9517-06-11 18:28 J	-1754498.95	-1754498.73	-1754498.49	0.0089	0.0041
Neptune	-9516-06-14 06:28 J	-1754131.49	-1754131.23	-1754130.97	0.0089	0.0005
Neptune	-9515-06-16 17:45 J	-1753763.99	-1753763.76	-1753763.50	0.0089	0.0031
Neptune	-9514-06-19 05:16 J	-1753396.43	-1753396.28	-1753396.09	0.0089	0.0067
Mars	-9512-10-17 06:14 J	-1752545.31	-1752545.24	-1752545.18	0.1618	0.1514
Saturn	-9511-12-09 18:43 J	-1752126.81	-1752126.72	-1752126.60	0.0265	0.0240
Uranus	-9508-06-02 18:43 J	-1751220.84	-1751220.72	-1751220.55	0.0132	0.0109
Uranus	-9507-06-07 00:28 J	-1750851.68	-1750851.48	-1750851.25	0.0132	0.0067
Uranus	-9506-06-11 06:00 J	-1750482.49	-1750482.25	-1750481.99	0.0132	0.0027
Uranus	-9505-06-14 11:02 J	-1750113.29	-1750113.04	-1750112.78	0.0132	0.0015
Uranus	-9504-06-18 15:50 J	-1749744.07	-1749743.84	-1749743.61	0.0132	0.0056
Uranus	-9503-06-22 19:55 J	-1749374.83	-1749374.67	-1749374.48	0.0132	0.0096
Jupiter	-9498-05-20 22:04 J	-1747581.76	-1747581.58	-1747581.39	0.0523	0.0310
Saturn	-9494-06-24 13:55 J	-1746085.93	-1746085.92	-1746085.91	0.0300	0.0299
Jupiter	-9486-05-25 23:16 J	-1743193.76	-1743193.53	-1743193.30	0.0524	0.0103
Saturn	-9481-12-15 14:38 J	-1741163.12	-1741162.89	-1741162.65	0.0264	0.0085
Jupiter	-9474-05-30 21:35 J	-1738805.66	-1738805.60	-1738805.54	0.0524	0.0505
Jupiter	-9469-11-14 13:12 J	-1736811.14	-1736810.95	-1736810.76	0.0503	0.0288
Uranus	-9466-11-28 15:50 J	-1735701.97	-1735701.84	-1735701.67	0.0146	0.0117
Saturn	-9465-06-17 09:21 J	-1735500.34	-1735500.11	-1735499.87	0.0298	0.0087
Uranus	-9465-12-02 19:12 J	-1735331.92	-1735331.70	-1735331.46	0.0146	0.0061
Uranus	-9464-12-07 22:47 J	-1734961.80	-1734961.55	-1734961.29	0.0146	0.0005
Uranus	-9463-12-13 02:24 J	-1734591.63	-1734591.40	-1734591.15	0.0146	0.0051
Uranus	-9462-12-18 06:00 J	-1734221.40	-1734221.25	-1734221.05	0.0146	0.0108
Jupiter	-9457-11-19 01:26 J	-1732423.67	-1732423.44	-1732423.21	0.0502	0.0063
Saturn	-9452-12-10 20:09 J	-1730575.83	-1730575.66	-1730575.47	0.0265	0.0177
Jupiter	-9445-11-23 12:57 J	-1728036.08	-1728035.96	-1728035.82	0.0501	0.0412

Neptune	-9437-12-04 22:47 J	-1725102.65	-1725102.55	-1725102.38	0.0088	0.0076
Neptune	-9436-12-07 10:47 J	-1724735.28	-1724735.05	-1724734.82	0.0088	0.0040
Neptune	-9435-12-09 22:04 J	-1724367.83	-1724367.58	-1724367.32	0.0088	0.0005
Neptune	-9434-12-12 09:07 J	-1724000.35	-1724000.12	-1723999.86	0.0088	0.0031
Mars	-9433-10-19 06:28 J	-1723688.41	-1723688.23	-1723688.05	0.1619	0.0369
Neptune	-9433-12-13 20:38 J	-1723632.79	-1723632.64	-1723632.45	0.0088	0.0066
Uranus	-9424-06-03 06:43 J	-1720539.36	-1720539.22	-1720539.04	0.0132	0.0104
Uranus	-9423-06-07 12:43 J	-1720170.18	-1720169.97	-1720169.74	0.0132	0.0062
Uranus	-9422-06-11 18:14 J	-1719800.98	-1719800.74	-1719800.48	0.0132	0.0022
Saturn	-9422-12-17 17:31 J	-1719611.97	-1719611.77	-1719611.56	0.0264	0.0151
Uranus	-9421-06-14 23:16 J	-1719431.78	-1719431.53	-1719431.27	0.0132	0.0020
Uranus	-9420-06-19 04:04 J	-1719062.54	-1719062.33	-1719062.09	0.0132	0.0060
Uranus	-9419-06-23 08:24 J	-1718693.29	-1718693.15	-1718692.97	0.0132	0.0101
Jupiter	-9415-05-20 00:00 J	-1717266.66	-1717266.50	-1717266.34	0.0522	0.0380
Saturn	-9406-06-19 22:33 J	-1713948.80	-1713948.56	-1713948.32	0.0298	0.0015
Jupiter	-9403-05-24 22:47 J	-1712878.79	-1712878.55	-1712878.32	0.0523	0.0024
Pluto	-9403-10-21 13:12 J	-1712729.11	-1712728.95	-1712728.78	0.0066	0.0051
Pluto	-9402-10-23 01:55 J	-1712362.57	-1712362.42	-1712362.24	0.0067	0.0051
Saturn	-9393-12-12 00:43 J	-1709024.69	-1709024.47	-1709024.24	0.0265	0.0106
Jupiter	-9391-05-29 19:40 J	-1708490.81	-1708490.68	-1708490.54	0.0525	0.0418
Jupiter	-9386-11-14 19:55 J	-1706495.84	-1706495.67	-1706495.50	0.0503	0.0342
Uranus	-9382-11-29 06:28 J	-1705020.38	-1705020.23	-1705020.05	0.0146	0.0110
Uranus	-9381-12-03 09:35 J	-1704650.33	-1704650.10	-1704649.86	0.0146	0.0054
Uranus	-9380-12-08 12:57 J	-1704280.21	-1704279.96	-1704279.70	0.0146	0.0002
Uranus	-9379-12-13 16:19 J	-1703910.04	-1703909.82	-1703909.57	0.0146	0.0058
Uranus	-9378-12-18 19:55 J	-1703539.81	-1703539.67	-1703539.49	0.0146	0.0114
Jupiter	-9374-11-19 04:33 J	-1702108.54	-1702108.31	-1702108.08	0.0502	0.0004
Saturn	-9363-12-18 23:45 J	-1698060.62	-1698060.51	-1698060.37	0.0264	0.0225
Mars	-9362-04-23 02:38 J	-1697935.55	-1697935.39	-1697935.23	0.1905	0.1198
Jupiter	-9362-11-23 14:38 J	-1697721.05	-1697720.89	-1697720.72	0.0501	0.0341

Mars	-9354-10-22 06:43 J	-1694831.39	-1694831.22	-1694831.06	0.1620	0.0792
Neptune	-9353-06-11 00:00 J	-1694598.67	-1694598.50	-1694598.30	0.0089	0.0062
Neptune	-9352-06-13 12:00 J	-1694231.24	-1694231.00	-1694230.75	0.0089	0.0026
Neptune	-9351-06-15 23:45 J	-1693863.76	-1693863.51	-1693863.25	0.0089	0.0010
Neptune	-9350-06-18 11:16 J	-1693496.23	-1693496.03	-1693495.79	0.0089	0.0046
Neptune	-9349-06-19 22:33 J	-1693128.63	-1693128.56	-1693128.43	0.0089	0.0082
Saturn	-9347-06-21 17:02 J	-1692397.00	-1692396.79	-1692396.56	0.0299	0.0131
Uranus	-9340-06-03 19:55 J	-1689857.83	-1689857.67	-1689857.49	0.0132	0.0097
Uranus	-9339-06-08 01:40 J	-1689488.65	-1689488.43	-1689488.19	0.0132	0.0057
Uranus	-9338-06-12 07:12 J	-1689119.44	-1689119.20	-1689118.94	0.0132	0.0017
Uranus	-9337-06-15 12:14 J	-1688750.23	-1688749.99	-1688749.73	0.0132	0.0026
Uranus	-9336-06-19 17:02 J	-1688380.99	-1688380.79	-1688380.55	0.0132	0.0066
Uranus	-9335-06-23 21:50 J	-1688011.73	-1688011.59	-1688011.43	0.0132	0.0106
Saturn	-9334-12-14 08:38 J	-1687473.39	-1687473.14	-1687472.90	0.0265	0.0028
Jupiter	-9332-05-18 18:14 J	-1686951.83	-1686951.74	-1686951.64	0.0523	0.0477
Jupiter	-9320-05-23 18:57 J	-1682563.94	-1682563.71	-1682563.47	0.0524	0.0071
Saturn	-9318-06-15 19:12 J	-1681810.84	-1681810.70	-1681810.54	0.0296	0.0232
Pluto	-9315-04-26 23:45 J	-1680764.70	-1680764.51	-1680764.30	0.0078	0.0049
Jupiter	-9308-05-28 20:09 J	-1678175.83	-1678175.66	-1678175.48	0.0524	0.0341
Jupiter	-9303-11-13 18:43 J	-1676180.84	-1676180.72	-1676180.59	0.0503	0.0420
Uranus	-9298-11-29 21:07 J	-1674338.80	-1674338.62	-1674338.44	0.0146	0.0103
Uranus	-9297-12-03 23:45 J	-1673968.74	-1673968.51	-1673968.26	0.0146	0.0048
Uranus	-9296-12-09 03:07 J	-1673598.63	-1673598.37	-1673598.12	0.0146	0.0007
Uranus	-9295-12-14 06:14 J	-1673228.46	-1673228.24	-1673228.00	0.0146	0.0063
Uranus	-9294-12-19 09:50 J	-1672858.22	-1672858.09	-1672857.92	0.0146	0.0119
Jupiter	-9291-11-18 05:31 J	-1671793.50	-1671793.27	-1671793.04	0.0502	0.0075
Saturn	-9288-06-23 14:52 J	-1670845.00	-1670844.88	-1670844.75	0.0299	0.0253
Jupiter	-9279-11-22 18:00 J	-1667405.94	-1667405.75	-1667405.55	0.0501	0.0275
Saturn	-9275-12-15 19:12 J	-1665921.94	-1665921.70	-1665921.45	0.0265	0.0056
Neptune	-9272-12-06 17:31 J	-1664834.94	-1664834.77	-1664834.57	0.0088	0.0060

Neptune	-9271-12-09 04:47 J	-1664467.54	-1664467.30	-1664467.04	0.0088	0.0024
Neptune	-9270-12-11 16:04 J	-1664100.07	-1664099.83	-1664099.56	0.0088	0.0012
Neptune	-9269-12-13 03:21 J	-1663732.56	-1663732.36	-1663732.12	0.0088	0.0046
Neptune	-9268-12-15 14:38 J	-1663364.96	-1663364.89	-1663364.76	0.0088	0.0082
Saturn	-9259-06-17 18:14 J	-1660258.96	-1660258.74	-1660258.51	0.0297	0.0107
Uranus	-9256-06-04 07:40 J	-1659176.34	-1659176.18	-1659175.98	0.0132	0.0093
Uranus	-9255-06-08 13:55 J	-1658807.15	-1658806.92	-1658806.68	0.0132	0.0052
Uranus	-9254-06-12 19:26 J	-1658437.94	-1658437.69	-1658437.43	0.0132	0.0012
Uranus	-9253-06-16 00:28 J	-1658068.72	-1658068.48	-1658068.22	0.0132	0.0030
Uranus	-9252-06-20 05:45 J	-1657699.47	-1657699.26	-1657699.04	0.0132	0.0070
Uranus	-9251-06-24 10:33 J	-1657330.20	-1657330.06	-1657329.92	0.0132	0.0110
Saturn	-9246-12-11 02:24 J	-1655334.55	-1655334.40	-1655334.23	0.0266	0.0202
Jupiter	-9237-05-22 16:19 J	-1652249.04	-1652248.82	-1652248.59	0.0523	0.0155
Mars	-9228-10-18 13:26 J	-1648813.08	-1648812.94	-1648812.79	0.1617	0.1018
Jupiter	-9225-05-27 14:09 J	-1647861.11	-1647860.91	-1647860.70	0.0524	0.0243
Jupiter	-9220-11-12 20:38 J	-1645865.68	-1645865.64	-1645865.57	0.0504	0.0489
Saturn	-9216-12-17 07:12 J	-1644370.40	-1644370.20	-1644369.98	0.0264	0.0141
Uranus	-9214-11-30 10:04 J	-1643657.26	-1643657.08	-1643656.89	0.0146	0.0096
Uranus	-9213-12-04 12:43 J	-1643287.20	-1643286.97	-1643286.71	0.0146	0.0043
Uranus	-9212-12-09 16:04 J	-1642917.08	-1642916.83	-1642916.58	0.0146	0.0013
Uranus	-9211-12-14 19:40 J	-1642546.90	-1642546.68	-1642546.45	0.0146	0.0069
Uranus	-9210-12-19 23:16 J	-1642176.65	-1642176.53	-1642176.38	0.0146	0.0124
Jupiter	-9208-11-17 08:24 J	-1641478.37	-1641478.15	-1641477.92	0.0503	0.0141
Saturn	-9200-06-19 16:33 J	-1638707.05	-1638706.81	-1638706.56	0.0297	0.0016
Jupiter	-9196-11-21 15:21 J	-1637091.07	-1637090.86	-1637090.64	0.0502	0.0194
Neptune	-9189-06-10 06:28 J	-1634698.30	-1634698.23	-1634698.11	0.0089	0.0082
Neptune	-9188-06-12 18:43 J	-1634330.93	-1634330.72	-1634330.49	0.0089	0.0046
Neptune	-9187-06-15 06:57 J	-1633963.47	-1633963.21	-1633962.95	0.0089	0.0010
Saturn	-9187-12-12 15:50 J	-1633783.06	-1633782.84	-1633782.62	0.0265	0.0114
Neptune	-9186-06-17 18:28 J	-1633595.96	-1633595.73	-1633595.47	0.0089	0.0026

Neptune	-9185-06-19 06:00 J	-1633228.42	-1633228.25	-1633228.05	0.0089	0.0062
Uranus	-9173-05-31 14:09 J	-1628863.97	-1628863.91	-1628863.83	0.0132	0.0127
Uranus	-9172-06-04 20:24 J	-1628494.84	-1628494.65	-1628494.45	0.0132	0.0087
Uranus	-9171-06-09 02:09 J	-1628125.64	-1628125.41	-1628125.17	0.0132	0.0046
Uranus	-9170-06-13 07:40 J	-1627756.43	-1627756.18	-1627755.92	0.0132	0.0006
Uranus	-9169-06-16 12:57 J	-1627387.21	-1627386.96	-1627386.72	0.0132	0.0035
Uranus	-9168-06-20 17:45 J	-1627017.96	-1627017.76	-1627017.54	0.0132	0.0075
Uranus	-9167-06-24 22:33 J	-1626648.67	-1626648.56	-1626648.42	0.0132	0.0115
Saturn	-9157-12-18 19:12 J	-1622818.81	-1622818.70	-1622818.56	0.0264	0.0226
Pluto	-9156-10-23 02:38 J	-1622510.62	-1622510.39	-1622510.14	0.0066	0.0023
Jupiter	-9154-05-22 08:24 J	-1621934.35	-1621934.15	-1621933.94	0.0523	0.0258
Mars	-9149-10-20 13:55 J	-1619956.10	-1619955.92	-1619955.73	0.1618	0.0124
Jupiter	-9142-05-27 08:52 J	-1617546.35	-1617546.13	-1617545.90	0.0524	0.0148
Saturn	-9141-06-21 13:12 J	-1617155.17	-1617154.95	-1617154.73	0.0298	0.0133
Uranus	-9131-11-25 17:16 J	-1613345.79	-1613345.78	-1613345.74	0.0146	0.0145
Uranus	-9130-11-30 19:26 J	-1612975.87	-1612975.69	-1612975.48	0.0146	0.0092
Uranus	-9129-12-04 22:19 J	-1612605.81	-1612605.57	-1612605.32	0.0146	0.0038
Uranus	-9128-12-10 01:26 J	-1612235.69	-1612235.44	-1612235.18	0.0146	0.0018
Saturn	-9128-12-14 04:04 J	-1612231.58	-1612231.33	-1612231.09	0.0265	0.0028
Uranus	-9127-12-15 04:47 J	-1611865.51	-1611865.30	-1611865.07	0.0146	0.0073
Uranus	-9126-12-20 08:38 J	-1611495.25	-1611495.14	-1611495.00	0.0146	0.0128
Jupiter	-9125-11-16 05:31 J	-1611163.48	-1611163.27	-1611163.06	0.0503	0.0222
Jupiter	-9113-11-20 16:04 J	-1606776.05	-1606775.83	-1606775.60	0.0502	0.0122
Saturn	-9112-06-15 11:02 J	-1606569.17	-1606569.04	-1606568.90	0.0297	0.0245
Neptune	-9108-12-06 00:57 J	-1604934.56	-1604934.46	-1604934.33	0.0088	0.0079
Neptune	-9107-12-08 12:28 J	-1604567.20	-1604566.98	-1604566.75	0.0088	0.0044
Neptune	-9106-12-10 23:45 J	-1604199.77	-1604199.51	-1604199.25	0.0088	0.0009
Neptune	-9105-12-12 11:02 J	-1603832.28	-1603832.04	-1603831.79	0.0088	0.0026
Neptune	-9104-12-14 22:04 J	-1603464.75	-1603464.58	-1603464.38	0.0088	0.0061
Jupiter	-9101-11-25 04:47 J	-1602388.37	-1602388.30	-1602388.21	0.0501	0.0470

Uranus	-9089-06-01 00:28 J	-1598182.55	-1598182.48	-1598182.36	0.0132	0.0123
Uranus	-9088-06-05 06:57 J	-1597813.39	-1597813.21	-1597813.00	0.0132	0.0082
Uranus	-9087-06-09 12:43 J	-1597444.19	-1597443.97	-1597443.71	0.0132	0.0043
Uranus	-9086-06-13 18:43 J	-1597074.97	-1597074.72	-1597074.46	0.0132	0.0001
Uranus	-9085-06-16 23:31 J	-1596705.75	-1596705.52	-1596705.26	0.0132	0.0039
Uranus	-9084-06-21 04:33 J	-1596336.49	-1596336.31	-1596336.09	0.0132	0.0079
Uranus	-9083-06-25 09:35 J	-1595967.19	-1595967.10	-1595966.97	0.0132	0.0119
Saturn	-9082-06-24 04:33 J	-1595603.45	-1595603.31	-1595603.16	0.0298	0.0239
Jupiter	-9071-05-21 11:31 J	-1591619.20	-1591619.02	-1591618.83	0.0523	0.0320
Mars	-9070-10-23 13:55 J	-1591099.03	-1591098.92	-1591098.81	0.1618	0.1271
Pluto	-9069-04-26 11:45 J	-1590913.01	-1590913.01	-1590912.99	0.0078	0.0078
Saturn	-9069-12-15 14:24 J	-1590680.14	-1590679.90	-1590679.66	0.0264	0.0052
Jupiter	-9059-05-26 11:45 J	-1587231.24	-1587231.01	-1587230.78	0.0523	0.0082
Saturn	-9053-06-16 23:45 J	-1585017.72	-1585017.51	-1585017.30	0.0297	0.0147
Jupiter	-9047-05-31 10:19 J	-1582843.16	-1582843.07	-1582842.98	0.0524	0.0481
Uranus	-9047-11-26 00:14 J	-1582664.54	-1582664.49	-1582664.42	0.0146	0.0141
Uranus	-9046-12-01 02:24 J	-1582294.59	-1582294.40	-1582294.19	0.0146	0.0088
Uranus	-9045-12-05 05:02 J	-1581924.53	-1581924.29	-1581924.03	0.0146	0.0034
Uranus	-9044-12-10 08:09 J	-1581554.41	-1581554.16	-1581553.90	0.0146	0.0021
Uranus	-9043-12-15 11:45 J	-1581184.22	-1581184.01	-1581183.78	0.0146	0.0076
Jupiter	-9042-11-16 09:50 J	-1580848.27	-1580848.09	-1580847.89	0.0503	0.0282
Uranus	-9042-12-20 15:50 J	-1580813.94	-1580813.84	-1580813.72	0.0146	0.0130
Saturn	-9040-12-10 20:38 J	-1580092.79	-1580092.64	-1580092.48	0.0266	0.0207
Jupiter	-9030-11-20 22:33 J	-1576460.79	-1576460.56	-1576460.33	0.0502	0.0069
Neptune	-9024-06-12 02:24 J	-1574430.56	-1574430.40	-1574430.22	0.0089	0.0065
Neptune	-9023-06-14 14:24 J	-1574063.13	-1574062.90	-1574062.64	0.0089	0.0030
Neptune	-9022-06-17 02:38 J	-1573695.65	-1573695.39	-1573695.13	0.0089	0.0006
Neptune	-9021-06-18 14:09 J	-1573328.12	-1573327.91	-1573327.67	0.0089	0.0042
Neptune	-9020-06-21 02:09 J	-1572960.53	-1572960.41	-1572960.28	0.0089	0.0077
Jupiter	-9018-11-25 06:14 J	-1572073.38	-1572073.24	-1572073.10	0.0501	0.0402

Saturn	-9010-12-17 21:21 J	-1569128.82	-1569128.61	-1569128.39	0.0264	0.0125
Uranus	-9005-06-01 11:02 J	-1567501.13	-1567501.04	-1567500.90	0.0133	0.0118
Uranus	-9004-06-05 17:31 J	-1567131.96	-1567131.77	-1567131.55	0.0132	0.0078
Uranus	-9003-06-09 23:45 J	-1566762.75	-1566762.51	-1566762.26	0.0132	0.0037
Uranus	-9002-06-14 05:31 J	-1566393.52	-1566393.27	-1566393.01	0.0132	0.0003
Uranus	-9001-06-17 10:47 J	-1566024.28	-1566024.05	-1566023.80	0.0132	0.0043

9TH MILLENNIUM BCE

This is a list of transits of Earth in the 9th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-9000-06-21 15:50 J	-1565655.02	-1565654.84	-1565654.63	0.0132	0.0083		
Mars	-8999-04-25 20:24 J	-1565346.81	-1565346.65	-1565346.49	0.1906	0.1191		
Uranus	-8999-06-25 21:07 J	-1565285.71	-1565285.62	-1565285.52	0.0132	0.0123		
Saturn	-8994-06-19 05:45 J	-1563466.50	-1563466.26	-1563466.02	0.0298	0.0066		
Jupiter	-8988-05-20 14:38 J	-1561304.04	-1561303.89	-1561303.73	0.0522	0.0383		
Saturn	-8981-12-12 01:26 J	-1558541.64	-1558541.44	-1558541.22	0.0265	0.0138		
Jupiter	-8976-05-25 12:00 J	-1556916.23	-1556916.00	-1556915.76	0.0523	0.0011		
Jupiter	-8964-05-30 13:12 J	-1552528.09	-1552527.95	-1552527.81	0.0524	0.0415		
Uranus	-8963-11-26 07:26 J	-1551983.25	-1551983.19	-1551983.08	0.0146	0.0138		
Uranus	-8962-12-01 09:50 J	-1551613.29	-1551613.09	-1551612.88	0.0146	0.0084		
Uranus	-8961-12-05 12:00 J	-1551243.24	-1551243.00	-1551242.74	0.0146	0.0031		
Uranus	-8960-12-10 15:07 J	-1550873.12	-1550872.87	-1550872.61	0.0146	0.0024		
Jupiter	-8959-11-15 14:38 J	-1550533.06	-1550532.89	-1550532.71	0.0503	0.0336		

Uranus	-8959-12-15 18:43 J	-1550502.93	-1550502.72	-1550502.50	0.0146	0.0078
Uranus	-8958-12-20 22:33 J	-1550132.66	-1550132.56	-1550132.45	0.0146	0.0132
Saturn	-8951-12-19 00:14 J	-1547577.65	-1547577.49	-1547577.31	0.0264	0.0189
Jupiter	-8947-11-20 02:24 J	-1546145.63	-1546145.40	-1546145.16	0.0502	0.0015
Mars	-8944-10-19 20:38 J	-1545080.81	-1545080.64	-1545080.46	0.1616	0.0530
Neptune	-8943-12-07 20:38 J	-1544666.80	-1544666.64	-1544666.44	0.0088	0.0063
Neptune	-8942-12-10 08:09 J	-1544299.39	-1544299.16	-1544298.90	0.0088	0.0028
Neptune	-8941-12-11 19:40 J	-1543931.93	-1543931.68	-1543931.42	0.0088	0.0008
Neptune	-8940-12-14 06:43 J	-1543564.43	-1543564.22	-1543563.98	0.0088	0.0043
Neptune	-8939-12-16 18:00 J	-1543196.85	-1543196.75	-1543196.61	0.0088	0.0078
Saturn	-8935-06-20 06:28 J	-1541915.47	-1541915.23	-1541914.98	0.0298	0.0006
Jupiter	-8935-11-24 13:55 J	-1541758.08	-1541757.92	-1541757.75	0.0502	0.0353
Saturn	-8922-12-14 02:24 J	-1536990.63	-1536990.40	-1536990.16	0.0265	0.0078
Uranus	-8921-06-01 19:55 J	-1536819.78	-1536819.67	-1536819.53	0.0133	0.0114
Uranus	-8920-06-06 02:38 J	-1536450.59	-1536450.39	-1536450.17	0.0133	0.0074
Uranus	-8919-06-10 08:52 J	-1536081.37	-1536081.13	-1536080.88	0.0132	0.0033
Uranus	-8918-06-14 14:52 J	-1535712.13	-1535711.88	-1535711.63	0.0132	0.0007
Uranus	-8917-06-17 20:24 J	-1535342.89	-1535342.65	-1535342.41	0.0132	0.0047
Uranus	-8916-06-22 01:40 J	-1534973.61	-1534973.43	-1534973.23	0.0132	0.0087
Uranus	-8915-06-26 06:57 J	-1534604.28	-1534604.21	-1534604.12	0.0132	0.0126
Pluto	-8909-10-24 18:28 J	-1532291.96	-1532291.73	-1532291.46	0.0066	0.0015
Jupiter	-8905-05-19 20:09 J	-1530988.79	-1530988.66	-1530988.53	0.0522	0.0437
Jupiter	-8893-05-24 22:19 J	-1526600.81	-1526600.57	-1526600.34	0.0524	0.0031
Saturn	-8892-12-19 23:31 J	-1526026.60	-1526026.52	-1526026.43	0.0264	0.0245
Jupiter	-8881-05-30 00:14 J	-1522212.65	-1522212.49	-1522212.32	0.0524	0.0377
Uranus	-8879-11-26 18:00 J	-1521301.85	-1521301.75	-1521301.64	0.0146	0.0132
Uranus	-8878-12-01 19:26 J	-1520931.88	-1520931.69	-1520931.46	0.0146	0.0080
Uranus	-8877-12-05 22:04 J	-1520561.82	-1520561.58	-1520561.32	0.0146	0.0026
Saturn	-8876-06-21 03:07 J	-1520364.61	-1520364.37	-1520364.13	0.0298	0.0061
Jupiter	-8876-11-15 00:28 J	-1520217.63	-1520217.48	-1520217.33	0.0503	0.0377

Uranus	-8876-12-11 00:57 J	-1520191.71	-1520191.46	-1520191.21	0.0146	0.0028
Uranus	-8875-12-16 04:19 J	-1519821.52	-1519821.32	-1519821.10	0.0146	0.0082
Uranus	-8874-12-21 07:40 J	-1519451.25	-1519451.18	-1519451.07	0.0146	0.0136
Mars	-8865-10-21 20:52 J	-1516223.80	-1516223.63	-1516223.46	0.1616	0.0606
Jupiter	-8864-11-19 13:40 J	-1515830.16	-1515829.93	-1515829.70	0.0503	0.0028
Saturn	-8863-12-15 00:00 J	-1515439.75	-1515439.50	-1515439.26	0.0265	0.0025
Neptune	-8860-06-11 10:47 J	-1514530.11	-1514530.05	-1514529.94	0.0089	0.0084
Neptune	-8859-06-13 23:16 J	-1514162.74	-1514162.53	-1514162.31	0.0089	0.0048
Neptune	-8858-06-16 11:02 J	-1513795.29	-1513795.04	-1513794.78	0.0089	0.0013
Neptune	-8857-06-17 22:47 J	-1513427.79	-1513427.55	-1513427.29	0.0089	0.0023
Neptune	-8856-06-20 10:47 J	-1513060.23	-1513060.05	-1513059.84	0.0089	0.0058
Jupiter	-8852-11-24 02:24 J	-1511442.57	-1511442.40	-1511442.21	0.0502	0.0322
Uranus	-8837-06-02 06:00 J	-1506138.39	-1506138.25	-1506138.11	0.0133	0.0109
Uranus	-8836-06-06 12:14 J	-1505769.19	-1505768.99	-1505768.75	0.0133	0.0070
Uranus	-8835-06-10 19:12 J	-1505399.95	-1505399.70	-1505399.45	0.0133	0.0029
Uranus	-8834-06-15 00:57 J	-1505030.71	-1505030.46	-1505030.20	0.0132	0.0011
Uranus	-8833-06-18 06:28 J	-1504661.44	-1504661.23	-1504660.98	0.0132	0.0052
Uranus	-8832-06-22 12:14 J	-1504292.16	-1504291.99	-1504291.79	0.0132	0.0091
Uranus	-8831-06-26 17:31 J	-1503922.80	-1503922.77	-1503922.70	0.0133	0.0130
Pluto	-8822-04-29 08:38 J	-1500694.39	-1500694.14	-1500693.87	0.0078	0.0013
Jupiter	-8822-05-20 07:55 J	-1500673.26	-1500673.17	-1500673.06	0.0522	0.0473
Saturn	-8817-06-21 20:24 J	-1498813.87	-1498813.65	-1498813.42	0.0298	0.0111
Jupiter	-8810-05-25 09:21 J	-1496285.34	-1496285.11	-1496284.88	0.0523	0.0069
Saturn	-8804-12-15 18:43 J	-1493888.97	-1493888.72	-1493888.48	0.0265	0.0023
Jupiter	-8798-05-30 08:09 J	-1491897.34	-1491897.16	-1491896.98	0.0524	0.0328
Uranus	-8795-11-27 06:28 J	-1490620.33	-1490620.23	-1490620.09	0.0146	0.0127
Uranus	-8794-12-02 08:24 J	-1490250.36	-1490250.15	-1490249.92	0.0146	0.0074
Jupiter	-8793-11-14 14:09 J	-1489902.04	-1489901.91	-1489901.76	0.0504	0.0405
Uranus	-8793-12-06 10:33 J	-1489880.30	-1489880.06	-1489879.80	0.0146	0.0021
Uranus	-8792-12-11 13:40 J	-1489510.18	-1489509.93	-1489509.68	0.0146	0.0033

Uranus	-8791-12-16 16:47 J	-1489140.00	-1489139.80	-1489139.59	0.0146	0.0087
Uranus	-8790-12-21 20:09 J	-1488769.72	-1488769.66	-1488769.59	0.0146	0.0140
Saturn	-8788-06-15 10:33 J	-1488228.12	-1488228.06	-1488227.98	0.0295	0.0282
Jupiter	-8781-11-19 01:12 J	-1485514.68	-1485514.45	-1485514.21	0.0502	0.0063
Neptune	-8779-12-07 05:45 J	-1484766.34	-1484766.26	-1484766.13	0.0088	0.0081
Neptune	-8778-12-09 17:16 J	-1484398.99	-1484398.78	-1484398.55	0.0088	0.0046
Neptune	-8777-12-11 04:47 J	-1484031.56	-1484031.30	-1484031.04	0.0088	0.0011
Neptune	-8776-12-13 15:50 J	-1483664.08	-1483663.84	-1483663.58	0.0088	0.0024
Saturn	-8775-12-10 18:57 J	-1483301.78	-1483301.71	-1483301.62	0.0267	0.0253
Neptune	-8775-12-16 03:21 J	-1483296.54	-1483296.36	-1483296.16	0.0088	0.0059
Jupiter	-8769-11-23 13:40 J	-1481127.12	-1481126.93	-1481126.74	0.0501	0.0282
Saturn	-8758-06-23 13:26 J	-1477263.14	-1477262.94	-1477262.74	0.0298	0.0161
Uranus	-8753-06-02 15:07 J	-1475457.01	-1475456.87	-1475456.70	0.0133	0.0105
Uranus	-8752-06-06 21:50 J	-1475087.79	-1475087.59	-1475087.35	0.0133	0.0066
Uranus	-8751-06-11 04:33 J	-1474718.55	-1474718.31	-1474718.05	0.0133	0.0026
Uranus	-8750-06-15 11:02 J	-1474349.29	-1474349.04	-1474348.79	0.0133	0.0015
Uranus	-8749-06-18 16:47 J	-1473980.02	-1473979.80	-1473979.56	0.0133	0.0055
Uranus	-8748-06-22 22:04 J	-1473610.73	-1473610.58	-1473610.38	0.0133	0.0095
Saturn	-8745-12-16 12:00 J	-1472338.24	-1472338.00	-1472337.76	0.0265	0.0067
Jupiter	-8739-05-19 17:16 J	-1470357.81	-1470357.78	-1470357.74	0.0522	0.0514
Mars	-8739-10-19 04:33 J	-1470205.44	-1470205.31	-1470205.19	0.1615	0.1174
Saturn	-8729-06-16 03:21 J	-1466677.50	-1466677.36	-1466677.20	0.0295	0.0232
Jupiter	-8727-05-24 18:14 J	-1465969.97	-1465969.74	-1465969.51	0.0523	0.0113
Saturn	-8716-12-11 12:14 J	-1461751.14	-1461750.99	-1461750.83	0.0267	0.0207
Mars	-8715-04-24 16:19 J	-1461617.03	-1461616.82	-1461616.61	0.1908	0.0086
Jupiter	-8715-05-29 19:12 J	-1461581.89	-1461581.70	-1461581.50	0.0525	0.0289
Uranus	-8711-11-27 19:26 J	-1459938.82	-1459938.69	-1459938.54	0.0146	0.0120
Jupiter	-8710-11-15 03:07 J	-1459586.48	-1459586.37	-1459586.25	0.0503	0.0436
Uranus	-8710-12-02 21:07 J	-1459568.83	-1459568.62	-1459568.39	0.0146	0.0068
Uranus	-8709-12-06 23:31 J	-1459198.77	-1459198.52	-1459198.26	0.0146	0.0015

Uranus	-8708-12-12 02:24 J	-1458828.64	-1458828.40	-1458828.15	0.0146	0.0039
Uranus	-8707-12-17 05:16 J	-1458458.46	-1458458.28	-1458458.07	0.0146	0.0093
Uranus	-8706-12-22 08:38 J	-1458088.14	-1458088.14	-1458088.11	0.0146	0.0146
Saturn	-8699-06-24 07:12 J	-1455712.37	-1455712.20	-1455712.03	0.0297	0.0213
Jupiter	-8698-11-19 14:09 J	-1455199.14	-1455198.91	-1455198.68	0.0502	0.0097
Neptune	-8695-06-13 08:52 J	-1454262.29	-1454262.13	-1454261.95	0.0089	0.0066
Neptune	-8694-06-15 20:38 J	-1453894.86	-1453894.64	-1453894.38	0.0089	0.0031
Neptune	-8693-06-17 08:52 J	-1453527.38	-1453527.13	-1453526.87	0.0089	0.0005
Neptune	-8692-06-19 20:38 J	-1453159.86	-1453159.64	-1453159.40	0.0089	0.0040
Neptune	-8691-06-22 08:38 J	-1452792.27	-1452792.14	-1452792.00	0.0089	0.0075
Jupiter	-8686-11-24 02:09 J	-1450811.62	-1450811.41	-1450811.21	0.0502	0.0247
Saturn	-8686-12-18 05:45 J	-1450787.49	-1450787.26	-1450787.04	0.0265	0.0114
Saturn	-8670-06-17 22:47 J	-1445126.74	-1445126.55	-1445126.35	0.0295	0.0177
Uranus	-8669-06-03 01:55 J	-1444775.59	-1444775.42	-1444775.25	0.0133	0.0100
Uranus	-8668-06-07 08:24 J	-1444406.36	-1444406.15	-1444405.91	0.0133	0.0061
Uranus	-8667-06-11 15:21 J	-1444037.11	-1444036.86	-1444036.60	0.0132	0.0020
Uranus	-8666-06-15 21:21 J	-1443667.85	-1443667.61	-1443667.35	0.0132	0.0020
Uranus	-8665-06-19 03:35 J	-1443298.58	-1443298.35	-1443298.13	0.0132	0.0059
Uranus	-8664-06-23 08:52 J	-1442929.29	-1442929.13	-1442928.95	0.0133	0.0098
Pluto	-8663-10-26 00:43 J	-1442439.66	-1442439.47	-1442439.26	0.0066	0.0041
Pluto	-8662-10-27 13:12 J	-1442073.02	-1442072.95	-1442072.82	0.0067	0.0062
Mars	-8660-10-21 04:19 J	-1441348.51	-1441348.32	-1441348.14	0.1615	0.0047
Saturn	-8657-12-12 06:00 J	-1440200.43	-1440200.25	-1440200.04	0.0267	0.0161
Jupiter	-8644-05-24 04:04 J	-1435654.55	-1435654.33	-1435654.10	0.0523	0.0159
Saturn	-8640-06-25 04:33 J	-1434161.40	-1434161.31	-1434161.22	0.0297	0.0275
Jupiter	-8632-05-29 06:00 J	-1431266.45	-1431266.25	-1431266.04	0.0524	0.0247
Jupiter	-8627-11-14 13:55 J	-1429270.99	-1429270.92	-1429270.84	0.0503	0.0476
Uranus	-8627-11-28 06:14 J	-1429257.37	-1429257.24	-1429257.06	0.0146	0.0115
Saturn	-8627-12-19 00:28 J	-1429236.66	-1429236.48	-1429236.27	0.0265	0.0164
Uranus	-8626-12-03 08:38 J	-1428887.37	-1428887.14	-1428886.91	0.0146	0.0062

Uranus	-8625-12-07 10:47 J	-1428517.30	-1428517.05	-1428516.79	0.0146	0.0009
Uranus	-8624-12-12 13:40 J	-1428147.17	-1428146.93	-1428146.69	0.0146	0.0044
Uranus	-8623-12-17 16:33 J	-1427776.99	-1427776.81	-1427776.61	0.0146	0.0097
Jupiter	-8615-11-19 02:24 J	-1424883.63	-1424883.40	-1424883.18	0.0503	0.0131
Neptune	-8614-12-09 02:52 J	-1424498.54	-1424498.38	-1424498.18	0.0088	0.0063
Neptune	-8613-12-10 14:24 J	-1424131.13	-1424130.90	-1424130.64	0.0088	0.0029
Neptune	-8612-12-13 02:09 J	-1423763.67	-1423763.41	-1423763.15	0.0088	0.0006
Saturn	-8611-06-18 21:50 J	-1423575.82	-1423575.59	-1423575.36	0.0295	0.0112
Neptune	-8611-12-15 12:57 J	-1423396.17	-1423395.96	-1423395.71	0.0088	0.0042
Neptune	-8610-12-18 00:14 J	-1423028.60	-1423028.49	-1423028.34	0.0088	0.0076
Jupiter	-8603-11-23 14:09 J	-1420496.12	-1420495.91	-1420495.70	0.0501	0.0210
Saturn	-8598-12-14 02:38 J	-1418649.62	-1418649.39	-1418649.16	0.0267	0.0107
Uranus	-8585-06-03 10:47 J	-1414094.20	-1414094.05	-1414093.85	0.0133	0.0096
Uranus	-8584-06-07 18:14 J	-1413724.97	-1413724.74	-1413724.51	0.0133	0.0056
Uranus	-8583-06-12 00:43 J	-1413355.72	-1413355.47	-1413355.21	0.0132	0.0016
Uranus	-8582-06-16 06:43 J	-1412986.46	-1412986.22	-1412985.96	0.0132	0.0024
Uranus	-8581-06-19 12:28 J	-1412617.19	-1412616.98	-1412616.74	0.0132	0.0063
Mars	-8581-10-23 03:50 J	-1412491.48	-1412491.34	-1412491.21	0.1615	0.1081
Uranus	-8580-06-23 17:45 J	-1412247.90	-1412247.76	-1412247.58	0.0132	0.0102
Pluto	-8575-05-01 06:57 J	-1410475.34	-1410475.21	-1410475.02	0.0078	0.0061
Saturn	-8568-12-19 22:33 J	-1407685.69	-1407685.56	-1407685.41	0.0265	0.0219
Jupiter	-8561-05-23 09:35 J	-1405339.31	-1405339.10	-1405338.88	0.0523	0.0214
Saturn	-8552-06-20 02:38 J	-1402024.63	-1402024.39	-1402024.14	0.0295	0.0032
Jupiter	-8549-05-28 09:50 J	-1400951.31	-1400951.09	-1400950.87	0.0524	0.0184
Uranus	-8543-11-28 14:24 J	-1398576.06	-1398575.90	-1398575.73	0.0146	0.0110
Uranus	-8542-12-03 16:04 J	-1398206.05	-1398205.83	-1398205.59	0.0146	0.0058
Uranus	-8541-12-07 18:28 J	-1397835.98	-1397835.73	-1397835.48	0.0146	0.0005
Uranus	-8540-12-12 20:52 J	-1397465.86	-1397465.63	-1397465.38	0.0146	0.0048
Saturn	-8539-12-15 01:55 J	-1397098.66	-1397098.42	-1397098.18	0.0267	0.0047
Uranus	-8539-12-17 23:31 J	-1397095.68	-1397095.52	-1397095.31	0.0146	0.0101

Jupiter	-8532-11-18 12:28 J	-1394568.19	-1394567.98	-1394567.76	0.0502	0.0174
Neptune	-8531-06-12 18:28 J	-1394361.78	-1394361.73	-1394361.61	0.0089	0.0084
Neptune	-8530-06-15 07:12 J	-1393994.41	-1393994.20	-1393993.98	0.0089	0.0048
Neptune	-8529-06-16 19:12 J	-1393626.96	-1393626.70	-1393626.45	0.0089	0.0013
Neptune	-8528-06-19 06:57 J	-1393259.46	-1393259.21	-1393258.96	0.0089	0.0022
Neptune	-8527-06-21 18:43 J	-1392891.91	-1392891.72	-1392891.52	0.0089	0.0057
Jupiter	-8520-11-22 21:35 J	-1390180.82	-1390180.60	-1390180.38	0.0502	0.0159
Jupiter	-8508-11-27 07:55 J	-1385793.20	-1385793.17	-1385793.13	0.0501	0.0494
Uranus	-8502-05-31 13:26 J	-1383781.98	-1383781.94	-1383781.88	0.0133	0.0130
Uranus	-8501-06-03 20:52 J	-1383412.80	-1383412.63	-1383412.43	0.0133	0.0091
Uranus	-8500-06-08 03:50 J	-1383043.57	-1383043.34	-1383043.10	0.0133	0.0051
Uranus	-8499-06-12 10:33 J	-1382674.31	-1382674.06	-1382673.80	0.0132	0.0012
Uranus	-8498-06-16 16:33 J	-1382305.06	-1382304.81	-1382304.56	0.0132	0.0027
Uranus	-8497-06-19 22:04 J	-1381935.79	-1381935.58	-1381935.35	0.0132	0.0067
Uranus	-8496-06-24 03:21 J	-1381566.50	-1381566.36	-1381566.19	0.0132	0.0105
Saturn	-8493-06-21 12:43 J	-1380473.20	-1380472.97	-1380472.73	0.0296	0.0062
Saturn	-8480-12-16 05:16 J	-1375547.52	-1375547.28	-1375547.03	0.0267	0.0022
Jupiter	-8478-05-23 07:55 J	-1375024.36	-1375024.17	-1375023.98	0.0523	0.0297
Jupiter	-8466-05-28 09:50 J	-1370636.32	-1370636.09	-1370635.86	0.0524	0.0105
Uranus	-8459-11-28 20:09 J	-1367894.82	-1367894.66	-1367894.48	0.0146	0.0107
Uranus	-8458-12-03 21:50 J	-1367524.81	-1367524.59	-1367524.34	0.0146	0.0055
Uranus	-8457-12-08 00:00 J	-1367154.75	-1367154.50	-1367154.24	0.0146	0.0004
Uranus	-8456-12-13 02:38 J	-1366784.63	-1366784.39	-1366784.15	0.0146	0.0050
Mars	-8455-10-20 11:45 J	-1366473.18	-1366473.01	-1366472.84	0.1615	0.0683
Uranus	-8455-12-18 05:02 J	-1366414.45	-1366414.29	-1366414.09	0.0146	0.0103
Jupiter	-8454-06-02 11:45 J	-1366248.06	-1366248.01	-1366247.95	0.0525	0.0508
Saturn	-8451-12-11 06:28 J	-1364960.31	-1364960.23	-1364960.14	0.0269	0.0251
Neptune	-8450-12-08 13:12 J	-1364598.03	-1364597.95	-1364597.82	0.0088	0.0081
Jupiter	-8449-11-17 15:21 J	-1364253.06	-1364252.86	-1364252.65	0.0503	0.0238
Neptune	-8449-12-10 00:57 J	-1364230.67	-1364230.46	-1364230.23	0.0088	0.0046

Neptune	-8448-12-12 12:28 J	-1363863.23	-1363862.98	-1363862.72	0.0088	0.0011
Neptune	-8447-12-14 23:45 J	-1363495.75	-1363495.51	-1363495.25	0.0088	0.0024
Neptune	-8446-12-17 10:47 J	-1363128.22	-1363128.05	-1363127.83	0.0088	0.0058
Jupiter	-8437-11-22 02:09 J	-1359865.64	-1359865.41	-1359865.18	0.0502	0.0099
Saturn	-8434-06-24 04:33 J	-1358921.51	-1358921.31	-1358921.11	0.0296	0.0168
Mars	-8431-04-23 10:47 J	-1357887.19	-1357887.05	-1357886.90	0.1909	0.1389
Jupiter	-8425-11-26 14:09 J	-1355478.02	-1355477.91	-1355477.79	0.0501	0.0437
Saturn	-8421-12-17 12:28 J	-1353996.21	-1353995.98	-1353995.75	0.0267	0.0098
Uranus	-8418-05-31 21:21 J	-1353100.68	-1353100.61	-1353100.53	0.0133	0.0126
Uranus	-8417-06-04 04:47 J	-1352731.48	-1352731.30	-1352731.10	0.0133	0.0087
Uranus	-8416-06-08 11:45 J	-1352362.24	-1352362.01	-1352361.76	0.0133	0.0048
Pluto	-8416-10-27 20:52 J	-1352220.87	-1352220.63	-1352220.36	0.0066	0.0012
Uranus	-8415-06-12 18:28 J	-1351992.99	-1351992.73	-1351992.48	0.0133	0.0009
Uranus	-8414-06-17 00:14 J	-1351623.73	-1351623.49	-1351623.23	0.0133	0.0031
Uranus	-8413-06-20 06:00 J	-1351254.45	-1351254.25	-1351254.02	0.0133	0.0069
Uranus	-8412-06-24 11:16 J	-1350885.16	-1350885.03	-1350884.87	0.0133	0.0108
Saturn	-8405-06-17 08:38 J	-1348335.32	-1348335.14	-1348334.94	0.0294	0.0184
Jupiter	-8395-05-22 09:35 J	-1344709.26	-1344709.10	-1344708.93	0.0523	0.0365
Saturn	-8392-12-12 15:50 J	-1343409.03	-1343408.84	-1343408.65	0.0269	0.0170
Jupiter	-8383-05-27 08:38 J	-1340321.37	-1340321.14	-1340320.90	0.0523	0.0027
Mars	-8376-10-22 11:45 J	-1337616.19	-1337616.01	-1337615.83	0.1615	0.0456
Saturn	-8375-06-26 00:43 J	-1337369.51	-1337369.47	-1337369.40	0.0296	0.0288
Uranus	-8375-11-29 02:52 J	-1337213.55	-1337213.38	-1337213.20	0.0146	0.0103
Uranus	-8374-12-04 04:04 J	-1336843.55	-1336843.33	-1336843.08	0.0146	0.0052
Uranus	-8373-12-08 06:14 J	-1336473.50	-1336473.24	-1336472.99	0.0146	0.0001
Uranus	-8372-12-13 08:09 J	-1336103.38	-1336103.16	-1336102.91	0.0146	0.0053
Jupiter	-8371-06-01 07:26 J	-1335933.33	-1335933.19	-1335933.05	0.0524	0.0417
Uranus	-8371-12-18 10:33 J	-1335733.22	-1335733.06	-1335732.87	0.0146	0.0105
Neptune	-8366-06-14 18:00 J	-1334093.91	-1334093.75	-1334093.56	0.0089	0.0065
Jupiter	-8366-11-17 19:26 J	-1333937.87	-1333937.69	-1333937.50	0.0503	0.0299

Neptune	-8365-06-16 06:00 J	-1333726.48	-1333726.25	-1333726.00	0.0089	0.0030
Neptune	-8364-06-18 18:00 J	-1333359.01	-1333358.75	-1333358.49	0.0089	0.0005
Neptune	-8363-06-21 05:31 J	-1332991.49	-1332991.27	-1332991.03	0.0089	0.0040
Neptune	-8362-06-23 17:16 J	-1332623.90	-1332623.78	-1332623.62	0.0089	0.0075
Saturn	-8362-12-19 22:19 J	-1332444.74	-1332444.57	-1332444.38	0.0267	0.0181
Jupiter	-8354-11-22 06:43 J	-1329550.45	-1329550.22	-1329549.99	0.0502	0.0039
Saturn	-8346-06-20 06:00 J	-1326783.48	-1326783.25	-1326783.00	0.0294	0.0065
Jupiter	-8342-11-26 13:40 J	-1325163.09	-1325162.93	-1325162.77	0.0501	0.0363
Uranus	-8334-06-01 05:16 J	-1322419.37	-1322419.28	-1322419.18	0.0133	0.0122
Uranus	-8333-06-04 12:28 J	-1322050.16	-1322049.98	-1322049.76	0.0133	0.0084
Saturn	-8333-12-14 03:35 J	-1321857.58	-1321857.35	-1321857.12	0.0268	0.0083
Uranus	-8332-06-08 19:26 J	-1321680.91	-1321680.69	-1321680.43	0.0133	0.0045
Uranus	-8331-06-13 02:24 J	-1321311.65	-1321311.40	-1321311.14	0.0133	0.0005
Uranus	-8330-06-17 08:24 J	-1320942.39	-1320942.15	-1320941.89	0.0133	0.0034
Pluto	-8329-05-01 06:43 J	-1320623.46	-1320623.22	-1320622.96	0.0078	0.0022
Uranus	-8329-06-20 14:09 J	-1320573.11	-1320572.91	-1320572.68	0.0133	0.0073
Uranus	-8328-06-24 19:26 J	-1320203.80	-1320203.69	-1320203.53	0.0133	0.0111
Jupiter	-8312-05-21 04:19 J	-1314394.43	-1314394.32	-1314394.20	0.0522	0.0454
Jupiter	-8300-05-26 00:00 J	-1310006.74	-1310006.50	-1310006.27	0.0523	0.0078
Mars	-8297-10-24 11:02 J	-1308759.08	-1308759.04	-1308758.99	0.1615	0.1568
Uranus	-8291-11-29 12:00 J	-1306532.17	-1306532.00	-1306531.80	0.0146	0.0099
Uranus	-8290-12-04 13:26 J	-1306162.17	-1306161.94	-1306161.69	0.0146	0.0048
Uranus	-8289-12-08 15:21 J	-1305792.12	-1305791.86	-1305791.61	0.0146	0.0004
Jupiter	-8288-05-31 00:43 J	-1305618.65	-1305618.47	-1305618.28	0.0524	0.0319
Uranus	-8288-12-13 17:16 J	-1305422.01	-1305421.78	-1305421.54	0.0146	0.0056
Saturn	-8287-06-22 04:33 J	-1305231.55	-1305231.31	-1305231.07	0.0295	0.0057
Uranus	-8287-12-18 19:26 J	-1305051.85	-1305051.69	-1305051.51	0.0146	0.0108
Neptune	-8285-12-09 11:45 J	-1304330.17	-1304330.01	-1304329.81	0.0088	0.0063
Neptune	-8284-12-11 23:02 J	-1303962.77	-1303962.54	-1303962.28	0.0088	0.0028
Jupiter	-8283-11-16 17:45 J	-1303622.91	-1303622.76	-1303622.60	0.0503	0.0375

Neptune	-8283-12-14 10:33 J	-1303595.32	-1303595.06	-1303594.80	0.0088	0.0006
Neptune	-8282-12-16 21:50 J	-1303227.81	-1303227.59	-1303227.36	0.0088	0.0041
Neptune	-8281-12-18 09:35 J	-1302860.24	-1302860.10	-1302859.97	0.0088	0.0075
Saturn	-8274-12-16 16:47 J	-1300306.04	-1300305.80	-1300305.55	0.0268	0.0007
Jupiter	-8271-11-21 03:35 J	-1299235.59	-1299235.35	-1299235.12	0.0502	0.0043
Jupiter	-8259-11-25 13:26 J	-1294848.13	-1294847.94	-1294847.75	0.0502	0.0290
Uranus	-8250-06-01 12:28 J	-1291738.08	-1291737.98	-1291737.85	0.0133	0.0119
Mars	-8250-10-19 19:12 J	-1291597.80	-1291597.70	-1291597.59	0.1614	0.1310
Uranus	-8249-06-04 20:09 J	-1291368.85	-1291368.66	-1291368.45	0.0133	0.0080
Uranus	-8248-06-09 03:21 J	-1290999.60	-1290999.36	-1290999.12	0.0133	0.0041
Uranus	-8247-06-13 10:04 J	-1290630.33	-1290630.08	-1290629.82	0.0133	0.0002
Uranus	-8246-06-17 16:04 J	-1290261.07	-1290260.83	-1290260.58	0.0133	0.0037
Uranus	-8245-06-20 22:19 J	-1289891.78	-1289891.57	-1289891.36	0.0133	0.0075
Saturn	-8245-12-10 23:45 J	-1289718.57	-1289718.51	-1289718.42	0.0269	0.0255
Uranus	-8244-06-25 03:50 J	-1289522.47	-1289522.34	-1289522.20	0.0133	0.0113
Saturn	-8228-06-24 00:57 J	-1283679.65	-1283679.46	-1283679.25	0.0295	0.0174
Jupiter	-8217-05-25 00:14 J	-1279691.71	-1279691.49	-1279691.26	0.0523	0.0148
Saturn	-8215-12-18 05:45 J	-1278754.48	-1278754.26	-1278754.02	0.0267	0.0093
Uranus	-8208-11-24 23:02 J	-1276220.58	-1276220.54	-1276220.49	0.0145	0.0143
Uranus	-8207-11-29 23:31 J	-1275850.71	-1275850.52	-1275850.32	0.0146	0.0093
Uranus	-8206-12-05 00:28 J	-1275480.71	-1275480.48	-1275480.23	0.0146	0.0043
Jupiter	-8205-05-30 00:14 J	-1275303.69	-1275303.49	-1275303.28	0.0524	0.0243
Uranus	-8205-12-09 02:09 J	-1275110.66	-1275110.41	-1275110.15	0.0146	0.0010
Uranus	-8204-12-14 04:04 J	-1274740.55	-1274740.33	-1274740.09	0.0146	0.0061
Uranus	-8203-12-19 06:28 J	-1274370.39	-1274370.23	-1274370.06	0.0146	0.0112
Neptune	-8202-06-14 04:47 J	-1274193.38	-1274193.30	-1274193.18	0.0089	0.0082
Neptune	-8201-06-15 17:02 J	-1273826.00	-1273825.79	-1273825.56	0.0089	0.0047
Neptune	-8200-06-18 05:02 J	-1273458.54	-1273458.29	-1273458.03	0.0089	0.0012
Jupiter	-8200-11-15 17:31 J	-1273307.87	-1273307.77	-1273307.66	0.0504	0.0447
Saturn	-8199-06-18 02:24 J	-1273093.58	-1273093.40	-1273093.21	0.0294	0.0191

Neptune	-8199-06-20 17:02 J	-1273091.03	-1273090.79	-1273090.53	0.0089	0.0023
Neptune	-8198-06-23 04:33 J	-1272723.49	-1272723.31	-1272723.10	0.0089	0.0058
Jupiter	-8188-11-20 06:00 J	-1268920.48	-1268920.25	-1268920.03	0.0503	0.0108
Saturn	-8186-12-13 12:14 J	-1268167.17	-1268166.99	-1268166.79	0.0268	0.0169
Jupiter	-8176-11-24 17:02 J	-1264532.99	-1264532.79	-1264532.58	0.0502	0.0231
Mars	-8171-10-21 19:12 J	-1262740.88	-1262740.70	-1262740.51	0.1614	0.0186
Pluto	-8170-10-29 08:09 J	-1262368.37	-1262368.16	-1262367.90	0.0066	0.0027
Saturn	-8169-06-25 18:14 J	-1262127.80	-1262127.74	-1262127.66	0.0296	0.0282
Uranus	-8166-06-01 21:07 J	-1261056.73	-1261056.62	-1261056.47	0.0133	0.0115
Uranus	-8165-06-05 05:02 J	-1260687.49	-1260687.29	-1260687.07	0.0133	0.0076
Uranus	-8164-06-09 12:00 J	-1260318.24	-1260318.00	-1260317.75	0.0133	0.0037
Uranus	-8163-06-13 18:57 J	-1259948.97	-1259948.71	-1259948.46	0.0133	0.0002
Uranus	-8162-06-18 01:12 J	-1259579.69	-1259579.45	-1259579.21	0.0133	0.0040
Uranus	-8161-06-21 06:43 J	-1259210.40	-1259210.22	-1259210.00	0.0133	0.0079
Uranus	-8160-06-25 12:28 J	-1258841.08	-1258840.98	-1258840.84	0.0133	0.0117
Saturn	-8156-12-19 17:02 J	-1257202.97	-1257202.79	-1257202.60	0.0267	0.0176
Saturn	-8140-06-19 16:04 J	-1251542.06	-1251541.83	-1251541.60	0.0294	0.0092
Jupiter	-8134-05-24 22:47 J	-1249376.76	-1249376.55	-1249376.33	0.0522	0.0226
Saturn	-8127-12-14 22:04 J	-1246615.81	-1246615.58	-1246615.34	0.0268	0.0088
Uranus	-8124-11-25 09:50 J	-1245539.15	-1245539.09	-1245538.99	0.0145	0.0138
Uranus	-8123-11-30 10:33 J	-1245169.25	-1245169.06	-1245168.85	0.0146	0.0088
Jupiter	-8122-05-29 19:40 J	-1244988.90	-1244988.68	-1244988.46	0.0523	0.0155
Uranus	-8122-12-05 12:00 J	-1244799.25	-1244799.00	-1244798.76	0.0146	0.0037
Neptune	-8121-12-08 23:45 J	-1244429.62	-1244429.51	-1244429.39	0.0088	0.0079
Uranus	-8121-12-09 13:26 J	-1244429.19	-1244428.94	-1244428.68	0.0146	0.0014
Neptune	-8120-12-11 10:47 J	-1244062.27	-1244062.05	-1244061.82	0.0088	0.0045
Uranus	-8120-12-14 15:21 J	-1244059.08	-1244058.86	-1244058.63	0.0146	0.0066
Neptune	-8119-12-13 22:04 J	-1243694.84	-1243694.58	-1243694.32	0.0088	0.0011
Uranus	-8119-12-19 17:45 J	-1243688.90	-1243688.76	-1243688.60	0.0146	0.0117
Neptune	-8118-12-16 09:21 J	-1243327.35	-1243327.11	-1243326.86	0.0088	0.0024

Jupiter	-8117-11-14 22:47 J	-1242992.57	-1242992.55	-1242992.52	0.0504	0.0500
Neptune	-8117-12-17 20:09 J	-1242959.83	-1242959.66	-1242959.44	0.0088	0.0058
Jupiter	-8105-11-19 06:57 J	-1238605.42	-1238605.21	-1238604.99	0.0503	0.0174
Saturn	-8097-12-21 01:40 J	-1235651.50	-1235651.43	-1235651.35	0.0266	0.0252
Jupiter	-8093-11-23 17:45 J	-1234217.98	-1234217.76	-1234217.54	0.0502	0.0162
Mars	-8092-10-23 19:12 J	-1233883.85	-1233883.70	-1233883.55	0.1614	0.0946
Pluto	-8082-05-04 12:14 J	-1230404.00	-1230403.99	-1230403.91	0.0078	0.0077
Uranus	-8082-06-02 05:16 J	-1230375.39	-1230375.28	-1230375.11	0.0133	0.0111
Uranus	-8081-06-05 13:12 J	-1230006.16	-1230005.95	-1230005.73	0.0133	0.0072
Saturn	-8081-06-21 00:28 J	-1229990.73	-1229990.48	-1229990.24	0.0295	0.0008
Jupiter	-8081-11-28 04:04 J	-1229830.36	-1229830.33	-1229830.28	0.0501	0.0492
Uranus	-8080-06-09 20:09 J	-1229636.90	-1229636.66	-1229636.41	0.0133	0.0034
Uranus	-8079-06-14 03:07 J	-1229267.63	-1229267.37	-1229267.12	0.0133	0.0005
Uranus	-8078-06-18 09:07 J	-1228898.35	-1228898.12	-1228897.87	0.0133	0.0044
Uranus	-8077-06-21 15:07 J	-1228529.06	-1228528.87	-1228528.66	0.0133	0.0082
Uranus	-8076-06-25 20:52 J	-1228159.72	-1228159.63	-1228159.51	0.0133	0.0120
Mars	-8068-04-26 01:40 J	-1225298.62	-1225298.43	-1225298.25	0.1910	0.0924
Saturn	-8068-12-16 04:47 J	-1225064.55	-1225064.30	-1225064.06	0.0268	0.0015
Jupiter	-8051-05-23 23:31 J	-1219061.72	-1219061.52	-1219061.33	0.0522	0.0293
Uranus	-8040-11-25 18:57 J	-1214857.79	-1214857.71	-1214857.59	0.0145	0.0133
Jupiter	-8039-05-29 02:09 J	-1214673.64	-1214673.41	-1214673.18	0.0524	0.0104
Uranus	-8039-11-30 19:55 J	-1214487.88	-1214487.67	-1214487.46	0.0146	0.0083
Uranus	-8038-12-05 20:52 J	-1214117.87	-1214117.63	-1214117.37	0.0146	0.0033
Neptune	-8037-06-15 03:50 J	-1213925.50	-1213925.34	-1213925.14	0.0089	0.0064
Uranus	-8037-12-09 22:33 J	-1213747.81	-1213747.56	-1213747.31	0.0146	0.0019
Neptune	-8036-06-17 16:19 J	-1213558.05	-1213557.82	-1213557.57	0.0089	0.0029
Uranus	-8036-12-15 00:28 J	-1213377.69	-1213377.48	-1213377.24	0.0146	0.0070
Neptune	-8035-06-20 04:19 J	-1213190.57	-1213190.32	-1213190.06	0.0089	0.0006
Uranus	-8035-12-20 03:07 J	-1213007.50	-1213007.37	-1213007.22	0.0146	0.0121
Neptune	-8034-06-22 16:04 J	-1212823.05	-1212822.83	-1212822.59	0.0089	0.0041

Neptune	-8033-06-24 04:04 J	-1212455.46	-1212455.33	-1212455.20	0.0089	0.0075
Jupiter	-8027-06-03 03:50 J	-1210285.40	-1210285.34	-1210285.26	0.0524	0.0501
Saturn	-8022-06-23 03:07 J	-1208439.61	-1208439.37	-1208439.13	0.0295	0.0066
Jupiter	-8022-11-19 13:26 J	-1208290.15	-1208289.94	-1208289.74	0.0503	0.0226
Jupiter	-8010-11-24 01:40 J	-1203902.65	-1203902.43	-1203902.20	0.0502	0.0114
Saturn	-8009-12-17 07:55 J	-1203513.41	-1203513.17	-1203512.93	0.0267	0.0051

8TH MILLENNIUM BCE

This is a list of transits of Earth in the 8th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-7998-06-02 14:24 J	-1199694.03	-1199693.90	-1199693.73	0.0133	0.0106		
Jupiter	-7998-11-28 13:55 J	-1199515.02	-1199514.92	-1199514.82	0.0502	0.0452		
Uranus	-7997-06-05 22:04 J	-1199324.79	-1199324.58	-1199324.35	0.0133	0.0068		
Uranus	-7996-06-10 05:02 J	-1198955.53	-1198955.29	-1198955.03	0.0133	0.0030		
Uranus	-7995-06-14 11:45 J	-1198586.26	-1198586.01	-1198585.75	0.0133	0.0010		
Uranus	-7994-06-18 18:00 J	-1198216.98	-1198216.75	-1198216.50	0.0133	0.0047		
Uranus	-7993-06-21 23:45 J	-1197847.68	-1197847.51	-1197847.29	0.0132	0.0086		
Uranus	-7992-06-26 05:45 J	-1197478.34	-1197478.26	-1197478.15	0.0132	0.0123		
Saturn	-7980-12-12 09:35 J	-1192926.23	-1192926.10	-1192925.97	0.0269	0.0225		
Jupiter	-7968-05-23 08:38 J	-1188746.31	-1188746.14	-1188745.95	0.0523	0.0337		
Mars	-7966-10-21 03:21 J	-1187865.52	-1187865.36	-1187865.20	0.1614	0.0801		
Saturn	-7963-06-24 01:55 J	-1186888.64	-1186888.42	-1186888.20	0.0295	0.0129		
Jupiter	-7956-05-28 10:04 J	-1184358.32	-1184358.08	-1184357.85	0.0523	0.0057		

Uranus	-7956-11-26 01:26 J	-1184176.55	-1184176.44	-1184176.32	0.0145	0.0129
Neptune	-7956-12-10 21:50 J	-1184161.75	-1184161.59	-1184161.38	0.0088	0.0062
Uranus	-7955-12-01 01:55 J	-1183806.62	-1183806.42	-1183806.20	0.0146	0.0080
Neptune	-7955-12-13 09:21 J	-1183794.34	-1183794.11	-1183793.85	0.0088	0.0027
Uranus	-7954-12-06 03:21 J	-1183436.61	-1183436.36	-1183436.11	0.0146	0.0029
Neptune	-7954-12-15 20:38 J	-1183426.89	-1183426.64	-1183426.38	0.0088	0.0007
Uranus	-7953-12-10 04:47 J	-1183066.54	-1183066.30	-1183066.04	0.0146	0.0022
Neptune	-7953-12-17 07:26 J	-1183059.39	-1183059.19	-1183058.94	0.0088	0.0042
Uranus	-7952-12-15 07:12 J	-1182696.42	-1182696.20	-1182695.98	0.0146	0.0073
Neptune	-7952-12-19 18:28 J	-1182691.83	-1182691.73	-1182691.56	0.0088	0.0076
Uranus	-7951-12-20 09:35 J	-1182326.21	-1182326.10	-1182325.95	0.0146	0.0124
Saturn	-7950-12-19 07:12 J	-1181962.42	-1181962.20	-1181961.97	0.0267	0.0108
Jupiter	-7944-06-02 08:38 J	-1179970.26	-1179970.14	-1179970.01	0.0524	0.0443
Jupiter	-7939-11-19 00:43 J	-1177974.66	-1177974.47	-1177974.26	0.0504	0.0260
Saturn	-7934-06-17 19:40 J	-1176302.80	-1176302.68	-1176302.55	0.0293	0.0250
Jupiter	-7927-11-23 10:47 J	-1173587.28	-1173587.05	-1173586.82	0.0502	0.0072
Pluto	-7924-10-29 22:19 J	-1172515.70	-1172515.57	-1172515.43	0.0066	0.0056
Pluto	-7923-10-31 10:47 J	-1172149.21	-1172149.05	-1172148.84	0.0066	0.0046
Saturn	-7921-12-13 07:55 J	-1171375.36	-1171375.17	-1171374.98	0.0269	0.0168
Jupiter	-7915-11-27 22:47 J	-1169199.68	-1169199.55	-1169199.42	0.0501	0.0407
Uranus	-7914-06-02 22:33 J	-1169012.71	-1169012.56	-1169012.38	0.0133	0.0102
Uranus	-7913-06-06 06:00 J	-1168643.46	-1168643.25	-1168643.02	0.0133	0.0064
Uranus	-7912-06-10 12:57 J	-1168274.20	-1168273.96	-1168273.70	0.0133	0.0026
Uranus	-7911-06-14 19:55 J	-1167904.92	-1167904.67	-1167904.41	0.0133	0.0013
Uranus	-7910-06-19 01:55 J	-1167535.65	-1167535.42	-1167535.18	0.0132	0.0051
Uranus	-7909-06-22 07:55 J	-1167166.34	-1167166.17	-1167165.96	0.0132	0.0089
Uranus	-7908-06-26 13:55 J	-1166796.98	-1166796.92	-1166796.83	0.0132	0.0126
Saturn	-7904-06-24 20:38 J	-1165337.82	-1165337.64	-1165337.44	0.0295	0.0183
Saturn	-7891-12-20 04:04 J	-1160411.53	-1160411.33	-1160411.14	0.0267	0.0160
Mars	-7887-10-23 03:21 J	-1159008.54	-1159008.36	-1159008.18	0.1614	0.0323

Jupiter	-7885-05-22 16:04 J	-1158430.98	-1158430.83	-1158430.67	0.0522	0.0383
Saturn	-7875-06-18 14:24 J	-1154752.08	-1154751.90	-1154751.72	0.0293	0.0197
Jupiter	-7873-05-27 17:45 J	-1154043.00	-1154042.76	-1154042.53	0.0523	0.0013
Neptune	-7873-06-14 14:52 J	-1154024.97	-1154024.88	-1154024.75	0.0089	0.0080
Neptune	-7872-06-17 03:35 J	-1153657.57	-1153657.35	-1153657.13	0.0089	0.0045
Uranus	-7872-11-26 06:14 J	-1153495.36	-1153495.24	-1153495.11	0.0145	0.0126
Neptune	-7871-06-19 15:35 J	-1153290.10	-1153289.85	-1153289.58	0.0089	0.0011
Uranus	-7871-12-01 06:43 J	-1153125.43	-1153125.22	-1153125.00	0.0146	0.0077
Neptune	-7870-06-22 03:35 J	-1152922.59	-1152922.35	-1152922.09	0.0089	0.0024
Uranus	-7870-12-06 07:55 J	-1152755.41	-1152755.17	-1152754.91	0.0146	0.0027
Neptune	-7869-06-23 15:07 J	-1152555.04	-1152554.87	-1152554.65	0.0089	0.0059
Uranus	-7869-12-10 09:21 J	-1152385.35	-1152385.11	-1152384.85	0.0146	0.0025
Uranus	-7868-12-15 12:00 J	-1152015.21	-1152015.00	-1152014.78	0.0146	0.0075
Uranus	-7867-12-20 14:24 J	-1151645.01	-1151644.90	-1151644.76	0.0146	0.0126
Saturn	-7862-12-15 03:35 J	-1149824.57	-1149824.35	-1149824.13	0.0269	0.0118
Jupiter	-7861-06-01 19:12 J	-1149654.84	-1149654.70	-1149654.54	0.0525	0.0403
Jupiter	-7856-11-18 12:28 J	-1147659.16	-1147658.98	-1147658.79	0.0503	0.0294
Saturn	-7845-06-25 14:09 J	-1143787.05	-1143786.91	-1143786.75	0.0295	0.0234
Jupiter	-7844-11-22 23:16 J	-1143271.76	-1143271.53	-1143271.30	0.0502	0.0037
Pluto	-7836-05-04 20:24 J	-1140551.88	-1140551.65	-1140551.38	0.0078	0.0026
Jupiter	-7832-11-27 11:02 J	-1138884.19	-1138884.04	-1138883.88	0.0502	0.0372
Saturn	-7832-12-20 22:19 J	-1138860.71	-1138860.57	-1138860.41	0.0267	0.0209
Uranus	-7830-06-03 06:14 J	-1138331.41	-1138331.24	-1138331.07	0.0133	0.0098
Uranus	-7829-06-06 13:26 J	-1137962.15	-1137961.94	-1137961.69	0.0133	0.0061
Uranus	-7828-06-10 21:07 J	-1137592.88	-1137592.62	-1137592.37	0.0133	0.0022
Uranus	-7827-06-15 03:35 J	-1137223.59	-1137223.35	-1137223.09	0.0133	0.0017
Uranus	-7826-06-19 09:50 J	-1136854.30	-1136854.09	-1136853.84	0.0133	0.0055
Uranus	-7825-06-22 16:19 J	-1136484.99	-1136484.82	-1136484.63	0.0133	0.0092
Uranus	-7824-06-26 22:04 J	-1136115.62	-1136115.58	-1136115.50	0.0133	0.0129
Saturn	-7816-06-19 07:55 J	-1133201.38	-1133201.17	-1133200.96	0.0293	0.0146

Mars	-7808-10-25 03:21 J	-1130151.44	-1130151.36	-1130151.28	0.1614	0.1449
Saturn	-7803-12-15 21:35 J	-1128273.83	-1128273.60	-1128273.35	0.0270	0.0070
Jupiter	-7802-05-23 01:12 J	-1128115.58	-1128115.45	-1128115.31	0.0523	0.0429
Neptune	-7792-12-10 09:50 J	-1124261.19	-1124261.09	-1124260.94	0.0088	0.0078
Neptune	-7791-12-12 21:07 J	-1123893.82	-1123893.62	-1123893.38	0.0088	0.0044
Jupiter	-7790-05-28 04:47 J	-1123727.53	-1123727.30	-1123727.06	0.0524	0.0032
Neptune	-7790-12-15 08:38 J	-1123526.39	-1123526.14	-1123525.88	0.0088	0.0010
Neptune	-7789-12-16 19:26 J	-1123158.93	-1123158.69	-1123158.43	0.0088	0.0025
Uranus	-7788-11-26 12:28 J	-1122814.10	-1122813.98	-1122813.83	0.0145	0.0123
Neptune	-7788-12-19 06:14 J	-1122791.41	-1122791.24	-1122791.02	0.0088	0.0059
Uranus	-7787-12-01 12:57 J	-1122444.16	-1122443.96	-1122443.73	0.0146	0.0074
Saturn	-7786-06-27 08:52 J	-1122236.17	-1122236.13	-1122236.07	0.0295	0.0289
Uranus	-7786-12-06 14:09 J	-1122074.15	-1122073.91	-1122073.66	0.0146	0.0023
Uranus	-7785-12-10 15:50 J	-1121704.09	-1121703.84	-1121703.59	0.0146	0.0027
Mars	-7784-04-24 21:07 J	-1121568.82	-1121568.62	-1121568.41	0.1910	0.0332
Uranus	-7784-12-15 18:00 J	-1121333.96	-1121333.75	-1121333.53	0.0146	0.0078
Uranus	-7783-12-20 20:24 J	-1120963.76	-1120963.65	-1120963.52	0.0146	0.0128
Jupiter	-7778-06-02 07:12 J	-1119339.36	-1119339.20	-1119339.02	0.0524	0.0367
Jupiter	-7773-11-18 00:43 J	-1117343.64	-1117343.47	-1117343.30	0.0503	0.0329
Saturn	-7773-12-21 16:19 J	-1117309.87	-1117309.82	-1117309.74	0.0267	0.0257
Mars	-7761-10-19 12:00 J	-1112990.09	-1112990.00	-1112989.91	0.1615	0.1406
Jupiter	-7761-11-22 12:57 J	-1112956.20	-1112955.96	-1112955.73	0.0503	0.0011
Saturn	-7757-06-20 02:52 J	-1111650.61	-1111650.38	-1111650.14	0.0293	0.0091
Jupiter	-7749-11-27 00:00 J	-1108568.66	-1108568.50	-1108568.32	0.0501	0.0338
Uranus	-7747-05-30 05:02 J	-1108019.29	-1108019.29	-1108019.28	0.0133	0.0133
Uranus	-7746-06-03 12:57 J	-1107650.13	-1107649.96	-1107649.78	0.0133	0.0095
Uranus	-7745-06-06 20:38 J	-1107280.86	-1107280.64	-1107280.40	0.0133	0.0057
Uranus	-7744-06-11 04:04 J	-1106911.58	-1106911.33	-1106911.08	0.0133	0.0019
Saturn	-7744-12-16 15:35 J	-1106723.10	-1106722.85	-1106722.61	0.0270	0.0021
Uranus	-7743-06-15 11:02 J	-1106542.29	-1106542.04	-1106541.78	0.0133	0.0019

Uranus	-7742-06-19 17:31 J	-1106172.99	-1106172.77	-1106172.54	0.0133	0.0057
Uranus	-7741-06-22 23:45 J	-1105803.67	-1105803.51	-1105803.32	0.0133	0.0095
Uranus	-7740-06-27 05:31 J	-1105434.27	-1105434.27	-1105434.21	0.0133	0.0132
Jupiter	-7719-05-22 12:57 J	-1097800.06	-1097799.96	-1097799.85	0.0522	0.0463
Neptune	-7708-06-16 13:55 J	-1093757.09	-1093756.92	-1093756.72	0.0089	0.0062
Jupiter	-7707-05-27 12:57 J	-1093412.19	-1093411.96	-1093411.72	0.0523	0.0077
Neptune	-7707-06-19 01:55 J	-1093389.65	-1093389.42	-1093389.16	0.0089	0.0028
Neptune	-7706-06-21 14:24 J	-1093022.16	-1093021.90	-1093021.64	0.0089	0.0007
Neptune	-7705-06-23 02:38 J	-1092654.62	-1092654.39	-1092654.16	0.0089	0.0041
Neptune	-7704-06-25 14:09 J	-1092287.02	-1092286.91	-1092286.76	0.0089	0.0076
Uranus	-7704-11-26 22:19 J	-1092132.71	-1092132.57	-1092132.42	0.0145	0.0118
Uranus	-7703-12-01 22:47 J	-1091762.77	-1091762.55	-1091762.33	0.0145	0.0069
Uranus	-7702-12-07 00:00 J	-1091392.75	-1091392.50	-1091392.25	0.0146	0.0019
Uranus	-7701-12-11 01:12 J	-1091022.69	-1091022.45	-1091022.19	0.0146	0.0032
Uranus	-7700-12-16 03:21 J	-1090652.56	-1090652.36	-1090652.14	0.0146	0.0082
Uranus	-7699-12-21 05:31 J	-1090282.36	-1090282.27	-1090282.14	0.0146	0.0132
Saturn	-7698-06-22 01:12 J	-1090099.70	-1090099.45	-1090099.21	0.0293	0.0028
Jupiter	-7695-06-01 14:09 J	-1089024.09	-1089023.91	-1089023.72	0.0524	0.0315
Jupiter	-7690-11-18 13:40 J	-1087028.08	-1087027.93	-1087027.76	0.0503	0.0361
Saturn	-7685-12-17 10:47 J	-1085172.30	-1085172.05	-1085171.81	0.0270	0.0031
Mars	-7682-10-22 11:45 J	-1084133.20	-1084133.01	-1084132.83	0.1614	0.0284
Jupiter	-7678-11-23 01:55 J	-1082640.65	-1082640.42	-1082640.19	0.0502	0.0026
Pluto	-7677-11-01 05:31 J	-1082296.50	-1082296.27	-1082296.04	0.0066	0.0030
Jupiter	-7666-11-27 11:02 J	-1078253.22	-1078253.04	-1078252.85	0.0501	0.0298
Uranus	-7663-05-30 12:43 J	-1077338.01	-1077337.97	-1077337.89	0.0133	0.0130
Uranus	-7662-06-03 21:07 J	-1076968.80	-1076968.62	-1076968.43	0.0133	0.0091
Uranus	-7661-06-07 05:02 J	-1076599.52	-1076599.29	-1076599.05	0.0133	0.0053
Uranus	-7660-06-11 12:43 J	-1076230.23	-1076229.97	-1076229.72	0.0133	0.0015
Uranus	-7659-06-15 19:26 J	-1075860.93	-1075860.69	-1075860.43	0.0133	0.0023
Uranus	-7658-06-20 01:55 J	-1075491.63	-1075491.42	-1075491.17	0.0133	0.0061

Uranus	-7657-06-23 08:24 J	-1075122.30	-1075122.15	-1075121.96	0.0133	0.0098
Saturn	-7656-12-12 04:19 J	-1074585.38	-1074585.32	-1074585.25	0.0272	0.0262
Saturn	-7639-06-23 03:35 J	-1068548.59	-1068548.35	-1068548.11	0.0293	0.0046
Jupiter	-7636-05-21 17:31 J	-1067484.79	-1067484.77	-1067484.75	0.0522	0.0519
Neptune	-7627-12-12 08:38 J	-1063993.32	-1063993.14	-1063992.94	0.0088	0.0060
Neptune	-7626-12-14 19:40 J	-1063625.91	-1063625.68	-1063625.42	0.0088	0.0026
Saturn	-7626-12-19 08:09 J	-1063621.39	-1063621.16	-1063620.92	0.0270	0.0088
Neptune	-7625-12-16 06:57 J	-1063258.46	-1063258.21	-1063257.95	0.0088	0.0008
Jupiter	-7624-05-26 15:21 J	-1063097.08	-1063096.86	-1063096.63	0.0524	0.0145
Neptune	-7624-12-18 18:00 J	-1062890.96	-1062890.75	-1062890.51	0.0088	0.0042
Neptune	-7623-12-21 04:47 J	-1062523.41	-1062523.30	-1062523.14	0.0088	0.0076
Uranus	-7620-11-27 09:21 J	-1061451.26	-1061451.11	-1061450.94	0.0145	0.0113
Uranus	-7619-12-02 09:50 J	-1061081.30	-1061081.09	-1061080.85	0.0145	0.0064
Uranus	-7618-12-07 11:02 J	-1060711.29	-1060711.04	-1060710.78	0.0146	0.0014
Uranus	-7617-12-11 12:43 J	-1060341.21	-1060340.97	-1060340.72	0.0146	0.0036
Uranus	-7616-12-16 14:52 J	-1059971.08	-1059970.88	-1059970.67	0.0146	0.0086
Uranus	-7615-12-21 16:47 J	-1059600.88	-1059600.80	-1059600.70	0.0146	0.0136
Jupiter	-7612-05-31 18:28 J	-1058708.93	-1058708.73	-1058708.52	0.0525	0.0251
Jupiter	-7607-11-17 22:33 J	-1056712.69	-1056712.56	-1056712.42	0.0503	0.0405
Mars	-7603-10-24 11:45 J	-1055276.17	-1055276.01	-1055275.85	0.1614	0.0835
Saturn	-7597-12-13 03:50 J	-1053034.50	-1053034.34	-1053034.17	0.0272	0.0201
Jupiter	-7595-11-22 08:52 J	-1052325.36	-1052325.13	-1052324.90	0.0502	0.0077
Pluto	-7590-05-06 09:21 J	-1050699.37	-1050699.11	-1050698.85	0.0078	0.0009
Jupiter	-7583-11-26 19:26 J	-1047937.89	-1047937.69	-1047937.49	0.0502	0.0252
Saturn	-7580-06-24 11:45 J	-1046997.23	-1046997.01	-1046996.79	0.0293	0.0133
Uranus	-7579-05-30 21:07 J	-1046656.69	-1046656.62	-1046656.52	0.0133	0.0125
Uranus	-7578-06-04 05:45 J	-1046287.45	-1046287.26	-1046287.06	0.0133	0.0087
Uranus	-7577-06-07 13:40 J	-1045918.16	-1045917.93	-1045917.69	0.0133	0.0049
Uranus	-7576-06-11 21:07 J	-1045548.87	-1045548.62	-1045548.36	0.0133	0.0012
Uranus	-7575-06-16 04:04 J	-1045179.57	-1045179.33	-1045179.07	0.0133	0.0027

Uranus	-7574-06-20 10:47 J	-1044810.26	-1044810.05	-1044809.82	0.0133	0.0064
Uranus	-7573-06-23 17:02 J	-1044440.94	-1044440.79	-1044440.61	0.0133	0.0101
Saturn	-7567-12-20 09:21 J	-1042070.31	-1042070.11	-1042069.90	0.0270	0.0152
Saturn	-7551-06-18 14:38 J	-1036411.05	-1036410.89	-1036410.72	0.0290	0.0215
Neptune	-7544-06-16 00:14 J	-1033856.58	-1033856.49	-1033856.34	0.0089	0.0079
Neptune	-7543-06-18 12:57 J	-1033489.18	-1033488.96	-1033488.73	0.0089	0.0044
Neptune	-7542-06-21 01:12 J	-1033121.70	-1033121.45	-1033121.19	0.0089	0.0010
Jupiter	-7541-05-25 20:38 J	-1032781.85	-1032781.64	-1032781.42	0.0523	0.0200
Neptune	-7541-06-22 12:57 J	-1032754.19	-1032753.96	-1032753.70	0.0089	0.0025
Neptune	-7540-06-25 00:57 J	-1032386.63	-1032386.46	-1032386.24	0.0089	0.0059
Saturn	-7538-12-15 06:57 J	-1031483.42	-1031483.21	-1031482.99	0.0271	0.0132
Uranus	-7536-11-27 20:52 J	-1030769.80	-1030769.63	-1030769.46	0.0145	0.0107
Uranus	-7535-12-02 21:07 J	-1030399.84	-1030399.62	-1030399.38	0.0146	0.0059
Uranus	-7534-12-07 22:33 J	-1030029.81	-1030029.56	-1030029.30	0.0146	0.0009
Uranus	-7533-12-12 00:00 J	-1029659.73	-1029659.50	-1029659.25	0.0146	0.0042
Uranus	-7532-12-17 02:09 J	-1029289.60	-1029289.41	-1029289.20	0.0146	0.0091
Uranus	-7531-12-22 04:33 J	-1028919.37	-1028919.31	-1028919.24	0.0146	0.0140
Jupiter	-7529-05-30 20:38 J	-1028393.86	-1028393.64	-1028393.42	0.0524	0.0184
Jupiter	-7524-11-17 04:04 J	-1026397.42	-1026397.33	-1026397.24	0.0504	0.0460
Saturn	-7521-06-26 00:14 J	-1025445.62	-1025445.49	-1025445.33	0.0293	0.0232
Jupiter	-7512-11-21 16:19 J	-1022010.04	-1022009.82	-1022009.60	0.0503	0.0128
Saturn	-7508-12-21 14:38 J	-1020519.02	-1020518.89	-1020518.75	0.0269	0.0224
Mars	-7500-04-23 16:19 J	-1017838.93	-1017838.82	-1017838.70	0.1909	0.1586
Jupiter	-7500-11-26 03:21 J	-1017622.57	-1017622.36	-1017622.15	0.0501	0.0202
Uranus	-7495-05-31 06:57 J	-1015975.30	-1015975.21	-1015975.08	0.0133	0.0120
Uranus	-7494-06-04 15:36 J	-1015606.05	-1015605.85	-1015605.65	0.0133	0.0082
Uranus	-7493-06-07 23:16 J	-1015236.76	-1015236.53	-1015236.28	0.0133	0.0045
Uranus	-7492-06-12 06:57 J	-1014867.46	-1014867.21	-1014866.95	0.0133	0.0007
Saturn	-7492-06-20 06:14 J	-1014859.46	-1014859.24	-1014859.00	0.0291	0.0112
Uranus	-7491-06-16 13:40 J	-1014498.17	-1014497.93	-1014497.67	0.0133	0.0031

Uranus	-7490-06-20 20:23 J	-1014128.86	-1014128.65	-1014128.43	0.0133	0.0068
Uranus	-7489-06-24 02:23 J	-1013759.54	-1013759.40	-1013759.23	0.0133	0.0105
Saturn	-7479-12-16 14:38 J	-1009932.13	-1009931.89	-1009931.65	0.0271	0.0053
Mars	-7477-10-20 20:23 J	-1009257.80	-1009257.65	-1009257.50	0.1615	0.0888
Neptune	-7463-12-11 19:12 J	-1004092.80	-1004092.70	-1004092.54	0.0088	0.0077
Neptune	-7462-12-14 06:43 J	-1003725.43	-1003725.22	-1003724.98	0.0088	0.0043
Neptune	-7461-12-15 18:00 J	-1003358.00	-1003357.75	-1003357.48	0.0088	0.0010
Neptune	-7460-12-18 05:02 J	-1002990.53	-1002990.29	-1002990.03	0.0088	0.0025
Neptune	-7459-12-20 15:50 J	-1002623.01	-1002622.84	-1002622.62	0.0088	0.0059
Jupiter	-7458-05-25 17:31 J	-1002466.97	-1002466.77	-1002466.57	0.0523	0.0282
Uranus	-7452-11-28 06:00 J	-1000088.43	-1000088.25	-1000088.07	0.0145	0.0102
Uranus	-7451-12-03 06:28 J	-999718.45	-999718.23	-999717.99	0.0146	0.0054
Uranus	-7450-12-08 07:40 J	-999348.43	-999348.18	-999347.92	0.0146	0.0005
Uranus	-7449-12-12 09:21 J	-998978.34	-998978.11	-998977.86	0.0146	0.0046
Uranus	-7448-12-17 11:31 J	-998608.21	-998608.02	-998607.83	0.0146	0.0095
Uranus	-7447-12-22 13:26 J	-998237.96	-998237.94	-998237.89	0.0146	0.0144
Jupiter	-7446-05-30 13:26 J	-998079.17	-998078.94	-998078.70	0.0524	0.0088
Jupiter	-7434-06-04 15:07 J	-993690.96	-993690.87	-993690.77	0.0525	0.0476
Saturn	-7433-06-22 01:26 J	-993307.69	-993307.44	-993307.20	0.0291	0.0003
Pluto	-7431-11-03 00:14 J	-992443.73	-992443.49	-992443.24	0.0066	0.0018
Jupiter	-7429-11-20 17:02 J	-991695.00	-991694.79	-991694.57	0.0503	0.0195
Saturn	-7420-12-18 02:09 J	-988380.65	-988380.41	-988380.16	0.0271	0.0033
Jupiter	-7417-11-25 02:09 J	-987307.63	-987307.41	-987307.18	0.0502	0.0129
Uranus	-7411-05-31 16:47 J	-985293.91	-985293.80	-985293.66	0.0133	0.0115
Uranus	-7410-06-05 00:57 J	-984924.65	-984924.46	-984924.23	0.0133	0.0078
Uranus	-7409-06-08 09:07 J	-984555.36	-984555.12	-984554.87	0.0133	0.0040
Uranus	-7408-06-12 16:19 J	-984186.07	-984185.82	-984185.56	0.0133	0.0003
Uranus	-7407-06-16 23:02 J	-983816.78	-983816.54	-983816.29	0.0132	0.0035
Uranus	-7406-06-21 05:16 J	-983447.48	-983447.28	-983447.05	0.0132	0.0072
Uranus	-7405-06-24 11:16 J	-983078.16	-983078.03	-983077.87	0.0132	0.0108

Jupiter	-7405-11-29 11:31 J	-982920.11	-982920.02	-982919.91	0.0501	0.0449
Mars	-7398-10-23 19:55 J	-980400.85	-980400.67	-980400.48	0.1614	0.0230
Saturn	-7391-12-13 06:57 J	-977793.33	-977793.21	-977793.09	0.0272	0.0236
Neptune	-7379-06-17 22:47 J	-973588.72	-973588.55	-973588.35	0.0089	0.0061
Neptune	-7378-06-20 11:02 J	-973221.28	-973221.04	-973220.78	0.0089	0.0027
Neptune	-7377-06-21 23:31 J	-972853.78	-972853.52	-972853.26	0.0089	0.0007
Neptune	-7376-06-24 11:16 J	-972486.25	-972486.03	-972485.79	0.0089	0.0041
Jupiter	-7375-05-24 10:33 J	-972152.22	-972152.06	-972151.90	0.0522	0.0375
Neptune	-7375-06-26 23:02 J	-972118.65	-972118.54	-972118.38	0.0089	0.0076
Saturn	-7374-06-24 23:02 J	-971755.76	-971755.54	-971755.31	0.0292	0.0117
Uranus	-7368-11-28 12:28 J	-969407.14	-969406.98	-969406.77	0.0145	0.0099
Uranus	-7367-12-03 13:26 J	-969037.17	-969036.94	-969036.70	0.0146	0.0050
Uranus	-7366-12-08 14:38 J	-968667.14	-968666.89	-968666.63	0.0146	0.0002
Uranus	-7365-12-12 16:19 J	-968297.05	-968296.82	-968296.58	0.0146	0.0049
Uranus	-7364-12-17 18:14 J	-967926.92	-967926.74	-967926.55	0.0146	0.0098
Jupiter	-7363-05-29 13:26 J	-967764.18	-967763.94	-967763.71	0.0524	0.0019
Saturn	-7361-12-19 15:50 J	-966829.06	-966828.84	-966828.62	0.0270	0.0122
Jupiter	-7351-06-03 13:26 J	-963376.09	-963375.94	-963375.79	0.0524	0.0398
Jupiter	-7346-11-20 16:33 J	-961380.00	-961379.81	-961379.61	0.0503	0.0267
Saturn	-7345-06-18 04:33 J	-961169.45	-961169.31	-961169.15	0.0290	0.0230
Pluto	-7344-05-07 01:40 J	-960846.67	-960846.43	-960846.18	0.0078	0.0028
Jupiter	-7334-11-25 04:19 J	-956992.55	-956992.32	-956992.09	0.0502	0.0063
Saturn	-7332-12-14 21:36 J	-956241.81	-956241.60	-956241.39	0.0272	0.0143
Uranus	-7327-06-01 02:38 J	-954612.52	-954612.39	-954612.23	0.0133	0.0110
Uranus	-7326-06-05 11:02 J	-954243.24	-954243.04	-954242.82	0.0133	0.0073
Uranus	-7325-06-08 18:43 J	-953873.96	-953873.72	-953873.47	0.0133	0.0036
Uranus	-7324-06-13 02:09 J	-953504.67	-953504.41	-953504.16	0.0133	0.0002
Uranus	-7323-06-17 08:38 J	-953135.38	-953135.14	-953134.89	0.0132	0.0039
Uranus	-7322-06-21 14:38 J	-952766.08	-952765.89	-952765.66	0.0132	0.0076
Jupiter	-7322-11-29 14:52 J	-952605.02	-952604.88	-952604.73	0.0501	0.0389

Uranus	-7321-06-24 20:38 J	-952396.75	-952396.64	-952396.48	0.0132	0.0112
Mars	-7319-10-25 19:55 J	-951543.77	-951543.67	-951543.57	0.1614	0.1349
Saturn	-7315-06-26 19:26 J	-950203.82	-950203.69	-950203.53	0.0292	0.0233
Saturn	-7302-12-22 06:14 J	-945277.38	-945277.24	-945277.08	0.0270	0.0213
Neptune	-7298-12-13 17:02 J	-943824.95	-943824.79	-943824.58	0.0088	0.0060
Neptune	-7297-12-15 04:47 J	-943457.55	-943457.30	-943457.06	0.0088	0.0026
Neptune	-7296-12-17 15:50 J	-943090.09	-943089.84	-943089.58	0.0088	0.0008
Neptune	-7295-12-20 02:23 J	-942722.60	-942722.40	-942722.15	0.0088	0.0042
Neptune	-7294-12-22 13:40 J	-942355.04	-942354.93	-942354.77	0.0088	0.0075
Jupiter	-7292-05-23 09:50 J	-941837.21	-941837.09	-941836.97	0.0522	0.0446
Saturn	-7286-06-20 23:45 J	-939617.73	-939617.51	-939617.28	0.0291	0.0120
Uranus	-7285-11-23 18:57 J	-939095.75	-939095.71	-939095.65	0.0145	0.0142
Uranus	-7284-11-28 18:43 J	-938725.90	-938725.72	-938725.52	0.0145	0.0095
Uranus	-7283-12-03 19:12 J	-938355.93	-938355.70	-938355.45	0.0146	0.0047
Uranus	-7282-12-08 20:23 J	-937985.90	-937985.65	-937985.40	0.0146	0.0003
Uranus	-7281-12-12 21:36 J	-937615.82	-937615.60	-937615.35	0.0146	0.0052
Jupiter	-7280-05-28 08:52 J	-937449.36	-937449.13	-937448.89	0.0523	0.0069
Uranus	-7280-12-17 23:31 J	-937245.69	-937245.52	-937245.32	0.0146	0.0101
Saturn	-7273-12-16 11:45 J	-934690.25	-934690.01	-934689.77	0.0271	0.0052
Mars	-7272-10-20 04:47 J	-934382.37	-934382.30	-934382.23	0.1616	0.1486
Jupiter	-7268-06-02 05:16 J	-933061.47	-933061.28	-933061.08	0.0524	0.0300
Jupiter	-7263-11-19 19:55 J	-931064.84	-931064.67	-931064.49	0.0504	0.0325
Jupiter	-7251-11-24 03:21 J	-926677.59	-926677.36	-926677.13	0.0502	0.0009
Uranus	-7243-06-01 11:16 J	-923931.17	-923931.03	-923930.86	0.0133	0.0106
Uranus	-7242-06-05 19:40 J	-923561.89	-923561.68	-923561.45	0.0133	0.0069
Uranus	-7241-06-09 03:21 J	-923192.60	-923192.36	-923192.10	0.0133	0.0032
Uranus	-7240-06-13 10:33 J	-922823.31	-922823.06	-922822.80	0.0133	0.0005
Uranus	-7239-06-17 17:16 J	-922454.02	-922453.78	-922453.54	0.0133	0.0042
Jupiter	-7239-11-28 12:57 J	-922290.13	-922289.96	-922289.77	0.0501	0.0314
Uranus	-7238-06-21 23:16 J	-922084.72	-922084.53	-922084.30	0.0133	0.0079

Uranus	-7237-06-25 05:31 J	-921715.39	-921715.27	-921715.14	0.0132	0.0114
Saturn	-7227-06-22 14:38 J	-918066.13	-918065.89	-918065.64	0.0292	0.0020
Neptune	-7215-06-17 08:23 J	-913688.25	-913688.15	-913688.00	0.0089	0.0078
Neptune	-7214-06-19 20:52 J	-913320.84	-913320.63	-913320.39	0.0089	0.0044
Saturn	-7214-12-18 23:45 J	-913138.75	-913138.51	-913138.26	0.0270	0.0034
Neptune	-7213-06-21 09:07 J	-912953.38	-912953.12	-912952.86	0.0089	0.0010
Neptune	-7212-06-23 21:07 J	-912585.86	-912585.62	-912585.36	0.0089	0.0024
Neptune	-7211-06-26 08:52 J	-912218.31	-912218.13	-912217.92	0.0089	0.0058
Uranus	-7201-11-24 03:36 J	-908414.43	-908414.35	-908414.27	0.0145	0.0138
Uranus	-7200-11-29 02:52 J	-908044.56	-908044.38	-908044.17	0.0145	0.0091
Uranus	-7199-12-04 03:21 J	-907674.59	-907674.36	-907674.11	0.0146	0.0043
Uranus	-7198-12-09 04:19 J	-907304.57	-907304.32	-907304.06	0.0146	0.0006
Jupiter	-7197-05-27 05:02 J	-907134.52	-907134.29	-907134.06	0.0523	0.0150
Uranus	-7197-12-13 05:31 J	-906934.49	-906934.27	-906934.02	0.0146	0.0055
Uranus	-7196-12-18 07:12 J	-906564.36	-906564.20	-906564.00	0.0146	0.0103
Mars	-7193-10-22 04:33 J	-905525.49	-905525.31	-905525.12	0.1615	0.0373
Jupiter	-7185-06-01 07:55 J	-902746.37	-902746.17	-902745.95	0.0524	0.0239
Pluto	-7185-11-03 23:16 J	-902590.76	-902590.53	-902590.27	0.0066	0.0018
Saturn	-7185-12-13 02:23 J	-902551.49	-902551.40	-902551.27	0.0273	0.0243
Jupiter	-7180-11-18 20:23 J	-900749.79	-900749.65	-900749.51	0.0504	0.0391
Saturn	-7168-06-24 00:57 J	-896514.69	-896514.46	-896514.21	0.0292	0.0071
Jupiter	-7168-11-23 06:14 J	-896362.47	-896362.24	-896362.01	0.0503	0.0071
Uranus	-7159-06-01 20:23 J	-893249.80	-893249.65	-893249.47	0.0133	0.0102
Uranus	-7158-06-06 04:47 J	-892880.51	-892880.30	-892880.06	0.0133	0.0065
Uranus	-7157-06-09 12:28 J	-892511.22	-892510.98	-892510.72	0.0133	0.0028
Uranus	-7156-06-13 19:55 J	-892141.93	-892141.67	-892141.42	0.0133	0.0009
Jupiter	-7156-11-27 17:31 J	-891974.96	-891974.77	-891974.57	0.0502	0.0257
Uranus	-7155-06-18 02:23 J	-891772.63	-891772.40	-891772.15	0.0133	0.0046
Saturn	-7155-12-20 08:09 J	-891587.38	-891587.16	-891586.93	0.0270	0.0112
Uranus	-7154-06-22 08:52 J	-891403.32	-891403.13	-891402.92	0.0133	0.0082

Uranus	-7153-06-25 14:38 J	-891033.98	-891033.89	-891033.75	0.0133	0.0118
Saturn	-7139-06-18 04:19 J	-885928.38	-885928.32	-885928.25	0.0290	0.0279
Mars	-7137-04-26 08:52 J	-885250.32	-885250.13	-885249.94	0.1909	0.0814
Neptune	-7134-12-13 02:38 J	-883924.49	-883924.39	-883924.24	0.0088	0.0077
Neptune	-7133-12-14 13:55 J	-883557.12	-883556.92	-883556.68	0.0088	0.0044
Neptune	-7132-12-17 01:12 J	-883189.70	-883189.45	-883189.19	0.0088	0.0010
Neptune	-7131-12-19 12:14 J	-882822.22	-882821.99	-882821.73	0.0088	0.0024
Neptune	-7130-12-21 23:31 J	-882454.70	-882454.52	-882454.31	0.0088	0.0057
Saturn	-7126-12-15 10:19 J	-881000.26	-881000.07	-880999.87	0.0272	0.0165
Uranus	-7117-11-24 14:23 J	-877732.99	-877732.90	-877732.79	0.0145	0.0133
Uranus	-7116-11-29 13:55 J	-877363.11	-877362.92	-877362.71	0.0145	0.0086
Uranus	-7115-12-04 14:23 J	-876993.14	-876992.90	-876992.65	0.0146	0.0038
Jupiter	-7114-05-27 10:47 J	-876819.26	-876819.05	-876818.83	0.0523	0.0203
Mars	-7114-10-25 04:19 J	-876668.48	-876668.32	-876668.15	0.1615	0.0745
Uranus	-7114-12-09 15:07 J	-876623.12	-876622.87	-876622.61	0.0146	0.0011
Uranus	-7113-12-13 16:19 J	-876253.04	-876252.82	-876252.58	0.0146	0.0059
Uranus	-7112-12-18 17:45 J	-875882.91	-875882.76	-875882.57	0.0146	0.0108
Saturn	-7109-06-25 06:00 J	-874963.46	-874963.25	-874963.03	0.0292	0.0148
Jupiter	-7102-06-01 11:45 J	-872431.23	-872431.01	-872430.79	0.0524	0.0179
Pluto	-7098-05-08 22:04 J	-870993.80	-870993.58	-870993.32	0.0078	0.0033
Jupiter	-7097-11-18 02:38 J	-870434.50	-870434.39	-870434.28	0.0504	0.0443
Saturn	-7096-12-21 12:43 J	-870036.14	-870035.97	-870035.77	0.0270	0.0182
Jupiter	-7085-11-22 14:38 J	-866047.11	-866046.89	-866046.66	0.0503	0.0114
Saturn	-7080-06-19 06:43 J	-864377.39	-864377.22	-864377.05	0.0290	0.0209
Uranus	-7075-06-02 06:00 J	-862568.40	-862568.25	-862568.05	0.0133	0.0098
Uranus	-7074-06-06 14:23 J	-862199.11	-862198.90	-862198.66	0.0133	0.0061
Uranus	-7073-06-09 22:19 J	-861829.82	-861829.57	-861829.32	0.0133	0.0024
Jupiter	-7073-11-26 23:31 J	-861659.73	-861659.52	-861659.31	0.0502	0.0205
Uranus	-7072-06-14 05:31 J	-861460.52	-861460.27	-861460.01	0.0133	0.0013
Uranus	-7071-06-18 12:00 J	-861091.23	-861091.00	-861090.75	0.0133	0.0050

Uranus	-7070-06-22 18:57 J	-860721.91	-860721.71	-860721.52	0.0133	0.0085
Uranus	-7069-06-26 00:43 J	-860352.56	-860352.47	-860352.36	0.0133	0.0121
Saturn	-7067-12-16 13:12 J	-859449.17	-859448.95	-859448.72	0.0272	0.0098
Neptune	-7050-06-19 06:00 J	-853420.43	-853420.25	-853420.06	0.0089	0.0061
Saturn	-7050-06-27 06:00 J	-853412.41	-853412.25	-853412.08	0.0292	0.0213
Neptune	-7049-06-20 18:00 J	-853052.98	-853052.75	-853052.49	0.0089	0.0028
Neptune	-7048-06-23 06:28 J	-852685.48	-852685.23	-852684.97	0.0089	0.0007
Neptune	-7047-06-25 18:28 J	-852317.95	-852317.73	-852317.49	0.0089	0.0040
Neptune	-7046-06-28 06:14 J	-851950.36	-851950.24	-851950.08	0.0089	0.0074
Saturn	-7037-12-22 13:26 J	-848485.04	-848484.94	-848484.83	0.0270	0.0242
Uranus	-7033-11-25 02:23 J	-847051.50	-847051.40	-847051.26	0.0145	0.0127
Uranus	-7032-11-30 02:09 J	-846681.61	-846681.41	-846681.19	0.0146	0.0081
Jupiter	-7031-05-26 14:52 J	-846504.08	-846503.88	-846503.68	0.0522	0.0259
Uranus	-7031-12-05 02:52 J	-846311.62	-846311.38	-846311.13	0.0146	0.0033
Uranus	-7030-12-10 03:36 J	-845941.59	-845941.35	-845941.09	0.0146	0.0016
Uranus	-7029-12-14 05:02 J	-845571.51	-845571.29	-845571.05	0.0146	0.0064
Uranus	-7028-12-19 06:57 J	-845201.36	-845201.21	-845201.04	0.0146	0.0112
Saturn	-7021-06-20 04:04 J	-842826.53	-842826.33	-842826.11	0.0290	0.0150
Jupiter	-7019-05-31 16:33 J	-842116.04	-842115.81	-842115.58	0.0523	0.0123
Jupiter	-7014-11-18 11:45 J	-840119.06	-840119.01	-840118.94	0.0504	0.0484
Saturn	-7008-12-17 12:28 J	-837898.22	-837897.98	-837897.73	0.0272	0.0039
Jupiter	-7007-06-05 18:43 J	-837727.77	-837727.72	-837727.66	0.0525	0.0508
Jupiter	-7002-11-22 23:45 J	-835731.72	-835731.51	-835731.28	0.0503	0.0157

7TH MILLENNIUM BCE

This is a list of transits of Earth in the 7th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-6992-05-29 08:23 J		-832256.19	-832256.15	-832256.07	0.0133	0.0130	
Uranus	-6991-06-02 17:31 J		-831886.95	-831886.77	-831886.58	0.0133	0.0092	
Saturn	-6991-06-28 02:23 J		-831861.48	-831861.40	-831861.30	0.0292	0.0271	
Uranus	-6990-06-07 01:26 J		-831517.66	-831517.44	-831517.19	0.0133	0.0056	
Jupiter	-6990-11-27 10:04 J		-831344.30	-831344.08	-831343.86	0.0502	0.0165	
Uranus	-6989-06-10 09:07 J		-831148.37	-831148.12	-831147.86	0.0133	0.0019	
Uranus	-6988-06-14 16:19 J		-830779.06	-830778.82	-830778.56	0.0133	0.0018	
Mars	-6988-10-21 12:43 J		-830650.11	-830649.97	-830649.82	0.1617	0.0973	
Uranus	-6987-06-18 23:02 J		-830409.76	-830409.54	-830409.29	0.0133	0.0054	
Uranus	-6986-06-23 05:31 J		-830040.44	-830040.27	-830040.07	0.0132	0.0090	
Uranus	-6985-06-26 11:45 J		-829671.08	-829671.01	-829670.91	0.0132	0.0125	
Jupiter	-6978-12-01 21:21 J		-826956.65	-826956.61	-826956.56	0.0501	0.0490	
Neptune	-6969-12-13 23:16 J		-823656.70	-823656.53	-823656.32	0.0088	0.0061	
Neptune	-6968-12-16 10:33 J		-823289.30	-823289.06	-823288.81	0.0088	0.0027	
Neptune	-6967-12-18 21:50 J		-822921.85	-822921.59	-822921.33	0.0088	0.0006	
Neptune	-6966-12-21 08:52 J		-822554.36	-822554.13	-822553.90	0.0088	0.0039	
Neptune	-6965-12-22 20:09 J		-822186.81	-822186.66	-822186.51	0.0088	0.0072	
Saturn	-6962-06-21 23:16 J		-821275.76	-821275.53	-821275.30	0.0290	0.0096	
Uranus	-6949-11-25 15:07 J		-816370.01	-816369.87	-816369.73	0.0145	0.0121	
Saturn	-6949-12-18 08:23 J		-816347.40	-816347.15	-816346.91	0.0272	0.0014	
Jupiter	-6948-05-25 23:02 J		-816188.73	-816188.54	-816188.35	0.0523	0.0305	
Uranus	-6948-11-30 14:23 J		-816000.10	-815999.90	-815999.67	0.0146	0.0075	
Uranus	-6947-12-05 15:07 J		-815630.11	-815629.87	-815629.62	0.0146	0.0027	
Uranus	-6946-12-10 16:04 J		-815260.08	-815259.83	-815259.58	0.0146	0.0021	
Uranus	-6945-12-14 17:16 J		-814889.98	-814889.78	-814889.54	0.0146	0.0070	
Uranus	-6944-12-19 19:26 J		-814519.82	-814519.69	-814519.53	0.0146	0.0118	

Pluto	-6939-11-05 22:33 J	-812737.79	-812737.56	-812737.30	0.0066	0.0020
Jupiter	-6936-05-31 03:21 J	-811800.60	-811800.36	-811800.13	0.0524	0.0083
Jupiter	-6924-06-05 06:00 J	-807412.35	-807412.25	-807412.14	0.0525	0.0470
Jupiter	-6919-11-22 11:31 J	-805416.24	-805416.02	-805415.81	0.0503	0.0192
Mars	-6909-10-23 12:14 J	-801793.18	-801792.99	-801792.81	0.1616	0.0134
Uranus	-6908-05-29 20:23 J	-801574.73	-801574.65	-801574.54	0.0133	0.0124
Uranus	-6907-06-03 05:02 J	-801205.48	-801205.29	-801205.09	0.0133	0.0087
Jupiter	-6907-11-26 23:16 J	-801028.75	-801028.53	-801028.30	0.0502	0.0136
Uranus	-6906-06-07 12:57 J	-800836.19	-800835.96	-800835.72	0.0133	0.0051
Uranus	-6905-06-10 20:23 J	-800466.90	-800466.65	-800466.39	0.0133	0.0015
Uranus	-6904-06-15 03:50 J	-800097.59	-800097.34	-800097.09	0.0133	0.0022
Uranus	-6903-06-19 10:04 J	-799728.29	-799728.08	-799727.83	0.0132	0.0059
Saturn	-6903-06-22 16:47 J	-799725.04	-799724.80	-799724.55	0.0290	0.0046
Uranus	-6902-06-23 16:47 J	-799358.97	-799358.80	-799358.61	0.0132	0.0094
Uranus	-6901-06-26 23:02 J	-798989.59	-798989.54	-798989.48	0.0132	0.0129
Jupiter	-6895-12-01 10:04 J	-796641.17	-796641.08	-796640.98	0.0501	0.0455
Saturn	-6890-12-20 02:23 J	-794796.63	-794796.40	-794796.16	0.0272	0.0062
Neptune	-6886-06-18 13:40 J	-793520.03	-793519.93	-793519.79	0.0089	0.0079
Neptune	-6885-06-20 02:23 J	-793152.62	-793152.40	-793152.18	0.0089	0.0045
Neptune	-6884-06-22 14:23 J	-792785.15	-792784.90	-792784.63	0.0089	0.0012
Neptune	-6883-06-25 02:38 J	-792417.63	-792417.39	-792417.13	0.0089	0.0022
Neptune	-6882-06-27 14:09 J	-792050.09	-792049.91	-792049.68	0.0089	0.0056
Jupiter	-6865-05-25 11:16 J	-785873.20	-785873.03	-785872.84	0.0522	0.0338
Uranus	-6865-11-26 00:14 J	-785688.62	-785688.49	-785688.32	0.0145	0.0117
Uranus	-6864-12-01 00:14 J	-785318.70	-785318.49	-785318.26	0.0146	0.0070
Uranus	-6863-12-06 01:12 J	-784948.70	-784948.45	-784948.20	0.0146	0.0022
Uranus	-6862-12-11 02:09 J	-784578.65	-784578.41	-784578.16	0.0146	0.0026
Saturn	-6861-12-13 16:04 J	-784209.94	-784209.83	-784209.71	0.0274	0.0241
Uranus	-6861-12-15 03:50 J	-784208.54	-784208.34	-784208.11	0.0146	0.0075
Uranus	-6860-12-20 06:00 J	-783838.37	-783838.25	-783838.09	0.0146	0.0122

Mars	-6853-04-25 02:38 J	-781520.59	-781520.39	-781520.19	0.1908	0.0457
Jupiter	-6853-05-30 12:14 J	-781485.23	-781484.99	-781484.76	0.0523	0.0041
Pluto	-6852-05-09 20:09 J	-781140.89	-781140.66	-781140.41	0.0078	0.0030
Saturn	-6844-06-23 10:47 J	-778174.29	-778174.05	-778173.80	0.0290	0.0007
Jupiter	-6841-06-04 13:55 J	-777097.05	-777096.92	-777096.78	0.0524	0.0423
Jupiter	-6836-11-22 01:12 J	-775100.65	-775100.45	-775100.24	0.0503	0.0222
Saturn	-6831-12-20 20:09 J	-773245.88	-773245.66	-773245.43	0.0272	0.0111
Mars	-6830-10-26 12:14 J	-772936.10	-772935.99	-772935.87	0.1615	0.1256
Uranus	-6824-05-30 09:07 J	-770893.24	-770893.12	-770893.00	0.0133	0.0118
Jupiter	-6824-11-26 13:26 J	-770713.17	-770712.94	-770712.71	0.0502	0.0105
Uranus	-6823-06-03 17:16 J	-770523.98	-770523.78	-770523.57	0.0133	0.0081
Uranus	-6822-06-08 01:26 J	-770154.68	-770154.44	-770154.20	0.0133	0.0045
Uranus	-6821-06-11 08:38 J	-769785.39	-769785.14	-769784.88	0.0133	0.0009
Uranus	-6820-06-15 15:50 J	-769416.09	-769415.84	-769415.59	0.0132	0.0027
Uranus	-6819-06-19 22:04 J	-769046.78	-769046.58	-769046.34	0.0132	0.0064
Uranus	-6818-06-24 04:47 J	-768677.46	-768677.30	-768677.12	0.0132	0.0099
Jupiter	-6812-11-30 22:47 J	-766325.67	-766325.55	-766325.42	0.0501	0.0422
Neptune	-6805-12-13 08:23 J	-763756.27	-763756.15	-763756.03	0.0088	0.0078
Neptune	-6804-12-15 18:57 J	-763388.91	-763388.71	-763388.47	0.0088	0.0045
Neptune	-6803-12-18 06:00 J	-763021.49	-763021.25	-763020.98	0.0088	0.0013
Saturn	-6802-12-15 10:04 J	-762659.25	-762659.08	-762658.91	0.0274	0.0192
Neptune	-6802-12-20 17:16 J	-762654.03	-762653.78	-762653.53	0.0088	0.0021
Neptune	-6801-12-22 03:50 J	-762286.53	-762286.34	-762286.12	0.0088	0.0054
Neptune	-6800-12-24 15:07 J	-761918.90	-761918.87	-761918.80	0.0088	0.0086
Saturn	-6785-06-24 07:55 J	-756623.40	-756623.17	-756622.93	0.0290	0.0067
Mars	-6783-10-20 20:38 J	-755774.67	-755774.64	-755774.62	0.1619	0.1595
Jupiter	-6782-05-25 18:43 J	-755557.88	-755557.72	-755557.56	0.0522	0.0384
Uranus	-6781-11-26 08:38 J	-755007.29	-755007.14	-755006.97	0.0145	0.0112
Uranus	-6780-12-01 08:09 J	-754637.37	-754637.16	-754636.92	0.0146	0.0066
Uranus	-6779-12-06 09:07 J	-754267.36	-754267.12	-754266.86	0.0146	0.0018

Uranus	-6778-12-11 10:19 J	-753897.31	-753897.07	-753896.82	0.0146	0.0030
Uranus	-6777-12-15 12:00 J	-753527.20	-753527.00	-753526.77	0.0146	0.0079
Uranus	-6776-12-20 14:23 J	-753157.01	-753156.90	-753156.76	0.0146	0.0126
Saturn	-6772-12-21 14:38 J	-751695.08	-751694.89	-751694.69	0.0272	0.0161
Jupiter	-6770-05-30 17:31 J	-751170.00	-751169.77	-751169.53	0.0524	0.0018
Jupiter	-6758-06-04 21:36 J	-746781.76	-746781.60	-746781.43	0.0525	0.0372
Saturn	-6756-06-18 06:57 J	-746037.24	-746037.21	-746037.17	0.0287	0.0283
Jupiter	-6753-11-21 13:12 J	-744785.14	-744784.95	-744784.75	0.0503	0.0256
Saturn	-6743-12-16 05:31 J	-741108.48	-741108.27	-741108.06	0.0274	0.0140
Jupiter	-6741-11-25 23:31 J	-740397.75	-740397.52	-740397.29	0.0502	0.0066
Uranus	-6740-05-30 20:09 J	-740211.79	-740211.66	-740211.51	0.0133	0.0112
Uranus	-6739-06-04 04:19 J	-739842.51	-739842.32	-739842.09	0.0133	0.0077
Uranus	-6738-06-08 12:28 J	-739473.22	-739472.98	-739472.73	0.0133	0.0040
Uranus	-6737-06-11 20:09 J	-739103.92	-739103.66	-739103.41	0.0133	0.0004
Uranus	-6736-06-16 03:21 J	-738734.61	-738734.36	-738734.11	0.0132	0.0032
Uranus	-6735-06-20 09:36 J	-738365.31	-738365.10	-738364.87	0.0132	0.0068
Uranus	-6734-06-24 16:04 J	-737995.97	-737995.83	-737995.65	0.0132	0.0103
Jupiter	-6729-11-30 10:33 J	-736010.21	-736010.06	-736009.92	0.0501	0.0386
Saturn	-6726-06-26 08:23 J	-735072.36	-735072.15	-735071.93	0.0290	0.0135
Neptune	-6721-06-19 09:36 J	-733252.28	-733252.10	-733251.92	0.0089	0.0063
Neptune	-6720-06-21 21:50 J	-732884.82	-732884.59	-732884.33	0.0089	0.0030
Neptune	-6719-06-24 10:19 J	-732517.33	-732517.07	-732516.81	0.0089	0.0004
Neptune	-6718-06-26 22:19 J	-732149.80	-732149.57	-732149.33	0.0089	0.0037
Neptune	-6717-06-28 10:04 J	-731782.21	-731782.08	-731781.90	0.0089	0.0071
Saturn	-6713-12-22 11:16 J	-730144.16	-730144.03	-730143.87	0.0272	0.0218
Mars	-6704-10-22 20:38 J	-726917.82	-726917.64	-726917.46	0.1618	0.0463
Jupiter	-6699-05-24 22:47 J	-725242.66	-725242.55	-725242.42	0.0523	0.0445
Saturn	-6697-06-19 10:47 J	-724486.21	-724486.05	-724485.88	0.0287	0.0208
Uranus	-6697-11-26 15:36 J	-724326.00	-724325.85	-724325.66	0.0145	0.0109
Uranus	-6696-12-01 15:36 J	-723956.06	-723955.85	-723955.61	0.0146	0.0062

Uranus	-6695-12-06 16:33 J	-723586.06	-723585.81	-723585.55	0.0146	0.0015
Uranus	-6694-12-11 17:45 J	-723216.01	-723215.76	-723215.51	0.0146	0.0033
Pluto	-6693-11-07 01:40 J	-722884.65	-722884.43	-722884.20	0.0066	0.0033
Uranus	-6693-12-15 19:26 J	-722845.88	-722845.69	-722845.46	0.0146	0.0082
Uranus	-6692-12-20 22:04 J	-722475.69	-722475.58	-722475.46	0.0146	0.0128
Jupiter	-6687-05-30 02:38 J	-720854.62	-720854.39	-720854.16	0.0523	0.0059
Saturn	-6684-12-17 03:50 J	-719557.57	-719557.34	-719557.10	0.0274	0.0081
Jupiter	-6675-06-04 03:36 J	-716466.53	-716466.35	-716466.16	0.0524	0.0318
Jupiter	-6670-11-21 22:19 J	-714469.76	-714469.57	-714469.39	0.0504	0.0299
Saturn	-6667-06-27 13:55 J	-713521.08	-713520.92	-713520.75	0.0290	0.0215
Jupiter	-6658-11-26 10:33 J	-710082.29	-710082.06	-710081.83	0.0502	0.0025
Uranus	-6656-05-31 07:26 J	-709530.34	-709530.19	-709530.04	0.0133	0.0108
Uranus	-6655-06-04 15:21 J	-709161.06	-709160.86	-709160.63	0.0133	0.0072
Uranus	-6654-06-08 23:45 J	-708791.75	-708791.51	-708791.26	0.0133	0.0036
Uranus	-6653-06-12 07:26 J	-708422.44	-708422.19	-708421.93	0.0133	0.0003
Uranus	-6652-06-16 14:38 J	-708053.13	-708052.89	-708052.64	0.0132	0.0037
Uranus	-6651-06-20 21:36 J	-707683.81	-707683.60	-707683.38	0.0132	0.0072
Uranus	-6650-06-25 03:50 J	-707314.47	-707314.34	-707314.17	0.0132	0.0107
Jupiter	-6646-11-30 21:36 J	-705694.76	-705694.60	-705694.43	0.0501	0.0346
Neptune	-6640-12-15 03:36 J	-703488.53	-703488.35	-703488.17	0.0088	0.0063
Neptune	-6639-12-17 14:09 J	-703121.14	-703120.91	-703120.65	0.0088	0.0031
Saturn	-6638-06-21 18:57 J	-702934.93	-702934.71	-702934.48	0.0287	0.0123
Neptune	-6638-12-20 01:12 J	-702753.71	-702753.45	-702753.20	0.0088	0.0002
Neptune	-6637-12-21 11:31 J	-702386.23	-702386.02	-702385.76	0.0088	0.0036
Neptune	-6636-12-23 22:47 J	-702018.70	-702018.55	-702018.37	0.0088	0.0068
Mars	-6625-10-24 19:40 J	-698060.84	-698060.68	-698060.51	0.1617	0.0644
Saturn	-6625-12-18 06:00 J	-698006.49	-698006.25	-698006.01	0.0274	0.0013
Jupiter	-6616-05-24 03:07 J	-694927.43	-694927.37	-694927.30	0.0522	0.0499
Uranus	-6613-11-27 02:52 J	-693644.55	-693644.38	-693644.19	0.0145	0.0103
Uranus	-6612-12-02 02:38 J	-693274.61	-693274.39	-693274.15	0.0146	0.0057

Uranus	-6611-12-07 03:21 J	-692904.61	-692904.36	-692904.10	0.0146	0.0010
Uranus	-6610-12-12 04:33 J	-692534.55	-692534.31	-692534.06	0.0146	0.0038
Uranus	-6609-12-16 06:28 J	-692164.43	-692164.23	-692164.02	0.0146	0.0085
Uranus	-6608-12-21 08:09 J	-691794.24	-691794.16	-691794.03	0.0146	0.0133
Pluto	-6606-05-11 22:19 J	-691287.82	-691287.57	-691287.30	0.0078	0.0013
Jupiter	-6604-05-29 03:21 J	-690539.59	-690539.36	-690539.13	0.0523	0.0128
Jupiter	-6592-06-03 00:00 J	-686151.71	-686151.50	-686151.29	0.0524	0.0234
Jupiter	-6587-11-21 07:40 J	-684154.35	-684154.18	-684154.01	0.0503	0.0340
Saturn	-6579-06-23 08:38 J	-681383.39	-681383.14	-681382.90	0.0287	0.0026
Jupiter	-6575-11-25 15:36 J	-679767.08	-679766.85	-679766.62	0.0502	0.0028
Uranus	-6572-05-31 18:00 J	-678848.89	-678848.75	-678848.57	0.0133	0.0103
Uranus	-6571-06-05 02:38 J	-678479.59	-678479.39	-678479.15	0.0133	0.0067
Uranus	-6570-06-09 11:16 J	-678110.28	-678110.03	-678109.78	0.0133	0.0031
Mars	-6569-04-23 20:52 J	-677790.72	-677790.63	-677790.54	0.1905	0.1691
Uranus	-6569-06-12 18:57 J	-677740.96	-677740.71	-677740.45	0.0133	0.0005
Uranus	-6568-06-17 02:23 J	-677371.64	-677371.40	-677371.15	0.0132	0.0041
Uranus	-6567-06-21 08:52 J	-677002.32	-677002.13	-677001.91	0.0132	0.0077
Uranus	-6566-06-25 15:50 J	-676632.97	-676632.84	-676632.70	0.0132	0.0111
Saturn	-6566-12-20 11:45 J	-676455.24	-676455.01	-676454.77	0.0274	0.0062
Jupiter	-6563-11-30 00:28 J	-675379.67	-675379.48	-675379.29	0.0501	0.0286
Neptune	-6557-06-18 15:07 J	-673351.96	-673351.87	-673351.77	0.0089	0.0082
Neptune	-6556-06-21 03:07 J	-672984.57	-672984.37	-672984.14	0.0089	0.0049
Neptune	-6555-06-23 15:50 J	-672617.08	-672616.84	-672616.57	0.0089	0.0016
Neptune	-6554-06-26 04:19 J	-672249.57	-672249.32	-672249.06	0.0089	0.0018
Neptune	-6553-06-27 16:19 J	-671882.01	-671881.82	-671881.59	0.0089	0.0052
Neptune	-6552-06-30 04:19 J	-671514.37	-671514.32	-671514.22	0.0089	0.0085
Saturn	-6537-12-14 12:14 J	-665868.13	-665867.99	-665867.83	0.0276	0.0219
Uranus	-6530-11-23 15:50 J	-663332.87	-663332.84	-663332.78	0.0145	0.0142
Uranus	-6529-11-27 15:07 J	-662963.04	-662962.87	-662962.67	0.0145	0.0098
Uranus	-6528-12-02 15:21 J	-662593.10	-662592.86	-662592.63	0.0146	0.0051

Uranus	-6527-12-07 16:04 J	-662223.08	-662222.83	-662222.58	0.0146	0.0004
Uranus	-6526-12-12 17:02 J	-661853.03	-661852.79	-661852.55	0.0146	0.0043
Uranus	-6525-12-16 18:43 J	-661482.90	-661482.72	-661482.51	0.0146	0.0091
Uranus	-6524-12-21 20:38 J	-661112.70	-661112.64	-661112.53	0.0146	0.0138
Jupiter	-6521-05-27 22:04 J	-660224.79	-660224.58	-660224.36	0.0523	0.0214
Saturn	-6520-06-25 01:55 J	-659831.66	-659831.42	-659831.19	0.0288	0.0079
Jupiter	-6509-06-02 01:55 J	-655836.64	-655836.42	-655836.20	0.0524	0.0170
Saturn	-6507-12-21 21:36 J	-654903.80	-654903.60	-654903.38	0.0273	0.0146
Jupiter	-6504-11-20 07:55 J	-653839.30	-653839.17	-653839.03	0.0504	0.0407
Mars	-6499-10-22 03:50 J	-652042.48	-652042.34	-652042.20	0.1621	0.1083
Jupiter	-6492-11-24 17:02 J	-649452.02	-649451.79	-649451.56	0.0503	0.0093
Saturn	-6491-06-19 10:19 J	-649245.17	-649245.07	-649244.94	0.0287	0.0253
Mars	-6490-04-28 16:47 J	-648931.84	-648931.80	-648931.75	0.1907	0.1856
Uranus	-6489-05-27 21:36 J	-648536.62	-648536.60	-648536.57	0.0133	0.0133
Uranus	-6488-06-01 06:43 J	-648167.38	-648167.22	-648167.03	0.0133	0.0097
Uranus	-6487-06-05 15:21 J	-647798.07	-647797.86	-647797.62	0.0133	0.0061
Uranus	-6486-06-10 00:00 J	-647428.75	-647428.50	-647428.24	0.0133	0.0025
Uranus	-6485-06-13 07:55 J	-647059.42	-647059.17	-647058.91	0.0133	0.0011
Uranus	-6484-06-17 15:07 J	-646690.10	-646689.87	-646689.62	0.0132	0.0046
Uranus	-6483-06-21 21:50 J	-646320.77	-646320.59	-646320.37	0.0132	0.0082
Uranus	-6482-06-26 04:47 J	-645951.42	-645951.30	-645951.17	0.0132	0.0116
Jupiter	-6480-11-29 04:33 J	-645064.52	-645064.31	-645064.10	0.0502	0.0226
Saturn	-6478-12-16 23:31 J	-644316.72	-644316.52	-644316.29	0.0275	0.0132
Neptune	-6476-12-14 11:16 J	-643588.13	-643588.03	-643587.93	0.0088	0.0081
Neptune	-6475-12-16 21:36 J	-643220.80	-643220.60	-643220.38	0.0088	0.0049
Neptune	-6474-12-19 08:23 J	-642853.39	-642853.15	-642852.88	0.0088	0.0017
Neptune	-6473-12-20 19:26 J	-642485.94	-642485.69	-642485.43	0.0088	0.0016
Neptune	-6472-12-23 06:14 J	-642118.45	-642118.24	-642118.02	0.0088	0.0049
Neptune	-6471-12-25 16:47 J	-641750.87	-641750.80	-641750.68	0.0088	0.0082
Saturn	-6461-06-26 21:21 J	-638279.79	-638279.61	-638279.42	0.0289	0.0190

Pluto	-6448-11-07 15:07 J	-633397.97	-633397.87	-633397.69	0.0066	0.0055
Saturn	-6448-12-23 10:19 J	-633352.18	-633352.07	-633351.93	0.0273	0.0234
Pluto	-6447-11-09 03:50 J	-633031.49	-633031.34	-633031.13	0.0066	0.0046
Uranus	-6446-11-24 06:43 J	-632651.30	-632651.22	-632651.12	0.0145	0.0135
Uranus	-6445-11-28 06:00 J	-632281.43	-632281.25	-632281.04	0.0145	0.0091
Uranus	-6444-12-03 06:00 J	-631911.48	-631911.25	-631911.00	0.0146	0.0045
Uranus	-6443-12-08 06:57 J	-631541.46	-631541.21	-631540.96	0.0146	0.0002
Uranus	-6442-12-13 08:09 J	-631171.40	-631171.16	-631170.92	0.0146	0.0049
Uranus	-6441-12-17 09:50 J	-630801.27	-630801.09	-630800.89	0.0146	0.0097
Uranus	-6440-12-22 11:45 J	-630431.04	-630431.01	-630430.95	0.0146	0.0143
Jupiter	-6438-05-27 21:36 J	-629909.80	-629909.60	-629909.41	0.0522	0.0284
Saturn	-6432-06-21 05:16 J	-627693.48	-627693.28	-627693.06	0.0287	0.0145
Jupiter	-6426-06-01 20:52 J	-625521.86	-625521.63	-625521.40	0.0523	0.0085
Jupiter	-6421-11-19 09:50 J	-623524.17	-623524.09	-623524.01	0.0504	0.0471
Mars	-6420-10-24 04:04 J	-623185.51	-623185.33	-623185.14	0.1619	0.0059
Saturn	-6419-12-18 13:55 J	-622765.16	-622764.92	-622764.68	0.0274	0.0039
Jupiter	-6414-06-06 17:02 J	-621133.91	-621133.79	-621133.66	0.0524	0.0445
Jupiter	-6409-11-23 20:38 J	-619136.86	-619136.64	-619136.42	0.0503	0.0150
Uranus	-6405-05-28 11:02 J	-617855.11	-617855.04	-617854.95	0.0133	0.0127
Uranus	-6404-06-01 20:09 J	-617485.83	-617485.66	-617485.46	0.0133	0.0091
Uranus	-6403-06-06 05:16 J	-617116.51	-617116.28	-617116.05	0.0133	0.0055
Uranus	-6402-06-10 13:40 J	-616747.18	-616746.93	-616746.67	0.0133	0.0019
Uranus	-6401-06-13 21:21 J	-616377.86	-616377.61	-616377.35	0.0133	0.0016
Uranus	-6400-06-18 04:33 J	-616008.53	-616008.31	-616008.06	0.0132	0.0052
Uranus	-6399-06-22 11:16 J	-615639.21	-615639.03	-615638.82	0.0132	0.0086
Uranus	-6398-06-26 17:45 J	-615269.85	-615269.76	-615269.64	0.0132	0.0120
Jupiter	-6397-11-28 03:36 J	-614749.57	-614749.35	-614749.13	0.0502	0.0157
Neptune	-6392-06-20 08:23 J	-613084.31	-613084.15	-613083.98	0.0089	0.0068
Neptune	-6391-06-22 20:38 J	-612716.86	-612716.64	-612716.39	0.0089	0.0035
Neptune	-6390-06-25 09:21 J	-612349.36	-612349.11	-612348.85	0.0089	0.0002

Neptune	-6389-06-26 21:36 J	-611981.83	-611981.60	-611981.34	0.0089	0.0032
Neptune	-6388-06-29 09:36 J	-611614.25	-611614.10	-611613.90	0.0089	0.0065
Jupiter	-6385-12-02 12:14 J	-610362.06	-610361.99	-610361.90	0.0501	0.0467
Saturn	-6373-06-23 00:00 J	-606141.74	-606141.50	-606141.25	0.0288	0.0038
Uranus	-6362-11-24 19:12 J	-601969.80	-601969.70	-601969.57	0.0145	0.0129
Uranus	-6361-11-28 18:43 J	-601599.91	-601599.72	-601599.50	0.0145	0.0085
Pluto	-6360-05-13 01:12 J	-601434.71	-601434.45	-601434.18	0.0078	0.0009
Uranus	-6360-12-03 18:43 J	-601229.95	-601229.72	-601229.47	0.0146	0.0039
Saturn	-6360-12-20 04:19 J	-601213.56	-601213.32	-601213.08	0.0274	0.0053
Uranus	-6359-12-08 19:40 J	-600859.93	-600859.68	-600859.42	0.0146	0.0009
Uranus	-6358-12-13 20:52 J	-600489.86	-600489.63	-600489.39	0.0146	0.0055
Uranus	-6357-12-17 22:33 J	-600119.72	-600119.56	-600119.36	0.0146	0.0102
Jupiter	-6355-05-26 12:57 J	-599595.12	-599594.96	-599594.79	0.0522	0.0375
Jupiter	-6343-05-31 13:40 J	-595207.16	-595206.93	-595206.69	0.0523	0.0012
Mars	-6341-10-26 03:50 J	-594328.47	-594328.34	-594328.21	0.1618	0.1156
Jupiter	-6331-06-05 17:02 J	-590818.95	-590818.79	-590818.63	0.0524	0.0376
Saturn	-6331-12-15 05:45 J	-590626.38	-590626.26	-590626.11	0.0276	0.0230
Jupiter	-6326-11-23 18:43 J	-588821.92	-588821.72	-588821.51	0.0503	0.0222
Uranus	-6321-05-29 01:40 J	-587173.53	-587173.43	-587173.31	0.0133	0.0120
Uranus	-6320-06-02 11:02 J	-586804.23	-586804.04	-586803.83	0.0133	0.0084
Uranus	-6319-06-06 19:40 J	-586434.90	-586434.68	-586434.43	0.0133	0.0049
Uranus	-6318-06-11 04:19 J	-586065.58	-586065.32	-586065.06	0.0133	0.0013
Uranus	-6317-06-14 11:45 J	-585696.25	-585696.01	-585695.75	0.0132	0.0023
Uranus	-6316-06-18 18:43 J	-585326.94	-585326.72	-585326.48	0.0132	0.0058
Uranus	-6315-06-23 01:26 J	-584957.61	-584957.44	-584957.25	0.0132	0.0092
Saturn	-6314-06-25 15:50 J	-584590.08	-584589.84	-584589.60	0.0289	0.0063
Uranus	-6314-06-27 07:40 J	-584588.24	-584588.18	-584588.09	0.0132	0.0126
Jupiter	-6314-11-28 03:50 J	-584434.57	-584434.34	-584434.11	0.0503	0.0088
Neptune	-6311-12-16 04:04 J	-583320.47	-583320.33	-583320.14	0.0088	0.0068
Neptune	-6310-12-18 14:52 J	-582953.09	-582952.88	-582952.62	0.0088	0.0036

Neptune	-6309-12-20 02:09 J	-582585.66	-582585.41	-582585.15	0.0088	0.0003
Neptune	-6308-12-22 12:57 J	-582218.20	-582217.96	-582217.71	0.0088	0.0030
Neptune	-6307-12-24 23:02 J	-581850.69	-581850.54	-581850.33	0.0088	0.0063
Jupiter	-6302-12-02 14:38 J	-580047.02	-580046.89	-580046.75	0.0502	0.0404
Saturn	-6301-12-21 18:00 J	-579661.96	-579661.75	-579661.54	0.0273	0.0142
Saturn	-6285-06-19 02:09 J	-574003.50	-574003.41	-574003.32	0.0286	0.0264
Uranus	-6278-11-25 07:12 J	-571288.30	-571288.20	-571288.04	0.0145	0.0124
Uranus	-6277-11-29 07:12 J	-570918.41	-570918.20	-570917.98	0.0146	0.0078
Uranus	-6276-12-04 07:12 J	-570548.44	-570548.20	-570547.95	0.0146	0.0033
Uranus	-6275-12-09 07:55 J	-570178.42	-570178.17	-570177.91	0.0146	0.0014
Uranus	-6274-12-14 08:52 J	-569808.34	-569808.13	-569807.88	0.0146	0.0062
Uranus	-6273-12-18 10:47 J	-569438.20	-569438.05	-569437.86	0.0146	0.0108
Jupiter	-6272-05-25 13:40 J	-569280.05	-569279.93	-569279.81	0.0522	0.0440
Saturn	-6272-12-16 19:26 J	-569074.89	-569074.69	-569074.47	0.0275	0.0139
Jupiter	-6260-05-30 15:50 J	-564892.08	-564891.84	-564891.61	0.0523	0.0067
Saturn	-6255-06-27 03:07 J	-563038.57	-563038.37	-563038.16	0.0289	0.0154
Jupiter	-6248-06-04 16:19 J	-560504.01	-560503.82	-560503.63	0.0524	0.0303
Jupiter	-6243-11-22 21:50 J	-558506.78	-558506.59	-558506.40	0.0504	0.0282
Saturn	-6242-12-24 04:47 J	-558110.42	-558110.30	-558110.15	0.0273	0.0227
Uranus	-6237-05-29 16:04 J	-556491.95	-556491.83	-556491.68	0.0133	0.0113
Uranus	-6236-06-03 01:40 J	-556122.64	-556122.43	-556122.22	0.0133	0.0077
Uranus	-6235-06-07 10:19 J	-555753.31	-555753.07	-555752.82	0.0133	0.0042
Uranus	-6234-06-11 18:43 J	-555383.98	-555383.72	-555383.47	0.0133	0.0007
Uranus	-6233-06-15 01:55 J	-555014.67	-555014.42	-555014.17	0.0132	0.0028
Uranus	-6232-06-19 09:07 J	-554645.35	-554645.12	-554644.90	0.0132	0.0063
Uranus	-6231-06-23 15:07 J	-554276.02	-554275.87	-554275.68	0.0132	0.0098
Jupiter	-6231-11-27 08:52 J	-554119.36	-554119.13	-554118.90	0.0503	0.0037
Uranus	-6230-06-27 21:21 J	-553906.63	-553906.61	-553906.55	0.0132	0.0131
Neptune	-6228-06-19 12:00 J	-553184.02	-553184.00	-553183.95	0.0089	0.0088
Neptune	-6227-06-22 00:28 J	-552816.66	-552816.48	-552816.26	0.0089	0.0055

Saturn	-6226-06-21 10:47 J	-552452.22	-552452.05	-552451.84	0.0287	0.0181
Neptune	-6226-06-24 13:12 J	-552449.19	-552448.95	-552448.69	0.0089	0.0022
Neptune	-6225-06-26 01:40 J	-552081.69	-552081.43	-552081.17	0.0089	0.0011
Neptune	-6224-06-28 13:40 J	-551714.13	-551713.93	-551713.68	0.0089	0.0045
Neptune	-6223-07-01 02:38 J	-551346.51	-551346.39	-551346.26	0.0089	0.0077
Jupiter	-6219-12-01 17:02 J	-549731.96	-549731.79	-549731.62	0.0502	0.0343
Mars	-6215-10-23 11:16 J	-548310.20	-548310.03	-548309.85	0.1622	0.0573
Saturn	-6213-12-18 06:00 J	-547523.49	-547523.25	-547523.01	0.0275	0.0054
Mars	-6206-04-27 11:16 J	-545202.23	-545202.03	-545201.83	0.1905	0.0628
Pluto	-6202-11-09 22:47 J	-543544.77	-543544.55	-543544.31	0.0066	0.0028
Saturn	-6196-06-28 10:33 J	-541487.19	-541487.06	-541486.91	0.0289	0.0236
Uranus	-6194-11-25 15:50 J	-540606.96	-540606.84	-540606.68	0.0145	0.0119
Uranus	-6193-11-29 15:21 J	-540237.07	-540236.86	-540236.63	0.0146	0.0074
Uranus	-6192-12-04 15:21 J	-539867.10	-539866.86	-539866.61	0.0146	0.0028
Uranus	-6191-12-09 16:04 J	-539497.08	-539496.83	-539496.58	0.0146	0.0018
Uranus	-6190-12-14 17:16 J	-539127.00	-539126.78	-539126.55	0.0146	0.0064
Jupiter	-6189-05-24 16:33 J	-538964.87	-538964.81	-538964.74	0.0521	0.0498
Uranus	-6189-12-18 18:57 J	-538756.86	-538756.71	-538756.54	0.0146	0.0111
Jupiter	-6177-05-29 15:07 J	-534577.10	-534576.87	-534576.64	0.0522	0.0136
Saturn	-6167-06-22 15:21 J	-530901.09	-530900.86	-530900.63	0.0287	0.0107
Jupiter	-6165-06-03 16:33 J	-530189.01	-530188.81	-530188.60	0.0524	0.0236
Jupiter	-6160-11-22 03:07 J	-528191.54	-528191.37	-528191.19	0.0504	0.0334
Saturn	-6154-12-20 12:14 J	-525972.23	-525971.99	-525971.75	0.0275	0.0021
Uranus	-6153-05-30 06:14 J	-525810.39	-525810.24	-525810.08	0.0133	0.0107
Uranus	-6152-06-03 15:36 J	-525441.06	-525440.85	-525440.63	0.0133	0.0071
Uranus	-6151-06-08 00:14 J	-525071.73	-525071.49	-525071.23	0.0133	0.0036
Uranus	-6150-06-12 08:23 J	-524702.40	-524702.15	-524701.89	0.0133	0.0002
Uranus	-6149-06-15 15:50 J	-524333.08	-524332.84	-524332.59	0.0133	0.0034
Uranus	-6148-06-19 22:48 J	-523963.76	-523963.55	-523963.33	0.0132	0.0068
Jupiter	-6148-11-26 14:38 J	-523804.13	-523803.89	-523803.66	0.0503	0.0018

Uranus	-6147-06-24 05:02 J	-523594.43	-523594.29	-523594.11	0.0132	0.0102
Neptune	-6147-12-15 10:48 J	-523420.09	-523420.05	-523419.97	0.0088	0.0086
Neptune	-6146-12-17 21:50 J	-523052.78	-523052.59	-523052.37	0.0088	0.0054
Neptune	-6145-12-19 08:52 J	-522685.38	-522685.13	-522684.88	0.0088	0.0021
Neptune	-6144-12-21 19:26 J	-522317.94	-522317.69	-522317.43	0.0088	0.0011
Neptune	-6143-12-24 06:14 J	-521950.46	-521950.24	-521950.01	0.0088	0.0043
Neptune	-6142-12-26 17:16 J	-521582.92	-521582.78	-521582.65	0.0088	0.0075
Mars	-6136-10-25 11:45 J	-519453.18	-519453.01	-519452.84	0.1620	0.0561
Jupiter	-6136-11-30 23:45 J	-519416.69	-519416.51	-519416.32	0.0502	0.0294
Pluto	-6114-05-15 09:50 J	-511581.28	-511581.09	-511580.88	0.0078	0.0050
Uranus	-6110-11-26 03:36 J	-509925.51	-509925.35	-509925.19	0.0145	0.0113
Uranus	-6109-11-30 02:09 J	-509555.62	-509555.41	-509555.17	0.0145	0.0069
Saturn	-6108-06-23 15:50 J	-509350.09	-509349.84	-509349.60	0.0287	0.0042
Uranus	-6108-12-05 02:23 J	-509185.65	-509185.40	-509185.16	0.0146	0.0023
Uranus	-6107-12-10 02:38 J	-508815.63	-508815.39	-508815.14	0.0146	0.0023
Uranus	-6106-12-15 03:36 J	-508445.56	-508445.35	-508445.12	0.0146	0.0069
Uranus	-6105-12-19 05:31 J	-508075.42	-508075.27	-508075.11	0.0146	0.0115
Saturn	-6095-12-21 13:55 J	-504421.15	-504420.92	-504420.69	0.0274	0.0086
Jupiter	-6094-05-29 20:52 J	-504261.85	-504261.63	-504261.41	0.0523	0.0189
Jupiter	-6082-06-04 00:57 J	-499873.68	-499873.46	-499873.24	0.0524	0.0190
Jupiter	-6077-11-21 12:28 J	-497876.12	-497875.98	-497875.82	0.0504	0.0375
Uranus	-6069-05-30 18:57 J	-495128.86	-495128.71	-495128.53	0.0133	0.0102
Uranus	-6068-06-04 04:19 J	-494759.53	-494759.32	-494759.08	0.0133	0.0066
Uranus	-6067-06-08 13:11 J	-494390.19	-494389.95	-494389.69	0.0133	0.0031
Uranus	-6066-06-12 21:36 J	-494020.86	-494020.60	-494020.35	0.0133	0.0004
Saturn	-6066-12-16 03:50 J	-493834.48	-493834.34	-493834.19	0.0277	0.0219
Uranus	-6065-06-16 04:33 J	-493651.54	-493651.31	-493651.05	0.0133	0.0040
Jupiter	-6065-11-25 23:45 J	-493488.73	-493488.51	-493488.28	0.0503	0.0059
Uranus	-6064-06-20 11:31 J	-493282.21	-493282.02	-493281.79	0.0132	0.0074
Neptune	-6063-06-21 04:04 J	-492916.46	-492916.33	-492916.19	0.0089	0.0075

Uranus	-6063-06-24 18:28 J	-492912.87	-492912.73	-492912.57	0.0132	0.0107
Neptune	-6062-06-23 15:50 J	-492549.04	-492548.84	-492548.59	0.0089	0.0043
Neptune	-6061-06-25 04:48 J	-492181.55	-492181.30	-492181.04	0.0089	0.0010
Neptune	-6060-06-27 16:48 J	-491814.03	-491813.80	-491813.53	0.0089	0.0024
Neptune	-6059-06-30 05:02 J	-491446.46	-491446.29	-491446.06	0.0089	0.0057
Jupiter	-6053-11-30 11:02 J	-489101.23	-489101.04	-489100.84	0.0502	0.0258
Saturn	-6049-06-24 12:14 J	-487799.23	-487798.99	-487798.74	0.0287	0.0017
Saturn	-6036-12-22 11:31 J	-482870.22	-482870.02	-482869.80	0.0274	0.0144
Uranus	-6026-11-26 14:52 J	-479244.03	-479243.88	-479243.70	0.0145	0.0108
Uranus	-6025-11-30 13:40 J	-478874.14	-478873.93	-478873.69	0.0145	0.0064
Uranus	-6024-12-05 13:26 J	-478504.18	-478503.94	-478503.69	0.0146	0.0018
Uranus	-6023-12-10 13:55 J	-478134.17	-478133.92	-478133.67	0.0146	0.0027
Uranus	-6022-12-15 14:38 J	-477764.10	-477763.89	-477763.66	0.0146	0.0073
Uranus	-6021-12-19 16:19 J	-477393.96	-477393.82	-477393.67	0.0146	0.0119
Jupiter	-6011-05-29 07:40 J	-473946.39	-473946.18	-473945.97	0.0522	0.0225
Mars	-6010-10-22 19:11 J	-473434.82	-473434.70	-473434.57	0.1625	0.1182
Saturn	-6007-12-17 00:00 J	-472283.70	-472283.50	-472283.31	0.0277	0.0165

6TH MILLENNIUM BCE

This is a list of transits of Earth in the 6th millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
TRANSIT								
TIME								
Jupiter	-5999-06-03 08:38 J	-469558.37	-469558.14	-469557.91	0.0523	0.0143		
Jupiter	-5994-11-22 00:57 J	-467560.59	-467560.46	-467560.32	0.0505	0.0407		

Saturn	-5990-06-26 07:26 J	-466248.43	-466248.19	-466247.95	0.0287	0.0070
Jupiter	-5987-06-08 10:33 J	-465170.09	-465170.06	-465170.01	0.0525	0.0516
Uranus	-5986-05-27 22:04 J	-464816.61	-464816.58	-464816.51	0.0134	0.0131
Uranus	-5985-05-31 08:09 J	-464447.32	-464447.16	-464446.96	0.0133	0.0096
Uranus	-5984-06-04 17:45 J	-464077.98	-464077.76	-464077.52	0.0133	0.0061
Uranus	-5983-06-09 02:38 J	-463708.63	-463708.39	-463708.13	0.0133	0.0025
Uranus	-5982-06-13 10:48 J	-463339.30	-463339.05	-463338.79	0.0133	0.0010
Jupiter	-5982-11-26 12:28 J	-463173.20	-463172.98	-463172.75	0.0503	0.0092
Neptune	-5982-12-17 03:21 J	-463152.48	-463152.36	-463152.19	0.0088	0.0073
Uranus	-5981-06-16 18:14 J	-462969.97	-462969.74	-462969.49	0.0133	0.0045
Neptune	-5981-12-18 14:23 J	-462785.13	-462784.90	-462784.67	0.0088	0.0041
Uranus	-5980-06-21 01:26 J	-462600.63	-462600.44	-462600.22	0.0133	0.0079
Neptune	-5980-12-21 01:26 J	-462417.70	-462417.44	-462417.19	0.0088	0.0009
Uranus	-5979-06-25 08:09 J	-462231.28	-462231.16	-462231.01	0.0132	0.0112
Neptune	-5979-12-23 12:00 J	-462050.24	-462050.00	-462049.74	0.0088	0.0023
Neptune	-5978-12-25 22:33 J	-461682.74	-461682.56	-461682.34	0.0088	0.0056
Saturn	-5977-12-23 06:28 J	-461319.39	-461319.23	-461319.05	0.0275	0.0196
Neptune	-5977-12-27 09:07 J	-461315.13	-461315.12	-461315.05	0.0088	0.0088
Jupiter	-5970-12-01 00:28 J	-458785.69	-458785.48	-458785.28	0.0502	0.0225
Saturn	-5961-06-19 05:45 J	-455662.31	-455662.26	-455662.20	0.0284	0.0276
Pluto	-5956-11-11 05:31 J	-453691.53	-453691.27	-453691.02	0.0066	0.0003
Saturn	-5948-12-17 17:31 J	-450732.99	-450732.77	-450732.55	0.0277	0.0116
Uranus	-5943-11-22 08:52 J	-448932.16	-448932.13	-448932.09	0.0145	0.0143
Uranus	-5942-11-27 06:57 J	-448562.38	-448562.21	-448562.02	0.0145	0.0100
Uranus	-5941-12-01 05:31 J	-448192.49	-448192.27	-448192.03	0.0145	0.0057
Uranus	-5940-12-06 05:31 J	-447822.52	-447822.27	-447822.02	0.0146	0.0012
Uranus	-5939-12-11 05:31 J	-447452.51	-447452.27	-447452.02	0.0146	0.0034
Uranus	-5938-12-16 06:28 J	-447082.43	-447082.23	-447082.01	0.0146	0.0080
Uranus	-5937-12-20 07:40 J	-446712.29	-446712.18	-446712.03	0.0146	0.0126
Saturn	-5931-06-27 01:55 J	-444697.63	-444697.42	-444697.19	0.0287	0.0124

Mars	-5931-10-24 19:26 J	-444577.88	-444577.69	-444577.51	0.1623	0.0057
Jupiter	-5928-05-28 15:21 J	-443631.06	-443630.86	-443630.65	0.0522	0.0269
Mars	-5922-04-26 07:11 J	-441472.40	-441472.20	-441471.99	0.1901	0.0522
Saturn	-5918-12-25 00:00 J	-439768.59	-439768.50	-439768.37	0.0275	0.0245
Jupiter	-5916-06-02 15:07 J	-439243.10	-439242.87	-439242.64	0.0524	0.0091
Jupiter	-5911-11-21 16:04 J	-437244.95	-437244.83	-437244.71	0.0504	0.0432
Jupiter	-5904-06-07 19:55 J	-434854.77	-434854.67	-434854.56	0.0525	0.0471
Uranus	-5902-05-28 12:28 J	-434135.07	-434134.98	-434134.88	0.0134	0.0124
Saturn	-5902-06-21 01:40 J	-434111.58	-434111.43	-434111.27	0.0284	0.0220
Uranus	-5901-05-31 22:19 J	-433765.74	-433765.57	-433765.36	0.0133	0.0090
Uranus	-5900-06-05 07:55 J	-433396.39	-433396.17	-433395.92	0.0133	0.0055
Uranus	-5899-06-09 17:02 J	-433027.05	-433026.79	-433026.54	0.0133	0.0019
Jupiter	-5899-11-26 01:40 J	-432857.65	-432857.43	-432857.20	0.0503	0.0122
Uranus	-5898-06-14 01:11 J	-432657.71	-432657.45	-432657.19	0.0133	0.0016
Neptune	-5898-06-22 18:57 J	-432648.87	-432648.71	-432648.50	0.0089	0.0063
Uranus	-5897-06-17 08:52 J	-432288.37	-432288.13	-432287.89	0.0133	0.0050
Neptune	-5897-06-24 07:40 J	-432281.42	-432281.18	-432280.93	0.0089	0.0030
Uranus	-5896-06-21 15:50 J	-431919.03	-431918.84	-431918.63	0.0132	0.0084
Neptune	-5896-06-26 20:23 J	-431913.91	-431913.65	-431913.39	0.0089	0.0003
Uranus	-5895-06-25 22:33 J	-431549.66	-431549.56	-431549.43	0.0132	0.0118
Neptune	-5895-06-29 08:23 J	-431546.37	-431546.15	-431545.90	0.0089	0.0036
Neptune	-5894-07-01 20:52 J	-431178.79	-431178.63	-431178.46	0.0089	0.0068
Saturn	-5889-12-18 10:19 J	-429182.30	-429182.07	-429181.83	0.0277	0.0069
Jupiter	-5887-11-30 12:00 J	-428470.21	-428470.00	-428469.78	0.0502	0.0190
Saturn	-5872-06-27 22:04 J	-423146.77	-423146.58	-423146.39	0.0287	0.0180
Uranus	-5859-11-22 22:48 J	-418250.60	-418250.55	-418250.44	0.0145	0.0137
Uranus	-5858-11-27 21:07 J	-417880.80	-417880.62	-417880.41	0.0145	0.0094
Uranus	-5857-12-01 19:55 J	-417510.89	-417510.67	-417510.42	0.0145	0.0050
Uranus	-5856-12-06 19:55 J	-417140.92	-417140.67	-417140.42	0.0146	0.0005
Uranus	-5855-12-11 20:09 J	-416770.90	-416770.66	-416770.42	0.0146	0.0040

Uranus	-5854-12-16 21:07 J	-416400.82	-416400.62	-416400.41	0.0146	0.0086
Uranus	-5853-12-20 22:48 J	-416030.66	-416030.55	-416030.44	0.0146	0.0131
Mars	-5852-10-26 19:40 J	-415720.82	-415720.68	-415720.54	0.1622	0.1082
Jupiter	-5845-05-27 22:19 J	-413315.76	-413315.57	-413315.38	0.0523	0.0320
Saturn	-5843-06-21 23:31 J	-412560.72	-412560.52	-412560.31	0.0284	0.0160
Jupiter	-5833-06-02 02:38 J	-408927.62	-408927.39	-408927.15	0.0524	0.0057
Saturn	-5830-12-20 05:02 J	-407631.53	-407631.29	-407631.05	0.0277	0.0017
Jupiter	-5828-11-21 02:38 J	-406929.47	-406929.39	-406929.31	0.0504	0.0469
Jupiter	-5821-06-07 04:19 J	-404539.45	-404539.32	-404539.18	0.0524	0.0425
Uranus	-5818-05-29 03:21 J	-403453.45	-403453.36	-403453.21	0.0134	0.0118
Uranus	-5817-06-01 13:40 J	-403084.11	-403083.93	-403083.71	0.0133	0.0083
Neptune	-5817-12-17 20:09 J	-402884.84	-402884.66	-402884.46	0.0088	0.0060
Uranus	-5816-06-05 23:16 J	-402714.76	-402714.53	-402714.28	0.0133	0.0048
Jupiter	-5816-11-25 13:11 J	-402542.17	-402541.95	-402541.73	0.0503	0.0157
Neptune	-5816-12-20 06:43 J	-402517.45	-402517.22	-402516.96	0.0088	0.0028
Uranus	-5815-06-10 08:09 J	-402345.41	-402345.16	-402344.90	0.0133	0.0013
Neptune	-5815-12-22 18:00 J	-402150.01	-402149.75	-402149.49	0.0088	0.0004
Uranus	-5814-06-14 16:04 J	-401976.08	-401975.83	-401975.57	0.0133	0.0022
Neptune	-5814-12-25 04:33 J	-401782.54	-401782.31	-401782.07	0.0088	0.0036
Uranus	-5813-06-18 00:00 J	-401606.73	-401606.50	-401606.27	0.0133	0.0056
Saturn	-5813-06-28 21:07 J	-401595.74	-401595.62	-401595.49	0.0287	0.0244
Neptune	-5813-12-26 15:07 J	-401415.02	-401414.87	-401414.69	0.0088	0.0068
Uranus	-5812-06-22 06:57 J	-401237.38	-401237.21	-401237.01	0.0132	0.0090
Uranus	-5811-06-26 13:55 J	-400868.01	-400867.92	-400867.82	0.0132	0.0123
Jupiter	-5804-11-30 01:26 J	-398154.66	-398154.44	-398154.22	0.0502	0.0157
Jupiter	-5792-12-04 12:43 J	-393767.05	-393766.97	-393766.89	0.0501	0.0470
Saturn	-5784-06-23 01:11 J	-391009.68	-391009.45	-391009.21	0.0284	0.0091
Uranus	-5775-11-23 14:38 J	-387568.99	-387568.89	-387568.77	0.0145	0.0129
Uranus	-5774-11-28 12:57 J	-387199.16	-387198.96	-387198.76	0.0145	0.0086
Uranus	-5773-12-02 11:31 J	-386829.25	-386829.02	-386828.77	0.0145	0.0043

Uranus	-5772-12-07 11:31 J	-386459.27	-386459.02	-386458.77	0.0146	0.0002
Uranus	-5771-12-12 11:45 J	-386089.24	-386089.01	-386088.77	0.0146	0.0047
Saturn	-5771-12-21 01:40 J	-386080.67	-386080.43	-386080.19	0.0277	0.0038
Uranus	-5770-12-17 12:43 J	-385719.16	-385718.97	-385718.77	0.0146	0.0092
Uranus	-5769-12-21 14:23 J	-385348.97	-385348.90	-385348.80	0.0146	0.0137
Jupiter	-5762-05-28 05:45 J	-383000.42	-383000.26	-383000.09	0.0522	0.0364
Jupiter	-5750-06-02 06:57 J	-378612.45	-378612.21	-378611.98	0.0523	0.0008
Saturn	-5742-12-15 18:57 J	-375493.78	-375493.71	-375493.61	0.0279	0.0261
Jupiter	-5738-06-07 04:33 J	-374224.48	-374224.31	-374224.14	0.0525	0.0354
Uranus	-5734-05-29 19:26 J	-372771.82	-372771.69	-372771.54	0.0134	0.0110
Neptune	-5734-06-21 21:21 J	-372748.68	-372748.61	-372748.50	0.0089	0.0083
Uranus	-5733-06-02 05:16 J	-372402.48	-372402.28	-372402.05	0.0133	0.0076
Neptune	-5733-06-23 09:50 J	-372381.28	-372381.09	-372380.86	0.0089	0.0051
Jupiter	-5733-11-25 02:09 J	-372226.62	-372226.41	-372226.20	0.0503	0.0189
Uranus	-5732-06-06 14:52 J	-372033.12	-372032.88	-372032.63	0.0133	0.0041
Neptune	-5732-06-25 22:33 J	-372013.81	-372013.56	-372013.30	0.0089	0.0018
Uranus	-5731-06-10 23:31 J	-371663.78	-371663.52	-371663.26	0.0133	0.0006
Neptune	-5731-06-28 10:48 J	-371646.30	-371646.05	-371645.78	0.0089	0.0015
Uranus	-5730-06-15 07:26 J	-371294.43	-371294.19	-371293.93	0.0133	0.0028
Neptune	-5730-06-30 23:02 J	-371278.74	-371278.54	-371278.31	0.0089	0.0047
Uranus	-5729-06-18 15:07 J	-370925.09	-370924.87	-370924.63	0.0133	0.0062
Neptune	-5729-07-02 11:02 J	-370911.12	-370911.04	-370910.90	0.0089	0.0080
Uranus	-5728-06-22 22:19 J	-370555.74	-370555.57	-370555.38	0.0132	0.0096
Uranus	-5727-06-27 05:16 J	-370186.33	-370186.28	-370186.22	0.0132	0.0129
Mars	-5726-10-24 02:52 J	-369702.55	-369702.38	-369702.22	0.1627	0.0663
Saturn	-5725-06-24 06:57 J	-369458.45	-369458.21	-369457.96	0.0284	0.0014
Jupiter	-5721-11-29 10:19 J	-367839.29	-367839.07	-367838.84	0.0502	0.0116
Saturn	-5712-12-22 01:55 J	-364529.64	-364529.42	-364529.19	0.0277	0.0102
Pluto	-5710-11-13 14:52 J	-363838.07	-363837.88	-363837.63	0.0066	0.0033
Jupiter	-5709-12-03 19:26 J	-363451.81	-363451.69	-363451.56	0.0501	0.0422

Uranus	-5691-11-24 01:26 J	-356887.54	-356887.44	-356887.29	0.0145	0.0124
Uranus	-5690-11-28 23:45 J	-356517.71	-356517.51	-356517.29	0.0145	0.0081
Uranus	-5689-12-02 22:33 J	-356147.80	-356147.56	-356147.31	0.0145	0.0038
Uranus	-5688-12-07 22:19 J	-355777.82	-355777.57	-355777.31	0.0146	0.0008
Uranus	-5687-12-12 22:48 J	-355407.79	-355407.55	-355407.32	0.0146	0.0052
Uranus	-5686-12-17 23:45 J	-355037.69	-355037.51	-355037.31	0.0146	0.0097
Uranus	-5685-12-22 01:11 J	-354667.48	-354667.45	-354667.37	0.0146	0.0143
Saturn	-5683-12-16 21:21 J	-353942.77	-353942.61	-353942.42	0.0279	0.0193
Jupiter	-5679-05-27 02:52 J	-352685.50	-352685.38	-352685.25	0.0522	0.0440
Jupiter	-5667-06-01 05:31 J	-348297.51	-348297.27	-348297.04	0.0523	0.0073
Saturn	-5666-06-26 17:16 J	-347907.02	-347906.78	-347906.54	0.0285	0.0075
Jupiter	-5655-06-06 09:50 J	-343909.28	-343909.09	-343908.89	0.0524	0.0302
Neptune	-5653-12-17 01:40 J	-342984.53	-342984.43	-342984.30	0.0088	0.0079
Saturn	-5653-12-23 06:57 J	-342978.40	-342978.21	-342978.02	0.0276	0.0175
Neptune	-5652-12-19 12:14 J	-342617.18	-342616.99	-342616.75	0.0088	0.0048
Neptune	-5651-12-21 23:16 J	-342249.77	-342249.53	-342249.27	0.0088	0.0016
Uranus	-5650-05-30 10:04 J	-342090.23	-342090.08	-342089.91	0.0134	0.0104
Jupiter	-5650-11-25 06:00 J	-341911.44	-341911.25	-341911.04	0.0504	0.0244
Neptune	-5650-12-24 10:04 J	-341882.33	-341882.08	-341881.82	0.0088	0.0016
Uranus	-5649-06-02 20:23 J	-341720.87	-341720.65	-341720.43	0.0134	0.0069
Neptune	-5649-12-25 20:38 J	-341514.83	-341514.64	-341514.40	0.0088	0.0049
Uranus	-5648-06-07 05:31 J	-341351.51	-341351.27	-341351.02	0.0133	0.0035
Neptune	-5648-12-28 07:40 J	-341147.27	-341147.18	-341147.05	0.0088	0.0080
Uranus	-5647-06-11 14:23 J	-340982.16	-340981.90	-340981.64	0.0133	0.0001
Mars	-5647-10-26 03:21 J	-340845.53	-340845.36	-340845.18	0.1625	0.0489
Uranus	-5646-06-15 22:19 J	-340612.81	-340612.57	-340612.31	0.0133	0.0035
Uranus	-5645-06-19 06:00 J	-340243.45	-340243.25	-340243.01	0.0133	0.0069
Uranus	-5644-06-23 13:26 J	-339874.09	-339873.94	-339873.76	0.0132	0.0102
Mars	-5638-04-25 05:02 J	-337742.41	-337742.29	-337742.18	0.1897	0.1565
Jupiter	-5638-11-29 15:21 J	-337524.09	-337523.86	-337523.63	0.0503	0.0062

Saturn	-5637-06-20 02:52 J	-337320.48	-337320.38	-337320.25	0.0283	0.0248
Jupiter	-5626-12-04 02:38 J	-333136.54	-333136.39	-333136.23	0.0502	0.0373
Saturn	-5624-12-18 04:48 J	-332391.52	-332391.30	-332391.07	0.0278	0.0114
Pluto	-5623-05-17 03:07 J	-332241.62	-332241.37	-332241.12	0.0079	0.0025
Saturn	-5607-06-28 08:23 J	-326355.34	-326355.15	-326354.95	0.0285	0.0174
Uranus	-5607-11-24 13:11 J	-326206.09	-326205.95	-326205.80	0.0145	0.0118
Uranus	-5606-11-29 11:16 J	-325836.24	-325836.03	-325835.82	0.0145	0.0075
Uranus	-5605-12-03 09:50 J	-325466.33	-325466.09	-325465.84	0.0145	0.0032
Uranus	-5604-12-08 09:36 J	-325096.35	-325096.10	-325095.85	0.0146	0.0013
Uranus	-5603-12-13 09:50 J	-324726.31	-324726.09	-324725.85	0.0146	0.0058
Uranus	-5602-12-18 10:48 J	-324356.21	-324356.05	-324355.85	0.0146	0.0102
Jupiter	-5596-05-26 05:45 J	-322370.33	-322370.26	-322370.19	0.0522	0.0495
Saturn	-5594-12-25 15:50 J	-321426.92	-321426.84	-321426.74	0.0276	0.0256
Jupiter	-5584-05-31 06:57 J	-317982.43	-317982.21	-317981.98	0.0523	0.0135
Saturn	-5578-06-22 18:28 J	-315768.93	-315768.73	-315768.51	0.0284	0.0150
Jupiter	-5572-06-05 06:57 J	-313594.42	-313594.21	-313594.00	0.0524	0.0225
Neptune	-5569-06-22 12:43 J	-312481.10	-312480.97	-312480.79	0.0089	0.0071
Neptune	-5568-06-25 01:26 J	-312113.66	-312113.44	-312113.20	0.0089	0.0038
Mars	-5568-10-28 03:36 J	-311988.37	-311988.35	-311988.33	0.1623	0.1608
Uranus	-5567-05-26 12:57 J	-311777.98	-311777.96	-311777.91	0.0134	0.0133
Neptune	-5567-06-27 14:09 J	-311746.17	-311745.91	-311745.65	0.0089	0.0006
Jupiter	-5567-11-24 10:33 J	-311596.24	-311596.06	-311595.87	0.0504	0.0299
Uranus	-5566-05-30 23:31 J	-311408.68	-311408.52	-311408.33	0.0134	0.0098
Neptune	-5566-06-30 02:09 J	-311378.64	-311378.41	-311378.15	0.0089	0.0027
Uranus	-5565-06-03 09:36 J	-311039.31	-311039.10	-311038.85	0.0134	0.0064
Neptune	-5565-07-01 14:23 J	-311011.07	-311010.90	-311010.69	0.0089	0.0059
Saturn	-5565-12-19 15:36 J	-310840.09	-310839.85	-310839.60	0.0278	0.0028
Uranus	-5564-06-07 19:26 J	-310669.94	-310669.69	-310669.44	0.0133	0.0029
Uranus	-5563-06-12 04:19 J	-310300.58	-310300.32	-310300.07	0.0133	0.0006
Uranus	-5562-06-16 12:28 J	-309931.22	-309930.98	-309930.73	0.0133	0.0040

Uranus	-5561-06-19 20:23 J	-309561.85	-309561.65	-309561.43	0.0133	0.0074
Uranus	-5560-06-24 03:50 J	-309192.49	-309192.34	-309192.19	0.0132	0.0107
Jupiter	-5555-11-28 21:21 J	-307208.84	-307208.61	-307208.37	0.0503	0.0017
Saturn	-5548-06-30 01:55 J	-304803.45	-304803.42	-304803.35	0.0286	0.0279
Jupiter	-5543-12-03 04:19 J	-302821.50	-302821.32	-302821.14	0.0502	0.0312
Uranus	-5523-11-25 00:14 J	-295524.64	-295524.49	-295524.33	0.0145	0.0113
Uranus	-5522-11-29 21:50 J	-295154.80	-295154.59	-295154.36	0.0145	0.0071
Mars	-5521-10-22 09:36 J	-294827.21	-294827.10	-294826.99	0.1631	0.1292
Uranus	-5521-12-03 20:23 J	-294784.89	-294784.65	-294784.39	0.0145	0.0028
Uranus	-5520-12-08 20:09 J	-294414.91	-294414.66	-294414.41	0.0145	0.0017
Saturn	-5519-06-24 12:43 J	-294217.22	-294216.97	-294216.73	0.0284	0.0045
Uranus	-5519-12-13 20:09 J	-294044.89	-294044.66	-294044.43	0.0146	0.0061
Uranus	-5518-12-18 20:52 J	-293674.79	-293674.63	-293674.45	0.0146	0.0106
Saturn	-5506-12-22 05:31 J	-289288.51	-289288.27	-289288.03	0.0277	0.0065
Jupiter	-5501-05-29 22:04 J	-287667.79	-287667.58	-287667.36	0.0522	0.0226
Jupiter	-5489-06-03 23:31 J	-283279.75	-283279.52	-283279.29	0.0523	0.0136
Neptune	-5488-12-18 18:28 J	-282716.89	-282716.73	-282716.55	0.0088	0.0066
Neptune	-5487-12-21 04:48 J	-282349.52	-282349.30	-282349.05	0.0088	0.0035
Neptune	-5486-12-23 15:50 J	-281982.09	-281981.84	-281981.58	0.0088	0.0003
Neptune	-5485-12-25 02:23 J	-281614.63	-281614.40	-281614.15	0.0088	0.0029
Jupiter	-5484-11-23 10:48 J	-281281.21	-281281.05	-281280.89	0.0504	0.0362
Neptune	-5484-12-27 12:57 J	-281247.12	-281246.96	-281246.75	0.0088	0.0061
Uranus	-5483-05-27 00:43 J	-281096.54	-281096.47	-281096.39	0.0134	0.0128
Uranus	-5482-05-31 11:31 J	-280727.19	-280727.02	-280726.83	0.0134	0.0093
Uranus	-5481-06-03 21:50 J	-280357.81	-280357.59	-280357.34	0.0134	0.0059
Uranus	-5480-06-08 07:40 J	-279988.43	-279988.18	-279987.93	0.0133	0.0024
Uranus	-5479-06-12 16:48 J	-279619.05	-279618.80	-279618.54	0.0133	0.0011
Uranus	-5478-06-17 01:11 J	-279249.68	-279249.45	-279249.20	0.0133	0.0045
Jupiter	-5477-06-09 03:07 J	-278891.43	-278891.37	-278891.31	0.0525	0.0507
Uranus	-5477-06-20 09:07 J	-278880.31	-278880.12	-278879.90	0.0133	0.0079

Saturn	-5477-12-16 03:36 J	-278701.48	-278701.35	-278701.21	0.0279	0.0229
Uranus	-5476-06-24 16:48 J	-278510.92	-278510.80	-278510.65	0.0133	0.0112
Jupiter	-5472-11-27 19:55 J	-276893.90	-276893.67	-276893.44	0.0503	0.0057
Pluto	-5465-11-13 10:19 J	-274351.26	-274351.07	-274350.84	0.0066	0.0038
Pluto	-5464-11-14 22:48 J	-273984.60	-273984.55	-273984.45	0.0066	0.0063
Saturn	-5460-06-26 06:14 J	-272665.47	-272665.24	-272664.99	0.0285	0.0059
Jupiter	-5460-12-02 04:04 J	-272506.52	-272506.33	-272506.12	0.0502	0.0245
Saturn	-5447-12-23 20:23 J	-267736.84	-267736.65	-267736.45	0.0276	0.0159
Mars	-5442-10-25 10:19 J	-265970.26	-265970.07	-265969.89	0.1629	0.0145
Uranus	-5439-11-25 14:23 J	-264843.06	-264842.90	-264842.72	0.0144	0.0107
Uranus	-5438-11-30 12:28 J	-264473.20	-264472.98	-264472.75	0.0145	0.0064
Uranus	-5437-12-04 10:48 J	-264103.29	-264103.05	-264102.79	0.0145	0.0022
Uranus	-5436-12-09 10:19 J	-263733.31	-263733.07	-263732.82	0.0145	0.0023
Uranus	-5435-12-14 10:04 J	-263363.29	-263363.08	-263362.84	0.0146	0.0068
Uranus	-5434-12-19 11:02 J	-262993.19	-262993.04	-262992.87	0.0146	0.0111
Saturn	-5431-06-20 22:04 J	-262078.68	-262078.58	-262078.45	0.0283	0.0249
Jupiter	-5418-05-29 21:07 J	-257352.80	-257352.62	-257352.42	0.0522	0.0294
Saturn	-5418-12-18 20:09 J	-257149.88	-257149.66	-257149.45	0.0279	0.0130
Jupiter	-5406-06-03 23:16 J	-252964.76	-252964.53	-252964.29	0.0523	0.0068
Neptune	-5404-06-24 04:19 J	-252213.50	-252213.32	-252213.11	0.0089	0.0058
Neptune	-5403-06-26 17:02 J	-251846.03	-251845.79	-251845.53	0.0089	0.0026
Neptune	-5402-06-29 05:45 J	-251478.51	-251478.26	-251477.99	0.0089	0.0007
Saturn	-5401-06-27 22:48 J	-251113.74	-251113.55	-251113.34	0.0285	0.0160
Neptune	-5401-06-30 18:00 J	-251110.97	-251110.75	-251110.50	0.0089	0.0039
Jupiter	-5401-11-22 10:33 J	-250966.18	-250966.06	-250965.95	0.0505	0.0430
Neptune	-5400-07-03 06:14 J	-250743.38	-250743.24	-250743.07	0.0089	0.0071
Uranus	-5399-05-27 12:57 J	-250415.05	-250414.96	-250414.84	0.0134	0.0123
Uranus	-5398-06-01 00:00 J	-250045.68	-250045.50	-250045.29	0.0134	0.0088
Uranus	-5397-06-04 10:48 J	-249676.28	-249676.05	-249675.81	0.0134	0.0053
Uranus	-5396-06-08 20:38 J	-249306.89	-249306.64	-249306.38	0.0133	0.0018

Uranus	-5395-06-13 06:00 J	-248937.50	-248937.25	-248936.99	0.0133	0.0016
Jupiter	-5394-06-08 23:31 J	-248576.65	-248576.52	-248576.38	0.0524	0.0428
Uranus	-5394-06-17 14:52 J	-248568.12	-248567.88	-248567.65	0.0133	0.0050
Uranus	-5393-06-20 22:48 J	-248198.73	-248198.55	-248198.34	0.0133	0.0084
Uranus	-5392-06-25 06:14 J	-247829.34	-247829.24	-247829.10	0.0133	0.0117
Jupiter	-5389-11-26 21:07 J	-246578.84	-246578.62	-246578.39	0.0504	0.0121
Saturn	-5388-12-25 10:33 J	-246185.15	-246185.06	-246184.95	0.0276	0.0251
Pluto	-5377-05-18 13:26 J	-242388.17	-242387.94	-242387.67	0.0078	0.0025
Jupiter	-5377-12-01 07:40 J	-242191.39	-242191.18	-242190.97	0.0503	0.0188
Saturn	-5372-06-22 12:43 J	-240527.17	-240526.97	-240526.76	0.0283	0.0154
Jupiter	-5365-12-05 15:07 J	-237803.93	-237803.87	-237803.81	0.0501	0.0483
Mars	-5363-10-27 11:02 J	-237113.19	-237113.04	-237112.90	0.1627	0.1008
Saturn	-5359-12-20 10:48 J	-235598.30	-235598.05	-235597.81	0.0278	0.0035
Uranus	-5356-11-21 08:38 J	-234531.17	-234531.14	-234531.08	0.0144	0.0141
Uranus	-5355-11-26 05:16 J	-234161.45	-234161.28	-234161.09	0.0144	0.0100
Uranus	-5354-12-01 03:21 J	-233791.59	-233791.36	-233791.13	0.0145	0.0058
Uranus	-5353-12-05 01:40 J	-233421.68	-233421.43	-233421.18	0.0145	0.0015
Uranus	-5352-12-10 01:11 J	-233051.70	-233051.45	-233051.20	0.0145	0.0029
Uranus	-5351-12-15 00:43 J	-232681.68	-232681.47	-232681.24	0.0146	0.0073
Uranus	-5350-12-20 01:11 J	-232311.58	-232311.45	-232311.28	0.0146	0.0117
Saturn	-5342-06-30 11:45 J	-229562.12	-229562.01	-229561.89	0.0286	0.0252
Jupiter	-5335-05-28 20:24 J	-227037.82	-227037.65	-227037.48	0.0521	0.0362
Neptune	-5324-12-18 00:43 J	-222816.53	-222816.47	-222816.37	0.0088	0.0084
Jupiter	-5323-06-02 18:28 J	-222649.97	-222649.73	-222649.50	0.0522	0.0015
Neptune	-5323-12-20 11:31 J	-222449.21	-222449.02	-222448.80	0.0088	0.0053
Neptune	-5322-12-22 22:04 J	-222081.82	-222081.58	-222081.32	0.0088	0.0022
Neptune	-5321-12-24 09:07 J	-221714.37	-221714.12	-221713.86	0.0088	0.0010
Neptune	-5320-12-26 19:26 J	-221346.90	-221346.69	-221346.45	0.0088	0.0042
Neptune	-5319-12-29 06:00 J	-220979.37	-220979.25	-220979.08	0.0088	0.0073
Jupiter	-5318-11-22 14:09 J	-220650.96	-220650.91	-220650.84	0.0506	0.0485

Uranus	-5315-05-28 01:55 J	-219733.55	-219733.42	-219733.30	0.0134	0.0117
Uranus	-5314-06-01 12:43 J	-219364.16	-219363.97	-219363.75	0.0134	0.0082
Uranus	-5313-06-04 23:31 J	-218994.75	-218994.52	-218994.27	0.0134	0.0048
Saturn	-5313-06-23 23:16 J	-218975.77	-218975.53	-218975.29	0.0284	0.0068
Uranus	-5312-06-09 09:35 J	-218625.36	-218625.10	-218624.84	0.0133	0.0013
Jupiter	-5311-06-07 19:26 J	-218261.86	-218261.69	-218261.51	0.0524	0.0350
Uranus	-5311-06-13 19:11 J	-218255.95	-218255.70	-218255.45	0.0133	0.0022
Uranus	-5310-06-18 04:04 J	-217886.56	-217886.33	-217886.10	0.0133	0.0055
Uranus	-5309-06-21 12:00 J	-217517.17	-217517.00	-217516.79	0.0133	0.0089
Uranus	-5308-06-25 19:26 J	-217147.76	-217147.69	-217147.56	0.0133	0.0122
Jupiter	-5306-11-26 23:16 J	-216263.75	-216263.53	-216263.31	0.0504	0.0180
Saturn	-5300-12-21 22:04 J	-214046.81	-214046.58	-214046.34	0.0278	0.0053
Jupiter	-5294-12-01 09:50 J	-211876.32	-211876.09	-211875.87	0.0503	0.0127
Jupiter	-5282-12-05 18:14 J	-207488.86	-207488.74	-207488.61	0.0502	0.0425
Mars	-5275-04-27 22:04 J	-205153.77	-205153.58	-205153.39	0.1896	0.0834
Uranus	-5272-11-22 00:00 J	-203849.57	-203849.50	-203849.39	0.0144	0.0134
Uranus	-5271-11-26 20:52 J	-203479.81	-203479.63	-203479.43	0.0144	0.0093
Saturn	-5271-12-16 15:21 J	-203459.97	-203459.86	-203459.75	0.0280	0.0249
Uranus	-5270-12-01 18:57 J	-203109.94	-203109.71	-203109.47	0.0145	0.0051
Uranus	-5269-12-05 17:31 J	-202740.02	-202739.77	-202739.52	0.0145	0.0008
Uranus	-5268-12-10 16:48 J	-202370.04	-202369.80	-202369.56	0.0145	0.0036
Uranus	-5267-12-15 16:19 J	-202000.02	-201999.82	-201999.60	0.0146	0.0080
Uranus	-5266-12-20 17:02 J	-201629.91	-201629.79	-201629.64	0.0146	0.0123
Saturn	-5254-06-26 04:48 J	-197424.54	-197424.30	-197424.05	0.0284	0.0010
Jupiter	-5252-05-27 19:11 J	-196722.83	-196722.70	-196722.56	0.0521	0.0428
Saturn	-5241-12-23 06:00 J	-192495.46	-192495.25	-192495.03	0.0277	0.0132
Jupiter	-5240-06-01 20:38 J	-192334.87	-192334.64	-192334.40	0.0523	0.0073
Neptune	-5240-06-23 07:55 J	-192313.28	-192313.17	-192313.02	0.0089	0.0077
Neptune	-5239-06-25 20:52 J	-191945.84	-191945.63	-191945.39	0.0089	0.0045
Neptune	-5238-06-28 09:35 J	-191578.35	-191578.10	-191577.83	0.0089	0.0013

Neptune	-5237-06-29 22:19 J	-191210.82	-191210.57	-191210.32	0.0089	0.0019
Mars	-5237-10-23 16:19 J	-191094.98	-191094.82	-191094.66	0.1633	0.0779
Neptune	-5236-07-02 10:33 J	-190843.26	-190843.06	-190842.84	0.0089	0.0051
Neptune	-5235-07-04 23:02 J	-190475.62	-190475.54	-190475.44	0.0089	0.0083
Uranus	-5231-05-28 15:35 J	-189051.98	-189051.85	-189051.68	0.0134	0.0111
Uranus	-5230-06-02 03:21 J	-188682.57	-188682.36	-188682.15	0.0134	0.0075
Uranus	-5229-06-05 13:55 J	-188313.16	-188312.92	-188312.67	0.0134	0.0041
Jupiter	-5228-06-07 00:28 J	-187946.67	-187946.48	-187946.28	0.0524	0.0294
Uranus	-5228-06-10 00:00 J	-187943.76	-187943.50	-187943.25	0.0133	0.0007
Uranus	-5227-06-14 09:21 J	-187574.36	-187574.11	-187573.85	0.0133	0.0028
Uranus	-5226-06-18 18:00 J	-187204.97	-187204.75	-187204.52	0.0133	0.0061
Uranus	-5225-06-22 01:55 J	-186835.58	-186835.42	-186835.22	0.0133	0.0095
Uranus	-5224-06-26 09:35 J	-186466.16	-186466.10	-186466.01	0.0133	0.0127
Jupiter	-5223-11-26 05:02 J	-185948.49	-185948.29	-185948.08	0.0504	0.0231
Pluto	-5219-11-15 20:38 J	-184497.89	-184497.64	-184497.38	0.0066	0.0002
Saturn	-5212-12-17 20:09 J	-181908.84	-181908.66	-181908.46	0.0279	0.0176
Jupiter	-5211-11-30 15:50 J	-181561.07	-181560.84	-181560.62	0.0503	0.0077
Jupiter	-5199-12-05 02:24 J	-177173.54	-177173.40	-177173.25	0.0502	0.0382
Saturn	-5195-06-27 06:43 J	-175873.46	-175873.22	-175872.98	0.0284	0.0076
Uranus	-5188-11-22 13:40 J	-173168.03	-173167.93	-173167.80	0.0144	0.0128
Uranus	-5187-11-27 10:48 J	-172798.25	-172798.05	-172797.85	0.0144	0.0087
Uranus	-5186-12-02 08:24 J	-172428.38	-172428.15	-172427.90	0.0145	0.0045
Uranus	-5185-12-06 06:57 J	-172058.47	-172058.21	-172057.96	0.0145	0.0003
Uranus	-5184-12-11 06:00 J	-171688.49	-171688.25	-171688.01	0.0145	0.0041
Uranus	-5183-12-16 05:31 J	-171318.47	-171318.27	-171318.06	0.0146	0.0085
Uranus	-5182-12-21 06:00 J	-170948.36	-170948.25	-170948.12	0.0146	0.0128
Saturn	-5182-12-25 09:21 J	-170944.27	-170944.11	-170943.94	0.0277	0.0202
Jupiter	-5169-05-27 01:26 J	-166407.53	-166407.44	-166407.34	0.0521	0.0479
Saturn	-5166-06-21 08:24 J	-165287.23	-165287.15	-165287.04	0.0282	0.0259
Neptune	-5159-12-19 17:45 J	-162548.89	-162548.76	-162548.58	0.0089	0.0071

Mars	-5158-10-26 17:31 J	-162237.95	-162237.77	-162237.59	0.1631	0.0384
Neptune	-5158-12-22 04:48 J	-162181.52	-162181.30	-162181.06	0.0088	0.0040
Jupiter	-5157-06-01 04:19 J	-162019.55	-162019.32	-162019.09	0.0522	0.0117
Neptune	-5157-12-23 15:35 J	-161814.10	-161813.85	-161813.59	0.0088	0.0009
Neptune	-5156-12-26 02:09 J	-161446.65	-161446.41	-161446.16	0.0088	0.0023
Neptune	-5155-12-28 12:57 J	-161079.16	-161078.96	-161078.75	0.0088	0.0054
Neptune	-5154-12-30 23:45 J	-160711.57	-160711.51	-160711.44	0.0088	0.0085
Saturn	-5153-12-18 21:35 J	-160357.82	-160357.60	-160357.37	0.0279	0.0109
Uranus	-5147-05-29 04:48 J	-158370.45	-158370.30	-158370.13	0.0134	0.0104
Uranus	-5146-06-02 15:50 J	-158001.04	-158000.84	-158000.60	0.0134	0.0070
Uranus	-5145-06-06 03:07 J	-157631.62	-157631.37	-157631.12	0.0134	0.0035
Jupiter	-5145-06-06 04:48 J	-157631.50	-157631.30	-157631.08	0.0523	0.0240 *
Uranus	-5144-06-10 12:57 J	-157262.21	-157261.96	-157261.70	0.0133	0.0002
Uranus	-5143-06-14 22:33 J	-156892.81	-156892.56	-156892.31	0.0133	0.0033
Uranus	-5142-06-19 07:11 J	-156523.42	-156523.20	-156522.97	0.0133	0.0066
Uranus	-5141-06-22 15:21 J	-156154.03	-156153.86	-156153.69	0.0133	0.0099
Uranus	-5140-06-26 22:19 J	-155784.57	-155784.57	-155784.51	0.0133	0.0132
Jupiter	-5140-11-25 14:52 J	-155633.08	-155632.88	-155632.69	0.0505	0.0270
Saturn	-5136-06-28 04:48 J	-154322.52	-154322.30	-154322.08	0.0284	0.0135
Jupiter	-5128-11-30 01:40 J	-151245.66	-151245.43	-151245.20	0.0503	0.0036
Saturn	-5123-12-26 09:07 J	-149393.18	-149393.12	-149393.04	0.0277	0.0264
Jupiter	-5116-12-04 13:11 J	-146858.12	-146857.95	-146857.78	0.0502	0.0342
Saturn	-5107-06-22 06:14 J	-143736.41	-143736.24	-143736.06	0.0281	0.0199
Uranus	-5104-11-23 00:57 J	-142486.58	-142486.46	-142486.31	0.0144	0.0122
Uranus	-5103-11-27 21:35 J	-142116.79	-142116.60	-142116.38	0.0144	0.0082
Uranus	-5102-12-02 19:40 J	-141746.92	-141746.68	-141746.44	0.0145	0.0039
Uranus	-5101-12-06 17:45 J	-141377.01	-141376.76	-141376.50	0.0145	0.0004
Uranus	-5100-12-11 16:48 J	-141007.04	-141006.80	-141006.56	0.0145	0.0046
Uranus	-5099-12-16 16:19 J	-140637.01	-140636.82	-140636.61	0.0146	0.0090
Uranus	-5098-12-21 17:02 J	-140266.89	-140266.79	-140266.69	0.0146	0.0132

Saturn	-5094-12-20 19:11 J	-138806.94	-138806.70	-138806.46	0.0279	0.0051
Jupiter	-5086-05-27 09:07 J	-136092.12	-136092.12	-136092.12	0.0521	0.0520
Mars	-5079-10-28 18:00 J	-133380.81	-133380.75	-133380.69	0.1629	0.1527
Saturn	-5077-06-29 00:14 J	-132771.66	-132771.49	-132771.30	0.0284	0.0191
Neptune	-5075-06-25 01:55 J	-132045.59	-132045.42	-132045.23	0.0089	0.0063
Jupiter	-5074-06-01 10:33 J	-131704.29	-131704.06	-131703.84	0.0522	0.0165
Neptune	-5074-06-27 14:52 J	-131678.13	-131677.88	-131677.64	0.0089	0.0031
Neptune	-5073-06-29 03:21 J	-131310.62	-131310.36	-131310.10	0.0089	0.0001
Neptune	-5072-07-01 15:50 J	-130943.07	-130942.84	-130942.59	0.0089	0.0033
Neptune	-5071-07-04 04:04 J	-130575.48	-130575.33	-130575.13	0.0089	0.0065
Uranus	-5064-05-25 05:31 J	-128058.30	-128058.27	-128058.21	0.0135	0.0133
Uranus	-5063-05-29 17:45 J	-127688.92	-127688.76	-127688.57	0.0134	0.0098
Uranus	-5062-06-03 05:02 J	-127319.50	-127319.29	-127319.04	0.0134	0.0064
Jupiter	-5062-06-06 10:47 J	-127316.27	-127316.05	-127315.83	0.0524	0.0187
Uranus	-5061-06-06 16:04 J	-126950.08	-126949.83	-126949.57	0.0134	0.0029
Uranus	-5060-06-11 02:09 J	-126580.67	-126580.41	-126580.15	0.0133	0.0005
Uranus	-5059-06-15 11:45 J	-126211.26	-126211.01	-126210.77	0.0133	0.0039
Uranus	-5058-06-19 19:55 J	-125841.87	-125841.67	-125841.44	0.0133	0.0072
Uranus	-5057-06-23 04:19 J	-125472.47	-125472.32	-125472.16	0.0133	0.0104
Jupiter	-5057-11-25 04:19 J	-125317.50	-125317.32	-125317.13	0.0504	0.0300
Saturn	-5048-06-23 01:55 J	-122185.62	-122185.42	-122185.20	0.0281	0.0145
Jupiter	-5045-11-29 14:09 J	-120930.14	-120929.91	-120929.68	0.0503	0.0006
Saturn	-5035-12-21 14:24 J	-117256.14	-117255.90	-117255.65	0.0279	0.0005
Jupiter	-5033-12-04 00:14 J	-116542.67	-116542.49	-116542.30	0.0502	0.0306
Mars	-5032-10-22 22:04 J	-116219.67	-116219.58	-116219.49	0.1638	0.1428
Uranus	-5020-11-23 11:02 J	-111805.17	-111805.04	-111804.89	0.0144	0.0117
Uranus	-5019-11-28 07:40 J	-111435.39	-111435.18	-111434.97	0.0144	0.0076
Saturn	-5018-06-30 19:55 J	-111220.79	-111220.67	-111220.54	0.0284	0.0246
Uranus	-5018-12-03 05:02 J	-111065.53	-111065.29	-111065.05	0.0145	0.0035
Uranus	-5017-12-07 02:38 J	-110695.63	-110695.39	-110695.13	0.0145	0.0008

Uranus	-5016-12-12 01:26 J	-110325.67	-110325.44	-110325.20	0.0145	0.0050
Uranus	-5015-12-17 00:43 J	-109955.65	-109955.47	-109955.26	0.0146	0.0093
Uranus	-5014-12-22 00:43 J	-109585.54	-109585.47	-109585.36	0.0146	0.0136

5TH MILLENNIUM BCE

This is a list of transits of Earth in the 5th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Neptune	-4995-12-19 01:40 J	-102648.45	-102648.43	-102648.38	0.0089	0.0088		
Neptune	-4994-12-21 12:28 J	-102281.17	-102280.98	-102280.78	0.0089	0.0057		
Neptune	-4993-12-22 23:02 J	-101913.78	-101913.54	-101913.29	0.0088	0.0026		
Neptune	-4992-12-25 09:50 J	-101546.35	-101546.09	-101545.83	0.0088	0.0005		
Mars	-4991-04-26 19:55 J	-101423.88	-101423.67	-101423.46	0.1891	0.0192		
Jupiter	-4991-05-31 18:14 J	-101388.95	-101388.74	-101388.52	0.0523	0.0212		
Neptune	-4991-12-27 20:09 J	-101178.88	-101178.66	-101178.41	0.0088	0.0036		
Neptune	-4990-12-30 06:57 J	-100811.36	-100811.21	-100811.03	0.0088	0.0067		
Saturn	-4989-06-23 22:19 J	-100634.80	-100634.57	-100634.33	0.0281	0.0087		
Uranus	-4980-05-25 14:52 J	-97376.93	-97376.88	-97376.78	0.0135	0.0129		
Uranus	-4979-05-30 03:21 J	-97007.52	-97007.36	-97007.15	0.0135	0.0095		
Jupiter	-4979-06-05 23:02 J	-97000.77	-97000.54	-97000.32	0.0524	0.0156		
Uranus	-4978-06-03 15:21 J	-96638.09	-96637.86	-96637.63	0.0134	0.0060		
Uranus	-4977-06-07 02:24 J	-96268.66	-96268.40	-96268.15	0.0134	0.0025		
Uranus	-4976-06-11 12:28 J	-95899.24	-95898.98	-95898.73	0.0134	0.0009		
Saturn	-4976-12-22 08:09 J	-95705.39	-95705.16	-95704.91	0.0280	0.0053		

Uranus	-4975-06-15 21:50 J	-95529.83	-95529.59	-95529.34	0.0133	0.0043
Uranus	-4974-06-20 06:28 J	-95160.44	-95160.23	-95160.01	0.0133	0.0075
Jupiter	-4974-11-25 15:50 J	-95002.01	-95001.84	-95001.66	0.0504	0.0333
Uranus	-4973-06-23 14:24 J	-94791.03	-94790.90	-94790.73	0.0133	0.0108
Pluto	-4973-11-17 04:04 J	-94644.57	-94644.33	-94644.10	0.0066	0.0026
Jupiter	-4967-06-11 00:57 J	-92612.50	-92612.46	-92612.41	0.0524	0.0514
Jupiter	-4962-11-30 02:38 J	-90614.62	-90614.39	-90614.16	0.0504	0.0030
Mars	-4953-10-24 22:33 J	-87362.74	-87362.56	-87362.37	0.1636	0.0269
Jupiter	-4950-12-04 14:24 J	-86227.09	-86226.90	-86226.71	0.0502	0.0275
Saturn	-4947-12-16 21:21 J	-85118.69	-85118.61	-85118.50	0.0282	0.0259
Uranus	-4936-11-23 21:50 J	-81123.74	-81123.59	-81123.42	0.0144	0.0112
Uranus	-4935-11-28 18:00 J	-80753.96	-80753.75	-80753.52	0.0144	0.0072
Uranus	-4934-12-03 15:07 J	-80384.11	-80383.87	-80383.62	0.0145	0.0030
Uranus	-4933-12-07 12:57 J	-80014.21	-80013.96	-80013.71	0.0145	0.0012
Uranus	-4932-12-12 11:16 J	-79644.25	-79644.03	-79643.79	0.0145	0.0054
Uranus	-4931-12-17 10:33 J	-79274.24	-79274.06	-79273.86	0.0145	0.0097
Saturn	-4930-06-25 20:38 J	-79083.89	-79083.64	-79083.40	0.0281	0.0028
Uranus	-4930-12-22 10:19 J	-78904.12	-78904.07	-78903.97	0.0146	0.0139
Saturn	-4917-12-23 02:24 J	-74154.61	-74154.40	-74154.16	0.0280	0.0104
Neptune	-4911-06-24 07:40 J	-72145.27	-72145.18	-72145.06	0.0089	0.0081
Neptune	-4910-06-26 20:24 J	-71777.86	-71777.65	-71777.43	0.0089	0.0049
Neptune	-4909-06-28 08:52 J	-71410.37	-71410.13	-71409.86	0.0089	0.0018
Jupiter	-4908-05-31 03:50 J	-71073.55	-71073.34	-71073.13	0.0522	0.0249
Neptune	-4908-06-30 21:35 J	-71042.85	-71042.60	-71042.33	0.0089	0.0015
Neptune	-4907-07-03 10:04 J	-70675.29	-70675.08	-70674.84	0.0089	0.0046
Neptune	-4906-07-05 22:19 J	-70307.67	-70307.57	-70307.42	0.0089	0.0078
Uranus	-4896-05-26 00:57 J	-66695.55	-66695.46	-66695.35	0.0135	0.0124
Jupiter	-4896-06-05 05:31 J	-66685.50	-66685.27	-66685.04	0.0523	0.0107
Uranus	-4895-05-30 13:26 J	-66326.12	-66325.94	-66325.74	0.0135	0.0090
Uranus	-4894-06-04 00:57 J	-65956.68	-65956.46	-65956.21	0.0134	0.0056

Uranus	-4893-06-07 12:14 J	-65587.24	-65586.99	-65586.73	0.0134	0.0021
Uranus	-4892-06-11 22:19 J	-65217.82	-65217.57	-65217.31	0.0134	0.0014
Uranus	-4891-06-16 07:55 J	-64848.40	-64848.17	-64847.92	0.0133	0.0047
Jupiter	-4891-11-25 05:16 J	-64686.43	-64686.28	-64686.12	0.0505	0.0364
Uranus	-4890-06-20 16:47 J	-64479.00	-64478.80	-64478.59	0.0133	0.0080
Uranus	-4889-06-24 00:43 J	-64109.58	-64109.47	-64109.31	0.0133	0.0112
Saturn	-4888-12-17 16:04 J	-63567.99	-63567.83	-63567.67	0.0282	0.0207
Pluto	-4886-05-21 06:00 J	-63048.43	-63048.25	-63048.03	0.0079	0.0051
Jupiter	-4884-06-10 04:04 J	-62297.45	-62297.33	-62297.21	0.0525	0.0453
Jupiter	-4879-11-29 17:45 J	-60298.99	-60298.76	-60298.53	0.0503	0.0054
Mars	-4874-10-27 23:31 J	-58505.67	-58505.52	-58505.36	0.1633	0.0891
Saturn	-4871-06-26 20:52 J	-57532.87	-57532.63	-57532.38	0.0281	0.0039
Jupiter	-4867-12-04 02:23 J	-55911.60	-55911.40	-55911.20	0.0502	0.0243
Saturn	-4858-12-24 22:33 J	-52603.76	-52603.56	-52603.36	0.0280	0.0158
Uranus	-4852-11-24 10:33 J	-50442.22	-50442.06	-50441.89	0.0144	0.0107
Uranus	-4851-11-29 06:43 J	-50072.44	-50072.22	-50072.00	0.0144	0.0066
Uranus	-4850-12-04 03:36 J	-49702.60	-49702.35	-49702.10	0.0144	0.0026
Uranus	-4849-12-08 00:57 J	-49332.71	-49332.46	-49332.21	0.0145	0.0016
Uranus	-4848-12-12 23:31 J	-48962.75	-48962.52	-48962.29	0.0145	0.0058
Uranus	-4847-12-17 22:19 J	-48592.74	-48592.57	-48592.38	0.0145	0.0101
Uranus	-4846-12-22 22:04 J	-48222.61	-48222.58	-48222.52	0.0146	0.0143
Neptune	-4830-12-20 20:09 J	-42380.79	-42380.66	-42380.51	0.0089	0.0074
Saturn	-4829-12-18 13:26 J	-42017.15	-42016.94	-42016.73	0.0282	0.0149
Neptune	-4829-12-22 06:43 J	-42013.42	-42013.22	-42012.98	0.0089	0.0044
Neptune	-4828-12-24 17:45 J	-41646.01	-41645.76	-41645.50	0.0088	0.0013
Neptune	-4827-12-27 04:33 J	-41278.55	-41278.31	-41278.05	0.0088	0.0019
Neptune	-4826-12-29 15:07 J	-40911.07	-40910.87	-40910.64	0.0088	0.0050
Jupiter	-4825-05-30 03:50 J	-40758.52	-40758.34	-40758.15	0.0522	0.0315
Neptune	-4825-12-31 01:26 J	-40543.51	-40543.44	-40543.30	0.0088	0.0081
Jupiter	-4813-06-04 07:40 J	-36370.42	-36370.18	-36369.95	0.0523	0.0047

Uranus	-4812-05-26 09:21 J	-36014.21	-36014.11	-36013.98	0.0135	0.0120
Saturn	-4812-06-28 01:26 J	-35981.66	-35981.44	-35981.21	0.0281	0.0113
Uranus	-4811-05-30 22:04 J	-35644.77	-35644.58	-35644.37	0.0135	0.0086
Uranus	-4810-06-04 09:50 J	-35275.32	-35275.09	-35274.85	0.0134	0.0051
Uranus	-4809-06-07 21:07 J	-34905.88	-34905.62	-34905.36	0.0134	0.0017
Uranus	-4808-06-12 07:26 J	-34536.45	-34536.19	-34535.93	0.0134	0.0017
Jupiter	-4808-11-24 15:36 J	-34370.98	-34370.85	-34370.70	0.0505	0.0398
Uranus	-4807-06-16 16:47 J	-34167.03	-34166.80	-34166.55	0.0134	0.0051
Uranus	-4806-06-21 01:40 J	-33797.61	-33797.43	-33797.21	0.0133	0.0083
Uranus	-4805-06-24 10:19 J	-33428.18	-33428.07	-33427.92	0.0133	0.0116
Jupiter	-4801-06-09 12:28 J	-31982.12	-31981.98	-31981.83	0.0525	0.0412
Saturn	-4799-12-25 21:21 J	-31052.76	-31052.61	-31052.45	0.0279	0.0218
Jupiter	-4796-11-29 01:11 J	-29983.67	-29983.45	-29983.22	0.0503	0.0098
Jupiter	-4784-12-03 10:33 J	-25596.27	-25596.06	-25595.84	0.0503	0.0199
Saturn	-4783-06-22 10:48 J	-25395.20	-25395.05	-25394.87	0.0280	0.0205
Jupiter	-4772-12-07 22:04 J	-21208.59	-21208.58	-21208.56	0.0501	0.0499
Saturn	-4770-12-20 13:55 J	-20466.15	-20465.92	-20465.68	0.0281	0.0084
Uranus	-4769-11-20 04:33 J	-20130.36	-20130.31	-20130.26	0.0143	0.0140
Uranus	-4768-11-24 23:31 J	-19760.69	-19760.52	-19760.33	0.0144	0.0101
Uranus	-4767-11-29 19:26 J	-19390.90	-19390.69	-19390.45	0.0144	0.0061
Uranus	-4766-12-04 16:33 J	-19021.06	-19020.81	-19020.56	0.0144	0.0020
Uranus	-4765-12-08 13:55 J	-18651.16	-18650.92	-18650.67	0.0145	0.0022
Uranus	-4764-12-13 12:14 J	-18281.21	-18280.99	-18280.75	0.0145	0.0064
Uranus	-4763-12-18 11:02 J	-17911.19	-17911.04	-17910.85	0.0145	0.0107
Saturn	-4753-06-29 09:35 J	-14430.26	-14430.10	-14429.91	0.0282	0.0195
Mars	-4748-10-24 03:35 J	-12487.50	-12487.35	-12487.19	0.1641	0.0932
Neptune	-4746-06-26 03:35 J	-11877.50	-11877.35	-11877.16	0.0089	0.0066
Neptune	-4745-06-27 16:48 J	-11510.04	-11509.80	-11509.56	0.0089	0.0034
Neptune	-4744-06-30 05:16 J	-11142.54	-11142.28	-11142.02	0.0089	0.0003
Neptune	-4743-07-02 17:31 J	-10775.01	-10774.77	-10774.52	0.0089	0.0029

Jupiter	-4742-05-30 10:04 J	-10443.24	-10443.08	-10442.90	0.0522	0.0359
Neptune	-4742-07-05 06:14 J	-10407.43	-10407.24	-10407.05	0.0089	0.0060
Jupiter	-4730-06-04 12:14 J	-6055.23	-6054.99	-6054.75	0.0523	0.0006
Uranus	-4728-05-26 20:09 J	-5332.77	-5332.66	-5332.50	0.0135	0.0115
Pluto	-4728-11-17 23:45 J	-5157.68	-5157.51	-5157.28	0.0066	0.0041
Uranus	-4727-05-31 08:38 J	-4963.33	-4963.14	-4962.91	0.0135	0.0081
Pluto	-4727-11-19 12:14 J	-4791.08	-4790.99	-4790.86	0.0066	0.0060
Uranus	-4726-06-04 20:24 J	-4593.88	-4593.65	-4593.39	0.0134	0.0047
Uranus	-4725-06-08 07:55 J	-4224.43	-4224.17	-4223.92	0.0134	0.0012
Jupiter	-4725-11-23 20:52 J	-4055.73	-4055.63	-4055.52	0.0505	0.0449
Uranus	-4724-06-12 18:00 J	-3855.00	-3854.75	-3854.49	0.0134	0.0022
Saturn	-4724-06-23 20:52 J	-3843.85	-3843.63	-3843.40	0.0280	0.0120
Uranus	-4723-06-17 03:36 J	-3485.58	-3485.35	-3485.11	0.0134	0.0055
Uranus	-4722-06-21 12:43 J	-3116.16	-3115.97	-3115.77	0.0133	0.0087
Uranus	-4721-06-24 21:21 J	-2746.71	-2746.61	-2746.49	0.0133	0.0119
Jupiter	-4718-06-09 12:43 J	-1667.14	-1666.97	-1666.79	0.0524	0.0345
Jupiter	-4713-11-28 08:52 J	331.65	331.87	332.09	0.0504	0.0144
Saturn	-4711-12-21 18:57 J	1085.05	1085.29	1085.54	0.0281	0.0011
Mars	-4707-04-25 18:43 J	2306.12	2306.28	2306.44	0.1885	0.1149
Jupiter	-4701-12-02 19:55 J	4719.12	4719.33	4719.55	0.0503	0.0160
Jupiter	-4689-12-07 03:07 J	9106.54	9106.63	9106.74	0.0501	0.0450
Uranus	-4685-11-20 17:16 J	10551.14	10551.22	10551.32	0.0143	0.0134
Uranus	-4684-11-25 12:28 J	10920.84	10921.02	10921.22	0.0144	0.0095
Uranus	-4683-11-30 08:24 J	11290.63	11290.85	11291.09	0.0144	0.0055
Uranus	-4682-12-05 05:16 J	11660.48	11660.72	11660.98	0.0144	0.0015
Uranus	-4681-12-09 02:52 J	12030.38	12030.62	12030.87	0.0145	0.0027
Uranus	-4680-12-14 01:11 J	12400.34	12400.55	12400.78	0.0145	0.0069
Uranus	-4679-12-19 00:00 J	12770.36	12770.50	12770.68	0.0145	0.0112
Mars	-4669-10-26 04:48 J	16369.52	16369.70	16369.88	0.1638	0.0240
Saturn	-4665-06-25 09:50 J	17707.67	17707.91	17708.16	0.0281	0.0029

Neptune	-4665-12-21 15:36 J	17886.98	17887.15	17887.35	0.0089	0.0060
Neptune	-4664-12-24 02:52 J	18254.38	18254.62	18254.86	0.0089	0.0029
Neptune	-4663-12-26 13:26 J	18621.81	18622.06	18622.32	0.0089	0.0002
Neptune	-4662-12-29 00:00 J	18989.27	18989.50	18989.75	0.0088	0.0033
Neptune	-4661-12-30 10:48 J	19356.78	19356.95	19357.14	0.0088	0.0063
Jupiter	-4659-05-29 09:07 J	19871.75	19871.88	19872.02	0.0521	0.0425
Saturn	-4652-12-23 04:33 J	22636.46	22636.69	22636.93	0.0280	0.0073
Jupiter	-4647-06-03 05:02 J	24259.48	24259.71	24259.94	0.0522	0.0090
Uranus	-4644-05-27 06:28 J	25348.63	25348.77	25348.93	0.0135	0.0109
Uranus	-4643-05-31 18:43 J	25718.08	25718.28	25718.51	0.0135	0.0076
Uranus	-4642-06-05 06:28 J	26087.53	26087.77	26088.02	0.0134	0.0041
Jupiter	-4642-11-24 03:36 J	26259.61	26259.65	26259.70	0.0506	0.0493
Uranus	-4641-06-08 17:45 J	26456.98	26457.24	26457.50	0.0134	0.0007
Pluto	-4640-05-22 17:31 J	26804.97	26805.23	26805.50	0.0079	0.0003
Uranus	-4640-06-13 03:50 J	26826.41	26826.66	26826.92	0.0134	0.0026
Uranus	-4639-06-17 13:11 J	27195.84	27196.05	27196.30	0.0133	0.0060
Uranus	-4638-06-21 22:33 J	27565.27	27565.44	27565.64	0.0133	0.0092
Uranus	-4637-06-25 07:26 J	27934.73	27934.81	27934.91	0.0133	0.0123
Jupiter	-4635-06-08 07:11 J	28647.59	28647.80	28648.00	0.0524	0.0263
Jupiter	-4630-11-28 11:45 J	30646.78	30646.99	30647.20	0.0504	0.0198
Saturn	-4623-12-17 21:21 J	33223.26	33223.39	33223.53	0.0283	0.0236
Jupiter	-4618-12-02 20:52 J	35034.14	35034.37	35034.59	0.0503	0.0098
Saturn	-4606-06-28 01:40 J	39259.34	39259.57	39259.82	0.0281	0.0070
Jupiter	-4606-12-07 04:47 J	39421.56	39421.70	39421.85	0.0502	0.0388
Uranus	-4601-11-21 03:36 J	41232.56	41232.65	41232.78	0.0143	0.0129
Uranus	-4600-11-25 22:47 J	41602.28	41602.45	41602.67	0.0144	0.0090
Uranus	-4599-11-30 18:57 J	41972.07	41972.29	41972.54	0.0144	0.0051
Uranus	-4598-12-05 16:04 J	42341.92	42342.17	42342.42	0.0144	0.0009
Uranus	-4597-12-09 13:26 J	42711.83	42712.06	42712.32	0.0145	0.0033
Uranus	-4596-12-14 12:00 J	43081.79	43082.00	43082.23	0.0145	0.0074

Uranus	-4595-12-19 10:47 J	43451.82	43451.95	43452.12	0.0145	0.0117
Saturn	-4593-12-24 17:31 J	44188.03	44188.23	44188.43	0.0280	0.0163
Mars	-4590-10-29 05:45 J	45226.64	45226.74	45226.83	0.1636	0.1404
Neptune	-4582-06-25 11:45 J	48022.91	48022.99	48023.11	0.0089	0.0082
Neptune	-4581-06-27 00:14 J	48390.32	48390.51	48390.74	0.0089	0.0051
Neptune	-4580-06-29 12:57 J	48757.80	48758.04	48758.30	0.0089	0.0020
Neptune	-4579-07-02 01:40 J	49125.31	49125.57	49125.83	0.0089	0.0012
Neptune	-4578-07-04 13:40 J	49492.87	49493.07	49493.32	0.0089	0.0044
Saturn	-4577-06-21 20:23 J	49846.22	49846.35	49846.51	0.0279	0.0226
Neptune	-4577-07-06 02:09 J	49860.47	49860.59	49860.75	0.0089	0.0075
Jupiter	-4576-05-28 01:55 J	50186.53	50186.58	50186.64	0.0520	0.0505
Jupiter	-4564-06-02 04:47 J	54574.47	54574.70	54574.93	0.0522	0.0154
Saturn	-4564-12-19 13:12 J	54774.84	54775.05	54775.27	0.0282	0.0137
Uranus	-4560-05-27 17:16 J	56030.08	56030.22	56030.41	0.0135	0.0104
Uranus	-4559-06-01 05:45 J	56399.53	56399.74	56399.97	0.0135	0.0070
Uranus	-4558-06-05 17:31 J	56768.99	56769.23	56769.49	0.0134	0.0036
Uranus	-4557-06-09 04:47 J	57138.44	57138.70	57138.95	0.0134	0.0003
Uranus	-4556-06-13 14:52 J	57507.87	57508.12	57508.37	0.0134	0.0031
Uranus	-4555-06-18 00:28 J	57877.30	57877.52	57877.75	0.0133	0.0064
Uranus	-4554-06-22 09:36 J	58246.74	58246.90	58247.09	0.0133	0.0097
Uranus	-4553-06-25 18:14 J	58616.21	58616.26	58616.35	0.0133	0.0128
Jupiter	-4552-06-07 06:43 J	58962.57	58962.78	58963.01	0.0523	0.0197
Saturn	-4547-06-29 18:28 J	60811.08	60811.27	60811.47	0.0282	0.0168
Jupiter	-4547-11-27 11:31 J	60961.79	60961.98	60962.18	0.0505	0.0264
Mars	-4543-10-23 07:12 J	62387.78	62387.80	62387.83	0.1646	0.1629
Jupiter	-4535-12-01 22:19 J	65349.20	65349.43	65349.66	0.0504	0.0036
Saturn	-4534-12-27 08:52 J	65739.79	65739.87	65739.96	0.0279	0.0258
Jupiter	-4523-12-06 08:09 J	69736.68	69736.84	69737.02	0.0503	0.0335
Saturn	-4518-06-24 13:12 J	71397.84	71398.05	71398.28	0.0280	0.0128
Uranus	-4517-11-21 12:57 J	71913.92	71914.04	71914.17	0.0143	0.0124

Uranus	-4516-11-26 08:09 J	72283.64	72283.84	72284.04	0.0144	0.0085
Uranus	-4515-12-01 03:50 J	72653.43	72653.66	72653.91	0.0144	0.0045
Uranus	-4514-12-06 00:43 J	73023.28	73023.53	73023.78	0.0144	0.0005
Uranus	-4513-12-09 22:19 J	73393.19	73393.43	73393.68	0.0145	0.0037
Uranus	-4512-12-14 20:52 J	73763.16	73763.37	73763.58	0.0145	0.0078
Uranus	-4511-12-19 19:55 J	74133.20	74133.33	74133.48	0.0145	0.0120
Saturn	-4505-12-21 06:14 J	76326.52	76326.76	76327.00	0.0281	0.0037
Neptune	-4501-12-21 01:12 J	77787.45	77787.55	77787.71	0.0089	0.0076
Neptune	-4500-12-23 12:28 J	78154.80	78155.02	78155.24	0.0089	0.0045
Neptune	-4499-12-25 23:02 J	78522.22	78522.46	78522.72	0.0089	0.0015
Neptune	-4498-12-28 09:50 J	78889.67	78889.91	78890.17	0.0088	0.0016
Neptune	-4497-12-29 20:38 J	79257.15	79257.36	79257.59	0.0088	0.0047
Neptune	-4495-01-01 06:57 J	79624.70	79624.79	79624.94	0.0088	0.0078
Saturn	-4488-07-01 10:19 J	82362.86	82362.93	82363.02	0.0283	0.0267
Pluto	-4482-11-20 07:26 J	84695.57	84695.81	84696.07	0.0066	0.0014
Jupiter	-4481-06-01 01:40 J	84889.36	84889.57	84889.79	0.0521	0.0227
Uranus	-4477-05-23 12:57 J	86342.02	86342.04	86342.10	0.0135	0.0134
Uranus	-4476-05-28 02:09 J	86711.43	86711.59	86711.77	0.0135	0.0100
Uranus	-4475-06-01 14:24 J	87080.89	87081.10	87081.34	0.0135	0.0066
Uranus	-4474-06-06 02:09 J	87450.35	87450.59	87450.85	0.0134	0.0033
Uranus	-4473-06-09 13:26 J	87819.80	87820.06	87820.32	0.0134	0.0002
Uranus	-4472-06-13 23:45 J	88189.25	88189.49	88189.74	0.0134	0.0035
Uranus	-4471-06-18 09:35 J	88558.68	88558.90	88559.13	0.0133	0.0068
Uranus	-4470-06-22 18:43 J	88928.13	88928.28	88928.46	0.0133	0.0100
Jupiter	-4469-06-05 23:16 J	89277.24	89277.47	89277.70	0.0522	0.0111
Uranus	-4469-06-26 03:50 J	89297.63	89297.66	89297.70	0.0133	0.0131
Mars	-4464-10-25 09:21 J	91244.71	91244.89	91245.07	0.1643	0.0426
Jupiter	-4464-11-26 14:09 J	91276.91	91277.09	91277.27	0.0506	0.0321
Saturn	-4459-06-26 03:50 J	92949.41	92949.66	92949.90	0.0281	0.0035
Jupiter	-4457-06-11 00:00 J	93665.40	93665.50	93665.62	0.0524	0.0461

Jupiter	-4452-11-30 22:33 J	95664.21	95664.44	95664.67	0.0504	0.0029
Saturn	-4446-12-23 23:02 J	97878.22	97878.46	97878.70	0.0281	0.0064
Jupiter	-4440-12-05 08:09 J	100051.65	100051.84	100052.04	0.0502	0.0269
Uranus	-4433-11-21 20:52 J	102595.24	102595.37	102595.51	0.0143	0.0120
Uranus	-4432-11-26 15:50 J	102964.96	102965.16	102965.37	0.0144	0.0081
Uranus	-4431-12-01 11:45 J	103334.75	103334.99	103335.23	0.0144	0.0041
Uranus	-4430-12-06 08:24 J	103704.60	103704.85	103705.10	0.0144	0.0001
Uranus	-4429-12-10 05:45 J	104074.51	104074.74	104074.99	0.0145	0.0041
Uranus	-4428-12-15 03:50 J	104444.47	104444.66	104444.89	0.0145	0.0082
Uranus	-4427-12-20 02:38 J	104814.50	104814.61	104814.77	0.0145	0.0123
Neptune	-4417-06-26 09:35 J	108290.74	108290.90	108291.08	0.0089	0.0066
Saturn	-4417-12-17 16:33 J	108465.07	108465.19	108465.33	0.0283	0.0240
Neptune	-4416-06-28 22:04 J	108658.19	108658.42	108658.67	0.0089	0.0035
Neptune	-4415-07-01 10:47 J	109025.69	109025.95	109026.21	0.0089	0.0004
Neptune	-4414-07-03 23:16 J	109393.23	109393.47	109393.72	0.0089	0.0027
Neptune	-4413-07-05 11:16 J	109760.80	109760.97	109761.19	0.0089	0.0059
Saturn	-4400-06-27 15:21 J	114500.90	114501.14	114501.39	0.0281	0.0054
Jupiter	-4398-05-31 21:07 J	115204.19	115204.38	115204.57	0.0521	0.0302
Pluto	-4394-05-25 01:12 J	116658.35	116658.55	116658.79	0.0079	0.0042
Uranus	-4393-05-23 20:38 J	117023.31	117023.36	117023.45	0.0136	0.0130
Uranus	-4392-05-28 09:50 J	117392.75	117392.91	117393.11	0.0135	0.0096
Uranus	-4391-06-01 22:33 J	117762.22	117762.44	117762.68	0.0135	0.0062
Uranus	-4390-06-06 10:19 J	118131.69	118131.93	118132.20	0.0134	0.0029
Uranus	-4389-06-09 21:50 J	118501.15	118501.41	118501.67	0.0134	0.0006
Uranus	-4388-06-14 08:09 J	118870.60	118870.84	118871.09	0.0134	0.0039
Uranus	-4387-06-18 18:14 J	119240.05	119240.26	119240.49	0.0134	0.0072
Saturn	-4387-12-25 12:43 J	119429.84	119430.03	119430.24	0.0280	0.0158
Jupiter	-4386-06-05 22:33 J	119592.21	119592.44	119592.68	0.0523	0.0045
Uranus	-4386-06-23 03:50 J	119609.51	119609.66	119609.83	0.0133	0.0104
Mars	-4385-10-27 10:47 J	120101.78	120101.95	120102.11	0.1641	0.0751

Jupiter	-4381-11-25 16:19 J	121592.03	121592.18	121592.33	0.0505	0.0380
Jupiter	-4374-06-11 01:55 J	123980.44	123980.58	123980.74	0.0524	0.0399
Saturn	-4371-06-22 00:43 J	125087.44	125087.53	125087.62	0.0279	0.0259
Jupiter	-4369-11-30 01:12 J	125979.32	125979.55	125979.78	0.0504	0.0086
Saturn	-4358-12-20 04:19 J	130016.48	130016.68	130016.89	0.0282	0.0149
Jupiter	-4357-12-04 11:16 J	130366.76	130366.97	130367.18	0.0503	0.0211
Uranus	-4349-11-22 06:14 J	133276.63	133276.76	133276.92	0.0143	0.0115
Uranus	-4348-11-27 01:11 J	133646.35	133646.55	133646.77	0.0143	0.0077
Uranus	-4347-12-01 21:07 J	134016.14	134016.38	134016.62	0.0144	0.0037
Uranus	-4346-12-06 17:45 J	134385.99	134386.24	134386.49	0.0144	0.0003
Uranus	-4345-12-10 14:52 J	134755.90	134756.12	134756.37	0.0144	0.0045
Mars	-4344-04-28 10:19 J	134894.77	134894.93	134895.09	0.1884	0.1165
Uranus	-4344-12-15 13:11 J	135125.85	135126.05	135126.26	0.0145	0.0085
Uranus	-4343-12-20 11:45 J	135495.88	135495.99	135496.13	0.0145	0.0126
Saturn	-4341-06-28 23:31 J	136052.27	136052.48	136052.70	0.0281	0.0134
Neptune	-4336-12-22 22:19 J	138055.26	138055.43	138055.63	0.0089	0.0061
Neptune	-4335-12-25 08:52 J	138422.65	138422.87	138423.13	0.0089	0.0031
Neptune	-4334-12-27 20:09 J	138790.08	138790.34	138790.60	0.0089	0.0000
Neptune	-4333-12-29 06:43 J	139157.55	139157.78	139158.03	0.0088	0.0031
Neptune	-4332-12-31 17:31 J	139525.06	139525.23	139525.43	0.0088	0.0061
Saturn	-4328-12-26 22:48 J	140981.35	140981.45	140981.58	0.0280	0.0243
Jupiter	-4315-05-31 00:00 J	145519.33	145519.50	145519.67	0.0521	0.0360
Saturn	-4312-06-23 06:28 J	146638.59	146638.77	146638.96	0.0279	0.0183
Uranus	-4309-05-24 02:24 J	147704.54	147704.60	147704.72	0.0136	0.0127
Uranus	-4308-05-28 16:04 J	148073.99	148074.17	148074.37	0.0135	0.0092
Uranus	-4307-06-02 04:48 J	148443.48	148443.70	148443.94	0.0135	0.0059
Uranus	-4306-06-06 17:16 J	148812.96	148813.22	148813.47	0.0134	0.0025
Uranus	-4305-06-10 04:19 J	149182.43	149182.68	149182.94	0.0134	0.0010
Uranus	-4304-06-14 15:07 J	149551.89	149552.13	149552.38	0.0134	0.0042
Jupiter	-4303-06-05 02:24 J	149907.36	149907.60	149907.84	0.0522	0.0011

Uranus	-4303-06-19 01:26 J	149921.36	149921.56	149921.78	0.0134	0.0075
Uranus	-4302-06-23 11:02 J	150290.82	150290.96	150291.13	0.0133	0.0107
Saturn	-4299-12-21 11:31 J	151567.74	151567.98	151568.22	0.0282	0.0069
Jupiter	-4298-11-25 20:38 J	151907.25	151907.36	151907.49	0.0506	0.0433
Jupiter	-4291-06-10 02:09 J	154295.41	154295.59	154295.78	0.0523	0.0333
Jupiter	-4286-11-30 07:26 J	156294.59	156294.81	156295.03	0.0505	0.0134
Saturn	-4282-07-01 02:52 J	157603.46	157603.62	157603.80	0.0282	0.0206
Jupiter	-4274-12-04 17:45 J	160682.02	160682.24	160682.46	0.0503	0.0161
Uranus	-4265-11-22 17:02 J	163958.06	163958.21	163958.38	0.0143	0.0110
Uranus	-4264-11-27 11:45 J	164327.79	164327.99	164328.22	0.0143	0.0072
Uranus	-4263-12-02 07:40 J	164697.59	164697.82	164698.07	0.0144	0.0033
Uranus	-4262-12-07 04:33 J	165067.44	165067.69	165067.94	0.0144	0.0008
Jupiter	-4262-12-09 04:33 J	165069.60	165069.69	165069.79	0.0502	0.0457
Uranus	-4261-12-11 01:40 J	165437.34	165437.57	165437.81	0.0144	0.0049
Uranus	-4260-12-15 23:31 J	165807.30	165807.48	165807.69	0.0145	0.0090
Mars	-4259-10-24 12:43 J	166119.89	166120.03	166120.16	0.1650	0.1124
Uranus	-4259-12-20 22:04 J	166177.33	166177.42	166177.55	0.0145	0.0130
Saturn	-4253-06-24 08:24 J	168189.64	168189.85	168190.09	0.0279	0.0116
Neptune	-4253-06-25 18:28 J	168191.20	168191.27	168191.41	0.0089	0.0082
Neptune	-4252-06-28 07:55 J	168558.62	168558.83	168559.05	0.0089	0.0050
Neptune	-4251-06-30 20:38 J	168926.11	168926.36	168926.61	0.0089	0.0019
Neptune	-4250-07-03 09:07 J	169293.63	169293.88	169294.14	0.0089	0.0012
Neptune	-4249-07-04 21:07 J	169661.18	169661.38	169661.63	0.0089	0.0043
Neptune	-4248-07-07 09:21 J	170028.78	170028.89	170029.06	0.0089	0.0074
Saturn	-4240-12-22 14:24 J	173118.86	173119.10	173119.35	0.0282	0.0006
Pluto	-4236-11-21 16:48 J	174548.96	174549.20	174549.45	0.0066	0.0019
Jupiter	-4232-05-30 04:04 J	175834.53	175834.67	175834.82	0.0520	0.0411
Uranus	-4225-05-24 10:33 J	178385.83	178385.94	178386.05	0.0136	0.0122
Uranus	-4224-05-29 00:00 J	178755.31	178755.50	178755.70	0.0135	0.0088
Uranus	-4223-06-02 12:43 J	179124.81	179125.03	179125.28	0.0135	0.0055

Saturn	-4223-07-02 02:52 J	179154.56	179154.62	179154.70	0.0282	0.0270
Uranus	-4222-06-07 01:11 J	179494.30	179494.55	179494.81	0.0134	0.0021
Uranus	-4221-06-10 12:43 J	179863.77	179864.03	179864.29	0.0134	0.0013
Jupiter	-4220-06-04 05:16 J	180222.49	180222.72	180222.96	0.0522	0.0067
Uranus	-4220-06-14 23:31 J	180233.25	180233.48	180233.73	0.0134	0.0046
Uranus	-4219-06-19 09:50 J	180602.72	180602.91	180603.13	0.0134	0.0079
Uranus	-4218-06-23 19:40 J	180972.19	180972.32	180972.48	0.0133	0.0111
Jupiter	-4215-11-25 05:45 J	182222.67	182222.74	182222.83	0.0506	0.0475
Jupiter	-4208-06-09 05:45 J	184610.55	184610.74	184610.95	0.0524	0.0276
Jupiter	-4203-11-29 18:28 J	186610.05	186610.27	186610.48	0.0504	0.0170
Saturn	-4194-06-26 07:40 J	189740.58	189740.82	189741.07	0.0279	0.0054
Jupiter	-4191-12-04 03:50 J	190997.44	190997.66	190997.88	0.0503	0.0123
Uranus	-4182-11-19 10:33 J	194269.93	194269.94	194269.97	0.0143	0.0142
Uranus	-4181-11-23 04:33 J	194639.54	194639.69	194639.88	0.0143	0.0105
Saturn	-4181-12-23 12:57 J	194669.81	194670.04	194670.28	0.0282	0.0062
Mars	-4180-10-26 14:52 J	194976.93	194977.12	194977.30	0.1647	0.0084
Uranus	-4180-11-27 23:31 J	195009.27	195009.48	195009.72	0.0143	0.0067
Uranus	-4179-12-02 19:40 J	195379.08	195379.32	195379.57	0.0144	0.0027
Jupiter	-4179-12-08 13:40 J	195384.95	195385.07	195385.20	0.0502	0.0417
Uranus	-4178-12-07 16:19 J	195748.93	195749.18	195749.43	0.0144	0.0013
Uranus	-4177-12-11 13:55 J	196118.84	196119.08	196119.31	0.0144	0.0054
Uranus	-4176-12-16 11:16 J	196488.80	196488.97	196489.17	0.0145	0.0095
Uranus	-4175-12-21 10:19 J	196858.84	196858.93	196859.02	0.0145	0.0134
Neptune	-4172-12-22 09:50 J	197955.80	197955.91	197956.07	0.0089	0.0076
Neptune	-4171-12-24 20:24 J	198323.16	198323.35	198323.59	0.0089	0.0046
Neptune	-4170-12-27 07:26 J	198690.56	198690.81	198691.07	0.0089	0.0015
Neptune	-4169-12-28 18:00 J	199058.01	199058.25	199058.51	0.0089	0.0015
Neptune	-4168-12-31 04:19 J	199425.48	199425.68	199425.92	0.0088	0.0046
Neptune	-4166-01-02 15:07 J	199793.02	199793.13	199793.29	0.0088	0.0076
Saturn	-4152-12-18 01:40 J	205256.46	205256.57	205256.68	0.0284	0.0253

Jupiter	-4149-05-29 07:55 J	206149.73	206149.83	206149.94	0.0521	0.0466
Uranus	-4141-05-24 18:28 J	209067.16	209067.27	209067.41	0.0136	0.0118
Uranus	-4140-05-29 08:24 J	209436.65	209436.85	209437.05	0.0135	0.0084
Uranus	-4139-06-02 21:07 J	209806.14	209806.38	209806.62	0.0135	0.0050
Uranus	-4138-06-07 09:21 J	210175.64	210175.89	210176.15	0.0134	0.0017
Jupiter	-4137-06-03 12:14 J	210537.78	210538.01	210538.24	0.0522	0.0114
Uranus	-4137-06-10 20:52 J	210545.11	210545.37	210545.63	0.0134	0.0017
Uranus	-4136-06-15 07:40 J	210914.59	210914.82	210915.07	0.0134	0.0050
Uranus	-4135-06-19 18:00 J	211284.06	211284.25	211284.47	0.0134	0.0083
Saturn	-4135-06-27 04:48 J	211291.45	211291.70	211291.94	0.0279	0.0005
Uranus	-4134-06-24 03:50 J	211653.54	211653.66	211653.80	0.0133	0.0114
Jupiter	-4132-11-24 18:14 J	212538.24	212538.26	212538.28	0.0506	0.0504
Jupiter	-4125-06-08 16:48 J	214926.00	214926.20	214926.42	0.0523	0.0242
Saturn	-4122-12-25 08:24 J	216220.64	216220.85	216221.08	0.0282	0.0116
Jupiter	-4120-11-29 04:48 J	216925.49	216925.70	216925.91	0.0505	0.0206
Jupiter	-4108-12-03 15:21 J	221312.91	221313.14	221313.37	0.0504	0.0089
Mars	-4101-10-28 16:48 J	223834.08	223834.20	223834.32	0.1644	0.1273
Uranus	-4098-11-19 21:07 J	224951.33	224951.38	224951.47	0.0143	0.0137
Uranus	-4097-11-23 15:50 J	225320.99	225321.16	225321.35	0.0143	0.0099
Uranus	-4096-11-28 10:48 J	225690.73	225690.95	225691.18	0.0143	0.0061
Jupiter	-4096-12-08 02:52 J	225700.47	225700.62	225700.77	0.0502	0.0383
Uranus	-4095-12-03 06:43 J	226060.54	226060.78	226061.04	0.0144	0.0022
Uranus	-4094-12-08 03:21 J	226430.40	226430.64	226430.90	0.0144	0.0019
Uranus	-4093-12-12 00:43 J	226800.30	226800.53	226800.76	0.0144	0.0059
Saturn	-4093-12-18 19:40 J	226807.16	226807.32	226807.50	0.0284	0.0201
Uranus	-4092-12-16 22:33 J	227170.26	227170.44	227170.63	0.0145	0.0099
Uranus	-4091-12-21 20:52 J	227540.32	227540.37	227540.45	0.0145	0.0139
Neptune	-4088-06-27 17:02 J	228459.06	228459.21	228459.41	0.0089	0.0066
Neptune	-4087-06-30 06:00 J	228826.53	228826.75	228827.01	0.0089	0.0035
Neptune	-4086-07-02 18:57 J	229194.03	229194.29	229194.55	0.0089	0.0004

Neptune	-4085-07-04 07:26 J	229561.57	229561.81	229562.06	0.0089	0.0027
Neptune	-4084-07-06 19:55 J	229929.15	229929.33	229929.54	0.0089	0.0058
Neptune	-4083-07-09 08:09 J	230296.84	230296.84	230296.88	0.0089	0.0089
Saturn	-4076-06-28 00:43 J	232842.29	232842.53	232842.77	0.0279	0.0058
Jupiter	-4066-05-29 19:55 J	236465.27	236465.33	236465.41	0.0520	0.0494
Saturn	-4063-12-26 02:38 J	237771.42	237771.61	237771.81	0.0282	0.0166
Mars	-4060-04-27 12:14 J	238624.81	238625.01	238625.21	0.1878	0.0333
Uranus	-4057-05-25 04:19 J	239748.55	239748.68	239748.83	0.0135	0.0112
Uranus	-4056-05-29 18:00 J	240118.05	240118.25	240118.47	0.0135	0.0078
Uranus	-4055-06-03 06:43 J	240487.55	240487.78	240488.04	0.0135	0.0045
Jupiter	-4054-06-03 22:19 J	240853.20	240853.43	240853.65	0.0521	0.0151
Uranus	-4054-06-07 19:11 J	240857.04	240857.30	240857.56	0.0134	0.0011
Uranus	-4053-06-11 06:28 J	241226.53	241226.77	241227.04	0.0134	0.0022
Uranus	-4052-06-15 17:31 J	241596.01	241596.23	241596.48	0.0134	0.0055
Uranus	-4051-06-20 03:35 J	241965.47	241965.65	241965.86	0.0134	0.0087
Uranus	-4050-06-24 12:57 J	242334.95	242335.04	242335.19	0.0133	0.0119
Saturn	-4047-06-22 09:35 J	243428.80	243428.90	243428.99	0.0277	0.0254
Jupiter	-4042-06-09 00:00 J	245241.28	245241.50	245241.72	0.0523	0.0196
Jupiter	-4037-11-28 18:28 J	247241.07	247241.27	247241.48	0.0505	0.0236
Saturn	-4034-12-20 13:26 J	248357.86	248358.06	248358.27	0.0284	0.0151
Jupiter	-4025-12-03 07:11 J	251628.57	251628.80	251629.03	0.0503	0.0066
Saturn	-4017-06-28 21:50 J	254393.19	254393.41	254393.64	0.0279	0.0115
Uranus	-4014-11-20 06:57 J	255632.70	255632.79	255632.89	0.0143	0.0131
Uranus	-4013-11-24 00:57 J	256002.37	256002.54	256002.74	0.0143	0.0094
Jupiter	-4013-12-07 16:04 J	256016.01	256016.17	256016.34	0.0502	0.0355
Uranus	-4012-11-28 20:09 J	256372.12	256372.34	256372.58	0.0143	0.0056
Uranus	-4011-12-03 16:19 J	256741.93	256742.18	256742.43	0.0144	0.0016
Uranus	-4010-12-08 12:43 J	257111.79	257112.03	257112.28	0.0144	0.0023
Uranus	-4009-12-12 09:50 J	257481.70	257481.91	257482.15	0.0145	0.0064
Uranus	-4008-12-17 07:26 J	257851.66	257851.81	257852.00	0.0145	0.0104

Uranus	-4007-12-22 06:14 J	258221.74	258221.76	258221.81	0.0145	0.0144
Neptune	-4007-12-24 08:38 J	258223.68	258223.86	258224.05	0.0089	0.0060
Neptune	-4006-12-26 18:57 J	258591.06	258591.29	258591.55	0.0089	0.0030
Neptune	-4005-12-28 05:45 J	258958.49	258958.74	258959.00	0.0089	0.0001
Saturn	-4004-12-26 20:24 J	259322.19	259322.35	259322.50	0.0282	0.0216
Neptune	-4004-12-30 16:19 J	259325.94	259326.18	259326.43	0.0089	0.0030
Neptune	-4002-01-02 03:07 J	259693.45	259693.63	259693.82	0.0088	0.0060

4TH MILLENNIUM BCE

This is a list of transits of Earth in the 4th millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Pluto	-3991-11-22 10:33 J		264035.83	264035.94	264036.11	0.0066	0.0055	
Pluto	-3990-11-23 22:48 J		264402.29	264402.45	264402.67	0.0066	0.0045	
Saturn	-3988-06-23 06:28 J		264979.61	264979.77	264979.95	0.0277	0.0198	
Mars	-3975-10-25 18:28 J		269852.10	269852.27	269852.45	0.1653	0.0608	
Saturn	-3975-12-21 07:55 J		269908.60	269908.83	269909.06	0.0284	0.0100	
Uranus	-3973-05-25 13:11 J		270429.92	270430.05	270430.23	0.0135	0.0108	
Uranus	-3972-05-30 03:21 J		270799.43	270799.64	270799.86	0.0135	0.0073	
Jupiter	-3971-06-03 00:43 J		271168.32	271168.53	271168.75	0.0522	0.0208	
Uranus	-3971-06-03 16:04 J		271168.93	271169.17	271169.42	0.0135	0.0040	
Uranus	-3970-06-08 04:33 J		271538.43	271538.69	271538.94	0.0134	0.0007	
Uranus	-3969-06-11 15:50 J		271907.91	271908.16	271908.41	0.0134	0.0026	
Uranus	-3968-06-16 02:38 J		272277.38	272277.61	272277.85	0.0134	0.0059	

Uranus	-3967-06-20 12:28 J	272646.85	272647.02	272647.22	0.0134	0.0091
Uranus	-3966-06-24 22:04 J	273016.33	273016.42	273016.53	0.0133	0.0122
Jupiter	-3959-06-08 05:16 J	275556.49	275556.72	275556.94	0.0523	0.0145
Saturn	-3958-06-30 20:52 J	275944.18	275944.37	275944.57	0.0279	0.0176
Jupiter	-3954-11-29 07:40 J	277556.62	277556.82	277557.02	0.0505	0.0262
Jupiter	-3947-06-13 10:33 J	279944.87	279944.94	279945.01	0.0525	0.0501
Saturn	-3945-12-27 15:36 J	280873.09	280873.15	280873.23	0.0282	0.0269
Jupiter	-3942-12-03 17:31 J	281944.00	281944.23	281944.46	0.0504	0.0032
Uranus	-3930-11-20 14:23 J	286314.00	286314.10	286314.22	0.0143	0.0127
Jupiter	-3930-12-08 03:07 J	286331.45	286331.63	286331.81	0.0503	0.0319
Saturn	-3929-06-24 06:57 J	286530.58	286530.79	286531.01	0.0277	0.0134
Uranus	-3929-11-24 08:23 J	286683.68	286683.85	286684.07	0.0143	0.0090
Uranus	-3928-11-29 03:36 J	287053.42	287053.65	287053.89	0.0143	0.0051
Uranus	-3927-12-03 23:31 J	287423.23	287423.48	287423.73	0.0144	0.0012
Uranus	-3926-12-08 19:55 J	287793.08	287793.33	287793.58	0.0144	0.0027
Uranus	-3925-12-12 17:02 J	288162.99	288163.21	288163.43	0.0145	0.0067
Neptune	-3924-06-27 03:21 J	288359.55	288359.64	288359.77	0.0089	0.0080
Uranus	-3924-12-17 14:23 J	288532.95	288533.10	288533.29	0.0145	0.0107
Neptune	-3923-06-29 16:33 J	288726.98	288727.19	288727.41	0.0089	0.0049
Neptune	-3922-07-02 05:16 J	289094.47	289094.72	289094.98	0.0089	0.0019
Neptune	-3921-07-03 18:14 J	289462.01	289462.26	289462.52	0.0089	0.0012
Neptune	-3920-07-06 06:28 J	289829.56	289829.77	289830.01	0.0089	0.0043
Neptune	-3919-07-08 18:57 J	290197.17	290197.29	290197.46	0.0089	0.0074
Saturn	-3916-12-22 03:50 J	291459.43	291459.66	291459.91	0.0284	0.0045
Pluto	-3903-05-26 16:04 J	295997.97	295998.17	295998.40	0.0079	0.0043
Saturn	-3899-07-01 23:16 J	297495.36	297495.47	297495.60	0.0279	0.0244
Mars	-3896-10-27 20:23 J	298709.17	298709.35	298709.52	0.1650	0.0598
Uranus	-3889-05-25 22:04 J	301111.27	301111.42	301111.60	0.0135	0.0103
Uranus	-3888-05-30 11:45 J	301480.78	301480.99	301481.23	0.0135	0.0070
Jupiter	-3888-06-02 10:33 J	301483.73	301483.94	301484.15	0.0521	0.0242

Uranus	-3887-06-04 00:43 J	301850.29	301850.53	301850.79	0.0135	0.0036
Uranus	-3886-06-08 12:57 J	302219.79	302220.04	302220.30	0.0134	0.0004
Uranus	-3885-06-12 00:28 J	302589.27	302589.52	302589.77	0.0134	0.0030
Uranus	-3884-06-16 11:02 J	302958.75	302958.96	302959.20	0.0134	0.0063
Uranus	-3883-06-20 20:52 J	303328.21	303328.37	303328.57	0.0134	0.0095
Uranus	-3882-06-25 06:14 J	303697.70	303697.76	303697.87	0.0133	0.0126
Jupiter	-3876-06-07 12:57 J	305871.81	305872.04	305872.28	0.0523	0.0103
Jupiter	-3871-11-28 16:04 J	307871.99	307872.17	307872.35	0.0506	0.0304
Saturn	-3870-06-26 10:33 J	308081.70	308081.94	308082.18	0.0277	0.0065
Jupiter	-3864-06-12 14:23 J	310259.98	310260.10	310260.22	0.0524	0.0446
Jupiter	-3859-12-03 04:33 J	312259.46	312259.69	312259.92	0.0504	0.0006
Saturn	-3857-12-23 03:50 J	313010.41	313010.66	313010.90	0.0284	0.0019
Jupiter	-3847-12-07 15:50 J	316646.98	316647.16	316647.35	0.0503	0.0290
Uranus	-3846-11-20 22:04 J	316995.30	316995.42	316995.55	0.0143	0.0123
Uranus	-3845-11-24 15:50 J	317364.97	317365.16	317365.37	0.0143	0.0086
Uranus	-3844-11-29 10:48 J	317734.72	317734.95	317735.19	0.0143	0.0048
Uranus	-3843-12-04 06:28 J	318104.52	318104.77	318105.02	0.0144	0.0009
Neptune	-3843-12-23 20:23 J	318124.24	318124.35	318124.52	0.0089	0.0075
Uranus	-3842-12-09 02:23 J	318474.36	318474.60	318474.85	0.0144	0.0031
Neptune	-3842-12-26 07:11 J	318491.59	318491.80	318492.04	0.0089	0.0045
Uranus	-3841-12-12 23:16 J	318844.27	318844.47	318844.70	0.0145	0.0071
Neptune	-3841-12-27 18:00 J	318859.00	318859.25	318859.50	0.0089	0.0015
Uranus	-3840-12-17 20:52 J	319214.22	319214.37	319214.55	0.0145	0.0110
Neptune	-3840-12-30 04:19 J	319226.44	319226.68	319226.95	0.0089	0.0016
Neptune	-3838-01-01 14:52 J	319593.91	319594.12	319594.35	0.0089	0.0045
Neptune	-3837-01-04 01:26 J	319961.44	319961.56	319961.71	0.0088	0.0075
Saturn	-3811-06-27 18:00 J	329633.01	329633.25	329633.50	0.0278	0.0015
Uranus	-3806-05-22 13:40 J	331423.05	331423.07	331423.15	0.0136	0.0133
Uranus	-3805-05-26 04:19 J	331792.53	331792.68	331792.88	0.0136	0.0100
Jupiter	-3805-06-01 12:43 J	331798.84	331799.03	331799.23	0.0521	0.0297

Uranus	-3804-05-30 18:43 J	332162.05	332162.28	332162.51	0.0135	0.0065
Uranus	-3803-06-04 07:26 J	332531.56	332531.81	332532.06	0.0135	0.0032
Uranus	-3802-06-08 19:40 J	332901.06	332901.32	332901.58	0.0135	0.0002
Uranus	-3801-06-12 07:11 J	333270.55	333270.80	333271.05	0.0134	0.0034
Uranus	-3800-06-16 17:45 J	333640.03	333640.24	333640.48	0.0134	0.0066
Uranus	-3799-06-21 03:36 J	334009.50	334009.65	334009.85	0.0134	0.0098
Uranus	-3798-06-25 13:26 J	334379.00	334379.06	334379.14	0.0133	0.0128
Saturn	-3798-12-25 07:26 J	334561.58	334561.81	334562.04	0.0283	0.0089
Jupiter	-3793-06-06 09:07 J	336186.64	336186.88	336187.11	0.0522	0.0029
Jupiter	-3788-11-28 02:23 J	338187.44	338187.60	338187.78	0.0506	0.0338
Saturn	-3782-06-22 13:11 J	340220.02	340220.05	340220.10	0.0275	0.0271
Jupiter	-3781-06-11 11:45 J	340574.83	340574.99	340575.16	0.0524	0.0375
Mars	-3776-04-26 17:45 J	342355.04	342355.24	342355.44	0.1871	0.0353
Jupiter	-3776-12-02 11:16 J	342574.74	342574.97	342575.20	0.0504	0.0049
Mars	-3770-10-24 20:09 J	344727.23	344727.34	344727.44	0.1660	0.1353
Saturn	-3769-12-18 18:00 J	345148.12	345148.25	345148.39	0.0286	0.0236
Jupiter	-3764-12-06 20:23 J	346962.15	346962.35	346962.55	0.0503	0.0238
Uranus	-3762-11-21 06:43 J	347676.65	347676.78	347676.92	0.0143	0.0119
Uranus	-3761-11-25 00:28 J	348046.33	348046.52	348046.74	0.0143	0.0082
Uranus	-3760-11-29 18:57 J	348416.07	348416.29	348416.54	0.0143	0.0045
Neptune	-3759-06-29 02:09 J	348627.43	348627.59	348627.78	0.0089	0.0064
Uranus	-3759-12-04 14:52 J	348785.87	348786.12	348786.37	0.0144	0.0006
Neptune	-3758-07-01 14:52 J	348994.90	348995.12	348995.38	0.0089	0.0034
Uranus	-3758-12-09 10:48 J	349155.71	349155.95	349156.19	0.0144	0.0034
Neptune	-3757-07-03 04:04 J	349362.41	349362.67	349362.93	0.0089	0.0003
Uranus	-3757-12-13 07:26 J	349525.61	349525.81	349526.04	0.0144	0.0074
Neptune	-3756-07-05 16:48 J	349729.96	349730.20	349730.46	0.0089	0.0028
Uranus	-3756-12-18 05:02 J	349895.57	349895.71	349895.88	0.0145	0.0113
Neptune	-3755-07-08 05:16 J	350097.54	350097.72	350097.93	0.0089	0.0058
Neptune	-3754-07-10 18:14 J	350465.24	350465.26	350465.29	0.0089	0.0088

Saturn	-3752-06-29 05:31 J	351184.50	351184.73	351184.97	0.0278	0.0100
Pluto	-3745-11-23 18:28 J	353889.04	353889.27	353889.50	0.0066	0.0028
Saturn	-3739-12-26 15:36 J	356112.97	356113.15	356113.36	0.0283	0.0170
Saturn	-3723-06-24 01:55 J	361771.41	361771.58	361771.77	0.0276	0.0184
Uranus	-3722-05-22 20:38 J	362104.30	362104.36	362104.45	0.0136	0.0129
Jupiter	-3722-06-01 07:40 J	362113.66	362113.82	362113.99	0.0520	0.0370
Uranus	-3721-05-26 11:02 J	362473.80	362473.96	362474.16	0.0136	0.0096
Uranus	-3720-05-31 00:57 J	362843.33	362843.54	362843.79	0.0135	0.0063
Uranus	-3719-06-04 14:09 J	363212.84	363213.09	363213.35	0.0135	0.0029
Uranus	-3718-06-09 02:38 J	363582.35	363582.61	363582.87	0.0135	0.0005
Uranus	-3717-06-12 13:55 J	363951.84	363952.08	363952.34	0.0134	0.0037
Uranus	-3716-06-17 00:43 J	364321.33	364321.53	364321.77	0.0134	0.0069
Uranus	-3715-06-21 11:02 J	364690.80	364690.96	364691.13	0.0134	0.0100
Uranus	-3714-06-25 20:52 J	365060.33	365060.37	365060.42	0.0134	0.0131
Jupiter	-3710-06-06 11:16 J	366501.73	366501.97	366502.21	0.0522	0.0026
Saturn	-3710-12-21 05:02 J	366699.51	366699.71	366699.92	0.0285	0.0148
Jupiter	-3705-11-27 04:33 J	368502.55	368502.69	368502.83	0.0506	0.0393
Jupiter	-3698-06-11 13:40 J	370889.88	370890.07	370890.26	0.0523	0.0315
Saturn	-3693-06-30 19:26 J	372736.14	372736.31	372736.50	0.0279	0.0193
Jupiter	-3693-12-01 12:57 J	372889.82	372890.04	372890.27	0.0505	0.0108
Mars	-3691-10-26 23:31 J	373584.30	373584.48	373584.67	0.1656	0.0105
Jupiter	-3681-12-06 00:00 J	377277.28	377277.50	377277.71	0.0504	0.0184
Saturn	-3680-12-28 03:50 J	377664.56	377664.66	377664.75	0.0282	0.0258
Neptune	-3679-12-23 09:07 J	378024.87	378024.88	378024.92	0.0089	0.0088
Uranus	-3678-11-21 16:04 J	378358.05	378358.17	378358.34	0.0143	0.0115
Neptune	-3678-12-25 19:26 J	378392.14	378392.31	378392.52	0.0089	0.0059
Uranus	-3677-11-25 10:33 J	378727.73	378727.94	378728.15	0.0143	0.0077
Neptune	-3677-12-27 06:28 J	378759.53	378759.77	378760.01	0.0089	0.0029
Uranus	-3676-11-30 05:02 J	379097.47	379097.71	379097.96	0.0143	0.0040
Neptune	-3676-12-29 17:02 J	379126.96	379127.21	379127.47	0.0089	0.0001

Uranus	-3675-12-05 00:43 J	379467.28	379467.53	379467.78	0.0144	0.0003
Neptune	-3674-01-01 03:21 J	379494.41	379494.64	379494.90	0.0089	0.0031
Uranus	-3674-12-09 20:23 J	379837.11	379837.35	379837.60	0.0144	0.0038
Neptune	-3673-01-03 13:55 J	379861.90	379862.08	379862.28	0.0089	0.0060
Uranus	-3673-12-13 17:16 J	380207.02	380207.22	380207.44	0.0144	0.0078
Uranus	-3672-12-18 14:38 J	380576.98	380577.11	380577.28	0.0145	0.0117
Jupiter	-3669-12-10 10:04 J	381664.85	381664.92	381665.00	0.0502	0.0473
Saturn	-3664-06-25 16:48 J	383322.97	383323.20	383323.44	0.0277	0.0092
Pluto	-3657-05-28 02:23 J	385851.34	385851.60	385851.86	0.0079	0.0004
Saturn	-3651-12-22 20:09 J	388251.11	388251.34	388251.58	0.0285	0.0051
Jupiter	-3639-05-31 08:38 J	392428.73	392428.86	392428.99	0.0520	0.0429
Uranus	-3638-05-23 03:50 J	392785.58	392785.66	392785.78	0.0136	0.0125
Uranus	-3637-05-26 18:28 J	393155.09	393155.27	393155.47	0.0136	0.0092
Uranus	-3636-05-31 08:09 J	393524.62	393524.84	393525.09	0.0135	0.0059
Uranus	-3635-06-04 21:07 J	393894.13	393894.38	393894.64	0.0135	0.0025
Uranus	-3634-06-09 09:36 J	394263.64	394263.90	394264.16	0.0135	0.0008
Uranus	-3633-06-12 20:52 J	394633.13	394633.37	394633.62	0.0134	0.0040
Uranus	-3632-06-17 07:40 J	395002.61	395002.82	395003.05	0.0134	0.0072
Uranus	-3631-06-21 17:31 J	395372.09	395372.23	395372.42	0.0134	0.0104
Jupiter	-3627-06-05 08:23 J	396816.62	396816.85	396817.09	0.0521	0.0096
Jupiter	-3622-11-27 05:31 J	398817.64	398817.73	398817.84	0.0507	0.0454
Jupiter	-3615-06-10 05:16 J	401204.51	401204.72	401204.93	0.0522	0.0230
Mars	-3612-10-29 01:55 J	402441.44	402441.58	402441.71	0.1653	0.1121
Jupiter	-3610-12-01 16:19 J	403204.97	403205.18	403205.40	0.0506	0.0161
Saturn	-3605-06-27 08:23 J	404874.60	404874.85	404875.10	0.0277	0.0002
Jupiter	-3598-12-06 00:43 J	407592.31	407592.53	407592.76	0.0504	0.0123
Neptune	-3595-06-28 12:14 J	408527.92	408528.01	408528.16	0.0089	0.0079
Neptune	-3594-07-01 01:26 J	408895.36	408895.56	408895.79	0.0089	0.0048
Uranus	-3594-11-22 02:23 J	409039.47	409039.60	409039.78	0.0143	0.0110
Neptune	-3593-07-02 14:23 J	409262.85	409263.10	409263.36	0.0089	0.0018

Uranus	-3593-11-25 20:52 J	409409.16	409409.37	409409.59	0.0143	0.0072
Neptune	-3592-07-05 03:07 J	409630.38	409630.63	409630.89	0.0089	0.0013
Uranus	-3592-11-30 15:36 J	409778.91	409779.15	409779.39	0.0143	0.0035
Saturn	-3592-12-24 12:57 J	409802.80	409803.04	409803.28	0.0284	0.0050
Neptune	-3591-07-07 15:36 J	409997.94	409998.15	409998.39	0.0089	0.0043
Uranus	-3591-12-05 11:02 J	410148.71	410148.96	410149.21	0.0144	0.0004
Neptune	-3590-07-10 04:33 J	410365.55	410365.69	410365.84	0.0089	0.0073
Uranus	-3590-12-10 06:57 J	410518.56	410518.79	410519.03	0.0144	0.0043
Uranus	-3589-12-14 04:04 J	410888.47	410888.67	410888.88	0.0144	0.0082
Uranus	-3588-12-19 01:40 J	411258.44	411258.57	411258.71	0.0145	0.0121
Jupiter	-3586-12-10 09:36 J	411979.78	411979.90	411980.05	0.0502	0.0409
Saturn	-3563-12-19 05:45 J	420389.64	420389.74	420389.84	0.0286	0.0257
Jupiter	-3556-05-30 01:55 J	422743.53	422743.58	422743.63	0.0519	0.0505
Uranus	-3554-05-23 12:43 J	423466.93	423467.03	423467.17	0.0136	0.0120
Uranus	-3553-05-27 03:07 J	423836.45	423836.63	423836.85	0.0136	0.0087
Uranus	-3552-05-31 16:48 J	424205.97	424206.20	424206.45	0.0135	0.0054
Uranus	-3551-06-05 05:45 J	424575.49	424575.74	424576.00	0.0135	0.0020
Uranus	-3550-06-09 18:00 J	424945.00	424945.25	424945.51	0.0135	0.0012
Uranus	-3549-06-13 05:31 J	425314.48	425314.73	425314.97	0.0134	0.0045
Uranus	-3548-06-17 16:19 J	425683.97	425684.18	425684.40	0.0134	0.0076
Uranus	-3547-06-22 02:09 J	426053.46	426053.59	426053.76	0.0134	0.0108
Saturn	-3546-06-29 23:02 J	426426.22	426426.46	426426.69	0.0278	0.0094
Jupiter	-3544-06-04 01:26 J	427131.34	427131.56	427131.79	0.0520	0.0176
Saturn	-3533-12-26 05:45 J	431354.54	431354.74	431354.95	0.0283	0.0151
Jupiter	-3532-06-09 03:21 J	431519.42	431519.64	431519.87	0.0522	0.0163
Jupiter	-3527-11-30 16:48 J	433519.99	433520.20	433520.41	0.0506	0.0223
Jupiter	-3520-06-14 06:28 J	435907.72	435907.77	435907.84	0.0524	0.0504
Saturn	-3517-06-23 12:14 J	437012.85	437013.01	437013.19	0.0276	0.0205
Jupiter	-3515-12-05 01:11 J	437907.32	437907.55	437907.78	0.0504	0.0060
Neptune	-3514-12-25 07:40 J	438292.69	438292.82	438292.97	0.0089	0.0073

Neptune	-3513-12-26 18:00 J	438660.05	438660.25	438660.49	0.0089	0.0044
Neptune	-3512-12-29 04:48 J	439027.46	439027.70	439027.97	0.0089	0.0015
Uranus	-3511-11-17 18:57 J	439351.27	439351.29	439351.35	0.0142	0.0140
Neptune	-3511-12-31 15:21 J	439394.90	439395.14	439395.40	0.0089	0.0016
Uranus	-3510-11-22 12:28 J	439720.86	439721.02	439721.20	0.0143	0.0104
Neptune	-3509-01-03 01:55 J	439762.37	439762.58	439762.81	0.0089	0.0045
Uranus	-3509-11-26 06:28 J	440090.55	440090.77	440090.99	0.0143	0.0067
Neptune	-3508-01-04 12:14 J	440129.90	440130.01	440130.17	0.0088	0.0075
Uranus	-3508-12-01 01:11 J	440460.31	440460.55	440460.80	0.0143	0.0030
Uranus	-3507-12-05 20:52 J	440830.12	440830.37	440830.62	0.0144	0.0009
Uranus	-3506-12-10 16:48 J	441199.97	441200.20	441200.44	0.0144	0.0048
Uranus	-3505-12-14 14:09 J	441569.89	441570.09	441570.29	0.0144	0.0087
Uranus	-3504-12-19 11:31 J	441939.88	441939.98	441940.12	0.0145	0.0126
Saturn	-3504-12-20 21:07 J	441941.19	441941.38	441941.59	0.0285	0.0159
Jupiter	-3503-12-09 10:48 J	442294.79	442294.95	442295.12	0.0503	0.0347
Pluto	-3499-11-25 23:31 J	443742.23	443742.48	443742.74	0.0066	0.0009
Mars	-3492-04-26 00:00 J	446085.33	446085.50	446085.67	0.1864	0.0982
Saturn	-3487-07-01 10:33 J	447977.76	447977.94	447978.14	0.0279	0.0182
Mars	-3486-10-26 00:28 J	448459.36	448459.52	448459.68	0.1664	0.0855
Saturn	-3474-12-28 21:21 J	452906.28	452906.39	452906.51	0.0283	0.0249
Uranus	-3470-05-23 22:48 J	454148.31	454148.45	454148.59	0.0136	0.0114
Uranus	-3469-05-27 12:28 J	454517.83	454518.02	454518.24	0.0135	0.0082
Uranus	-3468-06-01 02:09 J	454887.36	454887.59	454887.84	0.0135	0.0048
Uranus	-3467-06-05 14:52 J	455256.87	455257.12	455257.38	0.0135	0.0016
Uranus	-3466-06-10 02:52 J	455626.37	455626.62	455626.89	0.0134	0.0018
Uranus	-3465-06-13 14:09 J	455995.86	455996.09	455996.34	0.0134	0.0049
Uranus	-3464-06-18 00:43 J	456365.35	456365.53	456365.76	0.0134	0.0081
Uranus	-3463-06-22 11:02 J	456734.84	456734.96	456735.12	0.0134	0.0112
Jupiter	-3461-06-03 02:09 J	457446.38	457446.59	457446.80	0.0521	0.0238
Saturn	-3458-06-25 22:48 J	458564.23	458564.45	458564.68	0.0276	0.0121

Jupiter	-3449-06-08 03:50 J	461834.43	461834.66	461834.90	0.0522	0.0099
Saturn	-3445-12-22 10:48 J	463492.72	463492.95	463493.19	0.0285	0.0064
Jupiter	-3444-11-29 18:14 J	463835.08	463835.26	463835.46	0.0506	0.0283
Jupiter	-3437-06-13 02:38 J	466222.48	466222.61	466222.75	0.0523	0.0429
Jupiter	-3432-12-04 04:48 J	468222.47	468222.70	468222.93	0.0505	0.0010
Neptune	-3430-06-30 11:31 J	468795.82	468795.98	468796.19	0.0089	0.0063
Neptune	-3429-07-02 00:14 J	469163.28	469163.51	469163.77	0.0089	0.0033
Saturn	-3428-07-02 19:55 J	469529.25	469529.33	469529.41	0.0279	0.0263
Neptune	-3428-07-04 13:26 J	469530.80	469531.06	469531.32	0.0089	0.0002
Neptune	-3427-07-07 01:55 J	469898.34	469898.58	469898.84	0.0089	0.0028
Uranus	-3427-11-18 03:07 J	470032.57	470032.63	470032.72	0.0142	0.0136
Neptune	-3426-07-09 14:38 J	470265.92	470266.11	470266.31	0.0089	0.0058
Uranus	-3426-11-22 20:23 J	470402.18	470402.35	470402.54	0.0143	0.0100
Neptune	-3425-07-11 03:21 J	470633.62	470633.64	470633.68	0.0089	0.0088
Uranus	-3425-11-26 14:23 J	470771.89	470772.10	470772.34	0.0143	0.0063
Uranus	-3424-12-01 09:21 J	471141.65	471141.89	471142.14	0.0144	0.0025
Uranus	-3423-12-06 05:02 J	471511.46	471511.71	471511.96	0.0144	0.0013
Uranus	-3422-12-11 01:11 J	471881.32	471881.55	471881.79	0.0144	0.0052
Uranus	-3421-12-14 22:33 J	472251.25	472251.44	472251.64	0.0144	0.0091
Jupiter	-3420-12-08 14:09 J	472609.90	472610.09	472610.28	0.0503	0.0290
Uranus	-3420-12-19 20:09 J	472621.25	472621.34	472621.46	0.0145	0.0130
Pluto	-3411-05-30 06:00 J	475704.52	475704.75	475705.01	0.0079	0.0029
Mars	-3407-10-28 03:50 J	477316.48	477316.66	477316.84	0.1660	0.0407
Saturn	-3399-06-27 05:45 J	480115.50	480115.74	480115.99	0.0277	0.0044
Uranus	-3386-05-24 08:09 J	484829.70	484829.84	484830.01	0.0136	0.0109
Saturn	-3386-12-24 20:38 J	485044.12	485044.36	485044.60	0.0285	0.0023
Uranus	-3385-05-27 22:04 J	485199.23	485199.42	485199.65	0.0135	0.0077
Uranus	-3384-06-01 11:45 J	485568.74	485568.99	485569.23	0.0135	0.0044
Uranus	-3383-06-06 00:28 J	485938.26	485938.52	485938.77	0.0135	0.0011
Uranus	-3382-06-10 12:28 J	486307.77	486308.02	486308.28	0.0134	0.0021

Uranus	-3381-06-13 23:45 J	486677.26	486677.49	486677.73	0.0134	0.0053
Uranus	-3380-06-18 10:19 J	487046.75	487046.93	487047.15	0.0134	0.0085
Uranus	-3379-06-22 20:38 J	487416.25	487416.36	487416.50	0.0134	0.0116
Jupiter	-3378-06-03 02:09 J	487761.40	487761.59	487761.79	0.0520	0.0298
Jupiter	-3366-06-08 02:52 J	492149.38	492149.62	492149.85	0.0521	0.0034
Jupiter	-3361-11-28 23:45 J	494150.32	494150.49	494150.66	0.0506	0.0334
Jupiter	-3354-06-13 03:21 J	496537.48	496537.64	496537.81	0.0523	0.0366
Neptune	-3350-12-24 19:26 J	498193.28	498193.31	498193.38	0.0089	0.0087
Jupiter	-3349-12-03 12:00 J	498537.77	498538.00	498538.23	0.0505	0.0041
Neptune	-3349-12-26 06:14 J	498560.58	498560.76	498560.97	0.0089	0.0058
Neptune	-3348-12-28 16:48 J	498927.97	498928.20	498928.46	0.0089	0.0029
Neptune	-3347-12-31 03:50 J	499295.40	499295.66	499295.91	0.0089	0.0002
Neptune	-3345-01-02 14:09 J	499662.86	499663.09	499663.34	0.0089	0.0031
Neptune	-3344-01-04 00:28 J	500030.35	500030.52	500030.73	0.0089	0.0060
Uranus	-3343-11-18 10:04 J	500713.84	500713.92	500714.02	0.0142	0.0132
Uranus	-3342-11-23 03:21 J	501083.46	501083.64	501083.83	0.0143	0.0096
Uranus	-3341-11-26 21:21 J	501453.16	501453.39	501453.62	0.0143	0.0059
Saturn	-3340-06-28 09:50 J	501666.67	501666.91	501667.16	0.0277	0.0028
Uranus	-3340-12-01 15:50 J	501822.92	501823.16	501823.41	0.0143	0.0022
Uranus	-3339-12-06 11:31 J	502192.73	502192.98	502193.23	0.0144	0.0017
Uranus	-3338-12-11 07:55 J	502562.60	502562.83	502563.06	0.0144	0.0055
Jupiter	-3337-12-07 20:38 J	502925.16	502925.36	502925.57	0.0503	0.0244
Uranus	-3337-12-15 04:48 J	502932.53	502932.70	502932.91	0.0144	0.0095
Uranus	-3336-12-20 02:52 J	503302.53	503302.62	503302.73	0.0145	0.0133
Mars	-3328-10-30 06:28 J	506173.74	506173.77	506173.80	0.1657	0.1632
Saturn	-3327-12-26 01:55 J	506595.35	506595.58	506595.81	0.0284	0.0099
Saturn	-3311-06-23 00:00 J	512253.46	512253.50	512253.57	0.0275	0.0267
Uranus	-3302-05-24 16:19 J	515511.03	515511.18	515511.35	0.0136	0.0105
Uranus	-3301-05-28 06:14 J	515880.55	515880.76	515880.99	0.0136	0.0073
Uranus	-3300-06-01 19:26 J	516250.08	516250.31	516250.57	0.0135	0.0041

Uranus	-3299-06-06 08:23 J	516619.60	516619.85	516620.12	0.0135	0.0008
Uranus	-3298-06-10 20:38 J	516989.11	516989.36	516989.62	0.0134	0.0025
Saturn	-3298-12-20 15:21 J	517181.98	517182.14	517182.30	0.0287	0.0215
Uranus	-3297-06-14 07:55 J	517358.61	517358.83	517359.07	0.0134	0.0057
Uranus	-3296-06-18 18:43 J	517728.10	517728.28	517728.49	0.0134	0.0089
Jupiter	-3295-06-02 03:21 J	518076.47	518076.64	518076.82	0.0520	0.0359
Uranus	-3295-06-23 05:16 J	518097.61	518097.72	518097.84	0.0134	0.0119
Jupiter	-3283-06-07 07:26 J	522464.57	522464.81	522465.05	0.0522	0.0019
Saturn	-3281-06-29 10:33 J	523217.71	523217.94	523218.17	0.0277	0.0092
Mars	-3281-10-24 00:14 J	523334.48	523334.51	523334.54	0.1671	0.1644
Jupiter	-3278-11-29 09:07 J	524465.73	524465.88	524466.04	0.0506	0.0372
Jupiter	-3271-06-12 11:31 J	526852.80	526852.98	526853.17	0.0523	0.0324
Saturn	-3268-12-27 02:52 J	528146.43	528146.62	528146.83	0.0284	0.0167
Neptune	-3266-06-29 21:21 J	528696.28	528696.39	528696.54	0.0089	0.0077
Jupiter	-3266-12-03 19:40 J	528853.09	528853.32	528853.55	0.0505	0.0083
Neptune	-3265-07-01 10:19 J	529063.72	529063.93	529064.16	0.0089	0.0047
Neptune	-3264-07-03 23:16 J	529431.22	529431.47	529431.73	0.0089	0.0017
Neptune	-3263-07-06 12:00 J	529798.74	529799.00	529799.26	0.0089	0.0013
Neptune	-3262-07-09 00:28 J	530166.31	530166.52	530166.76	0.0089	0.0043
Neptune	-3261-07-10 12:43 J	530533.90	530534.03	530534.20	0.0089	0.0073
Uranus	-3259-11-18 17:02 J	531395.12	531395.21	531395.33	0.0142	0.0129
Uranus	-3258-11-23 10:19 J	531764.75	531764.93	531765.13	0.0143	0.0093
Uranus	-3257-11-27 04:04 J	532134.45	532134.67	532134.91	0.0143	0.0056
Uranus	-3256-12-01 23:02 J	532504.22	532504.46	532504.71	0.0143	0.0019
Uranus	-3255-12-06 18:43 J	532874.03	532874.28	532874.53	0.0144	0.0020
Jupiter	-3254-12-08 06:00 J	533240.54	533240.75	533240.96	0.0504	0.0203
Uranus	-3254-12-11 15:07 J	533243.90	533244.13	533244.36	0.0144	0.0059
Pluto	-3253-11-27 04:33 J	533595.45	533595.69	533595.95	0.0066	0.0011
Uranus	-3253-12-15 12:00 J	533613.83	533614.00	533614.20	0.0144	0.0097
Saturn	-3252-06-23 23:31 J	533804.33	533804.48	533804.65	0.0275	0.0206

Uranus	-3252-12-20 09:36 J	533983.83	533983.90	533984.00	0.0145	0.0136
Jupiter	-3242-12-12 16:47 J	537628.15	537628.20	537628.26	0.0502	0.0486
Saturn	-3239-12-21 14:38 J	538732.91	538733.11	538733.32	0.0287	0.0151
Saturn	-3222-07-01 09:07 J	544768.68	544768.88	544769.10	0.0276	0.0153
Uranus	-3219-05-20 08:09 J	545822.81	545822.84	545822.89	0.0136	0.0135
Uranus	-3218-05-24 23:02 J	546192.30	546192.46	546192.64	0.0136	0.0102
Uranus	-3217-05-28 13:26 J	546561.84	546562.06	546562.29	0.0136	0.0069
Uranus	-3216-06-02 02:52 J	546931.38	546931.62	546931.88	0.0135	0.0036
Uranus	-3215-06-06 16:04 J	547300.91	547301.17	547301.43	0.0135	0.0003
Uranus	-3214-06-11 04:19 J	547670.43	547670.68	547670.94	0.0134	0.0029
Uranus	-3213-06-14 15:36 J	548039.93	548040.15	548040.39	0.0134	0.0061
Jupiter	-3212-06-01 13:40 J	548391.92	548392.07	548392.23	0.0520	0.0391
Uranus	-3212-06-19 02:38 J	548409.44	548409.61	548409.82	0.0134	0.0092
Uranus	-3211-06-23 13:12 J	548778.97	548779.05	548779.17	0.0134	0.0123
Saturn	-3209-12-28 00:14 J	549697.37	549697.51	549697.66	0.0285	0.0225
Mars	-3208-04-25 06:43 J	549815.67	549815.78	549815.89	0.1857	0.1558
Mars	-3202-10-27 03:36 J	552191.47	552191.65	552191.83	0.1668	0.0369
Jupiter	-3200-06-06 15:36 J	552779.91	552780.15	552780.39	0.0521	0.0060
Jupiter	-3195-11-28 18:57 J	554781.16	554781.29	554781.43	0.0507	0.0409
Saturn	-3193-06-24 21:07 J	555355.17	555355.38	555355.59	0.0275	0.0149
Jupiter	-3188-06-11 17:02 J	557168.01	557168.21	557168.41	0.0522	0.0275
Neptune	-3185-12-25 17:31 J	558461.10	558461.23	558461.39	0.0089	0.0072
Neptune	-3184-12-28 04:04 J	558828.46	558828.67	558828.91	0.0089	0.0043
Jupiter	-3183-12-03 07:55 J	559168.60	559168.83	559169.05	0.0505	0.0117
Neptune	-3183-12-30 14:52 J	559195.87	559196.12	559196.38	0.0089	0.0014
Neptune	-3181-01-02 01:26 J	559563.32	559563.56	559563.82	0.0089	0.0016
Neptune	-3180-01-03 12:00 J	559930.80	559931.00	559931.24	0.0088	0.0045
Saturn	-3180-12-22 10:47 J	560283.72	560283.95	560284.18	0.0287	0.0095
Neptune	-3179-01-05 22:33 J	560298.32	560298.44	560298.60	0.0088	0.0074
Uranus	-3175-11-19 01:55 J	562076.47	562076.58	562076.71	0.0142	0.0124

Uranus	-3174-11-23 19:12 J	562446.11	562446.30	562446.50	0.0143	0.0089
Uranus	-3173-11-27 13:12 J	562815.82	562816.05	562816.29	0.0143	0.0052
Uranus	-3172-12-02 07:55 J	563185.58	563185.83	563186.08	0.0143	0.0014
Uranus	-3171-12-07 03:36 J	563555.40	563555.65	563555.90	0.0144	0.0024
Jupiter	-3171-12-07 20:23 J	563556.14	563556.35	563556.57	0.0504	0.0177
Uranus	-3170-12-11 23:45 J	563925.27	563925.49	563925.72	0.0144	0.0062
Uranus	-3169-12-15 20:52 J	564295.19	564295.37	564295.55	0.0144	0.0101
Uranus	-3168-12-20 18:14 J	564665.20	564665.26	564665.34	0.0145	0.0139
Pluto	-3165-05-31 11:45 J	565557.85	565557.99	565558.18	0.0079	0.0062
Saturn	-3163-07-02 06:43 J	566319.63	566319.78	566319.95	0.0276	0.0210
Jupiter	-3159-12-12 05:31 J	567943.64	567943.73	567943.83	0.0502	0.0458
Saturn	-3150-12-29 19:26 J	571248.28	571248.31	571248.37	0.0285	0.0279
Uranus	-3135-05-20 15:21 J	576504.07	576504.14	576504.21	0.0136	0.0131
Uranus	-3134-05-25 06:14 J	576873.59	576873.76	576873.95	0.0136	0.0098
Saturn	-3134-06-26 18:00 J	576906.02	576906.25	576906.49	0.0275	0.0093
Uranus	-3133-05-28 20:09 J	577243.13	577243.34	577243.58	0.0136	0.0066
Uranus	-3132-06-02 10:19 J	577612.68	577612.93	577613.18	0.0135	0.0032
Uranus	-3131-06-06 23:31 J	577982.22	577982.48	577982.73	0.0135	0.0002
Uranus	-3130-06-11 11:31 J	578351.74	578351.98	578352.24	0.0134	0.0033
Mars	-3129-04-28 17:31 J	578674.09	578674.23	578674.38	0.1863	0.1326
Jupiter	-3129-05-31 21:07 J	578707.25	578707.38	578707.51	0.0519	0.0431
Uranus	-3129-06-14 23:02 J	578721.25	578721.46	578721.71	0.0134	0.0065
Uranus	-3128-06-19 10:33 J	579090.77	579090.94	579091.13	0.0134	0.0095
Uranus	-3127-06-23 20:52 J	579460.30	579460.37	579460.48	0.0134	0.0126
Mars	-3123-10-29 07:40 J	581048.67	581048.82	581048.98	0.1664	0.0900
Saturn	-3121-12-23 04:33 J	581834.45	581834.69	581834.93	0.0287	0.0044
Jupiter	-3117-06-05 18:28 J	583095.04	583095.27	583095.50	0.0521	0.0115
Jupiter	-3112-11-28 11:02 J	585096.84	585096.96	585097.09	0.0507	0.0429
Jupiter	-3105-06-10 23:02 J	587483.25	587483.46	587483.67	0.0523	0.0226
Saturn	-3104-07-03 04:19 J	587870.63	587870.68	587870.76	0.0276	0.0266

Neptune	-3101-06-30 20:09 J	588964.16	588964.34	588964.53	0.0089	0.0061
Neptune	-3100-07-03 08:38 J	589331.64	589331.86	589332.12	0.0089	0.0032
Jupiter	-3100-12-02 21:21 J	589484.17	589484.39	589484.61	0.0505	0.0141
Neptune	-3099-07-05 21:50 J	589699.15	589699.41	589699.68	0.0089	0.0002
Neptune	-3098-07-08 10:04 J	590066.69	590066.92	590067.18	0.0089	0.0028
Neptune	-3097-07-09 22:33 J	590434.27	590434.44	590434.66	0.0089	0.0058
Neptune	-3096-07-12 11:31 J	590801.95	590801.98	590802.04	0.0089	0.0087
Uranus	-3091-11-19 12:14 J	592757.88	592758.01	592758.14	0.0142	0.0120
Uranus	-3090-11-24 05:02 J	593127.53	593127.71	593127.93	0.0143	0.0085
Uranus	-3089-11-27 23:16 J	593497.24	593497.47	593497.71	0.0143	0.0047
Uranus	-3088-12-02 18:14 J	593867.02	593867.26	593867.51	0.0143	0.0010
Jupiter	-3088-12-07 07:40 J	593871.60	593871.82	593872.04	0.0504	0.0144
Uranus	-3087-12-07 13:40 J	594236.84	594237.07	594237.33	0.0144	0.0029
Uranus	-3086-12-12 09:50 J	594606.71	594606.91	594607.15	0.0144	0.0068
Uranus	-3085-12-16 07:12 J	594976.63	594976.80	594976.98	0.0144	0.0105
Uranus	-3084-12-21 04:33 J	595346.67	595346.69	595346.74	0.0145	0.0143
Jupiter	-3076-12-11 17:02 J	598259.10	598259.21	598259.34	0.0503	0.0424
Saturn	-3075-06-27 15:36 J	598456.90	598457.15	598457.39	0.0275	0.0037
Saturn	-3062-12-24 22:47 J	603385.21	603385.45	603385.69	0.0287	0.0008
Uranus	-3051-05-20 23:45 J	607185.41	607185.49	607185.60	0.0136	0.0126
Uranus	-3050-05-25 14:23 J	607554.94	607555.10	607555.31	0.0136	0.0094
Uranus	-3049-05-29 05:16 J	607924.49	607924.72	607924.95	0.0136	0.0061
Uranus	-3048-06-02 18:57 J	608294.04	608294.29	608294.55	0.0135	0.0028
Uranus	-3047-06-07 08:09 J	608663.58	608663.84	608664.10	0.0135	0.0005
Jupiter	-3046-06-01 01:26 J	609022.47	609022.56	609022.65	0.0519	0.0480
Uranus	-3046-06-11 20:23 J	609033.11	609033.35	609033.61	0.0134	0.0037
Uranus	-3045-06-15 08:09 J	609402.63	609402.84	609403.07	0.0134	0.0069
Uranus	-3044-06-19 19:26 J	609772.15	609772.31	609772.49	0.0134	0.0099
Uranus	-3043-06-24 05:45 J	610141.70	610141.74	610141.82	0.0134	0.0130
Jupiter	-3034-06-06 06:00 J	613410.52	613410.75	613410.98	0.0521	0.0143

Jupiter	-3029-11-27 21:36 J	615412.31	615412.40	615412.50	0.0507	0.0461
Jupiter	-3022-06-11 08:52 J	617798.65	617798.87	617799.09	0.0522	0.0190
Neptune	-3021-12-25 05:02 J	618361.67	618361.71	618361.79	0.0089	0.0086
Neptune	-3020-12-27 15:21 J	618728.97	618729.14	618729.36	0.0089	0.0058
Neptune	-3019-12-30 01:55 J	619096.35	619096.58	619096.84	0.0089	0.0029
Neptune	-3017-01-01 12:57 J	619463.78	619464.04	619464.29	0.0089	0.0001
Jupiter	-3017-12-02 07:40 J	619799.61	619799.82	619800.04	0.0506	0.0177
Neptune	-3016-01-02 23:02 J	619831.23	619831.46	619831.71	0.0089	0.0030
Saturn	-3016-06-28 14:52 J	620007.87	620008.12	620008.37	0.0275	0.0023
Neptune	-3015-01-05 09:36 J	620198.73	620198.90	620199.11	0.0088	0.0059
Neptune	-3014-01-07 19:55 J	620566.32	620566.33	620566.40	0.0088	0.0088
Uranus	-3007-11-19 22:47 J	623439.31	623439.45	623439.61	0.0142	0.0114
Pluto	-3007-11-29 07:26 J	623448.58	623448.81	623449.06	0.0066	0.0024
Uranus	-3006-11-24 16:04 J	623808.98	623809.17	623809.39	0.0143	0.0079
Uranus	-3005-11-28 10:19 J	624178.70	624178.93	624179.18	0.0143	0.0042
Jupiter	-3005-12-06 20:23 J	624187.13	624187.35	624187.57	0.0504	0.0113
Uranus	-3004-12-03 05:31 J	624548.48	624548.73	624548.98	0.0143	0.0004
Uranus	-3003-12-08 00:57 J	624918.30	624918.54	624918.79	0.0144	0.0034
Saturn	-3003-12-25 18:00 J	624936.01	624936.25	624936.49	0.0286	0.0060
Uranus	-3002-12-12 21:21 J	625288.18	625288.39	625288.61	0.0144	0.0072
Uranus	-3001-12-16 18:14 J	625658.10	625658.26	625658.42	0.0144	0.0110

3RD MILLENNIUM BCE

This is a list of transits of Earth in the 3rd millennium BCE.

FROM	MAX-	C	START	MAX	END	SUNRAD	DEPTH	S
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TRANSIT

TIME

Mars	-2997-10-25 02:23 J	627066.47	627066.60	627066.74	0.1675	0.1178
Jupiter	-2993-12-11 08:09 J	628574.71	628574.84	628574.99	0.0503	0.0401
Saturn	-2987-06-23 07:12 J	630594.75	630594.80	630594.88	0.0272	0.0262
Saturn	-2974-12-19 19:26 J	635522.31	635522.31	635522.31	0.0289	0.0289
Uranus	-2967-05-21 09:36 J	637866.81	637866.90	637867.04	0.0136	0.0121
Uranus	-2966-05-26 01:12 J	638236.35	638236.55	638236.74	0.0136	0.0088
Uranus	-2965-05-29 15:21 J	638605.91	638606.14	638606.38	0.0135	0.0056
Uranus	-2964-06-03 05:02 J	638975.46	638975.71	638975.97	0.0135	0.0023
Jupiter	-2963-05-31 10:47 J	639337.92	639337.95	639337.99	0.0519	0.0513
Uranus	-2963-06-07 18:14 J	639345.01	639345.26	639345.52	0.0135	0.0010
Uranus	-2962-06-12 06:28 J	639714.53	639714.77	639715.02	0.0134	0.0042
Uranus	-2961-06-15 18:00 J	640084.05	640084.25	640084.48	0.0134	0.0073
Uranus	-2960-06-20 05:02 J	640453.57	640453.71	640453.89	0.0134	0.0104
Uranus	-2959-06-24 15:21 J	640823.14	640823.14	640823.18	0.0134	0.0134
Saturn	-2957-06-29 16:47 J	641558.97	641559.20	641559.44	0.0275	0.0089
Jupiter	-2951-06-05 11:16 J	643725.75	643725.97	643726.19	0.0520	0.0189
Jupiter	-2946-11-28 08:09 J	645727.80	645727.84	645727.89	0.0508	0.0496
Saturn	-2944-12-26 16:04 J	646486.96	646487.17	646487.40	0.0286	0.0119
Jupiter	-2939-06-10 07:55 J	648113.60	648113.83	648114.06	0.0522	0.0127
Neptune	-2937-06-30 04:33 J	648864.57	648864.69	648864.83	0.0089	0.0076
Neptune	-2936-07-02 17:16 J	649232.02	649232.22	649232.47	0.0089	0.0047
Neptune	-2935-07-05 06:28 J	649599.52	649599.77	649600.03	0.0089	0.0017
Neptune	-2934-07-07 19:12 J	649967.05	649967.30	649967.56	0.0089	0.0013
Jupiter	-2934-12-02 21:21 J	650115.18	650115.39	650115.60	0.0506	0.0202
Neptune	-2933-07-09 07:55 J	650334.61	650334.83	650335.06	0.0089	0.0042
Neptune	-2932-07-11 20:09 J	650702.21	650702.34	650702.52	0.0089	0.0072
Saturn	-2928-06-24 11:16 J	652145.81	652145.97	652146.16	0.0273	0.0194
Jupiter	-2927-06-15 11:16 J	652501.87	652501.97	652502.08	0.0524	0.0465

Uranus	-2923-11-20 08:38 J	654120.72	654120.86	654121.03	0.0142	0.0109
Uranus	-2922-11-25 02:23 J	654490.39	654490.60	654490.82	0.0143	0.0074
Jupiter	-2922-12-07 06:43 J	654502.55	654502.78	654503.01	0.0505	0.0081
Uranus	-2921-11-28 20:23 J	654860.12	654860.35	654860.60	0.0143	0.0037
Uranus	-2920-12-03 15:36 J	655229.90	655230.15	655230.41	0.0143	0.0003
Pluto	-2919-06-02 12:43 J	655410.99	655411.03	655411.14	0.0079	0.0076
Uranus	-2919-12-08 11:16 J	655599.73	655599.97	655600.21	0.0144	0.0038
Mars	-2918-10-28 06:14 J	655923.57	655923.76	655923.94	0.1672	0.0116
Uranus	-2918-12-13 07:26 J	655969.61	655969.81	655970.03	0.0144	0.0077
Uranus	-2917-12-17 04:04 J	656339.54	656339.67	656339.85	0.0145	0.0115
Saturn	-2915-12-20 19:55 J	657073.19	657073.33	657073.49	0.0289	0.0224
Jupiter	-2910-12-11 15:50 J	658890.01	658890.16	658890.33	0.0503	0.0360
Saturn	-2898-07-01 21:50 J	663110.22	663110.41	663110.62	0.0275	0.0160
Saturn	-2885-12-27 18:28 J	668038.10	668038.27	668038.46	0.0286	0.0187
Uranus	-2883-05-21 21:21 J	668548.27	668548.39	668548.55	0.0136	0.0115
Uranus	-2882-05-26 12:28 J	668917.82	668918.02	668918.23	0.0136	0.0082
Uranus	-2881-05-30 02:52 J	669287.39	669287.62	669287.87	0.0135	0.0050
Uranus	-2880-06-03 16:47 J	669656.94	669657.20	669657.45	0.0135	0.0017
Uranus	-2879-06-08 05:31 J	670026.48	670026.73	670026.99	0.0135	0.0015
Uranus	-2878-06-12 17:45 J	670396.00	670396.24	670396.49	0.0134	0.0047
Uranus	-2877-06-16 05:16 J	670765.52	670765.72	670765.94	0.0134	0.0078
Uranus	-2876-06-20 16:19 J	671135.03	671135.18	671135.33	0.0134	0.0108
Saturn	-2869-06-25 18:28 J	673697.05	673697.27	673697.50	0.0273	0.0119
Jupiter	-2868-06-04 09:36 J	674040.69	674040.90	674041.11	0.0520	0.0252
Jupiter	-2856-06-09 13:26 J	678428.83	678429.06	678429.30	0.0522	0.0083
Saturn	-2856-12-22 01:40 J	678624.37	678624.57	678624.79	0.0288	0.0147
Neptune	-2856-12-27 02:09 J	678629.46	678629.59	678629.76	0.0089	0.0072
Neptune	-2855-12-29 12:57 J	678996.83	678997.04	678997.27	0.0089	0.0043
Neptune	-2854-12-31 23:16 J	679364.22	679364.47	679364.73	0.0089	0.0014
Neptune	-2852-01-02 09:50 J	679731.66	679731.91	679732.17	0.0089	0.0014

Neptune	-2851-01-04 19:55 J	680099.13	680099.33	680099.57	0.0089	0.0044
Jupiter	-2851-12-02 02:38 J	680430.41	680430.61	680430.81	0.0506	0.0247
Neptune	-2850-01-07 06:43 J	680466.64	680466.78	680466.94	0.0088	0.0072
Mars	-2845-04-28 00:28 J	682404.33	682404.52	682404.71	0.1855	0.0720
Jupiter	-2844-06-14 16:19 J	682817.04	682817.18	682817.32	0.0523	0.0415
Uranus	-2840-11-16 01:12 J	684432.52	684432.55	684432.61	0.0142	0.0139
Saturn	-2839-07-03 07:12 J	684661.68	684661.80	684661.92	0.0276	0.0240
Mars	-2839-10-30 10:19 J	684780.83	684780.93	684781.03	0.1668	0.1382
Uranus	-2839-11-20 18:00 J	684802.09	684802.25	684802.43	0.0142	0.0105
Jupiter	-2839-12-06 11:31 J	684817.75	684817.98	684818.21	0.0505	0.0032
Uranus	-2838-11-25 11:16 J	685171.76	685171.97	685172.20	0.0143	0.0069
Uranus	-2837-11-29 05:31 J	685541.49	685541.73	685541.98	0.0143	0.0032
Uranus	-2836-12-04 00:43 J	685911.28	685911.53	685911.78	0.0144	0.0006
Uranus	-2835-12-08 19:55 J	686281.10	686281.33	686281.58	0.0144	0.0043
Uranus	-2834-12-13 16:33 J	686650.98	686651.19	686651.40	0.0144	0.0081
Uranus	-2833-12-17 12:57 J	687020.92	687021.04	687021.20	0.0145	0.0119
Jupiter	-2827-12-10 22:33 J	689205.27	689205.44	689205.63	0.0504	0.0315
Saturn	-2826-12-30 01:12 J	689589.47	689589.55	689589.65	0.0285	0.0264
Saturn	-2810-06-28 04:47 J	695248.46	695248.70	695248.95	0.0274	0.0038
Uranus	-2799-05-22 08:52 J	699229.72	699229.87	699230.03	0.0136	0.0110
Uranus	-2798-05-26 23:45 J	699599.29	699599.49	699599.71	0.0136	0.0077
Uranus	-2797-05-30 14:09 J	699968.86	699969.09	699969.34	0.0135	0.0045
Saturn	-2797-12-23 12:14 J	700175.77	700176.01	700176.25	0.0288	0.0060
Uranus	-2796-06-04 03:50 J	700338.41	700338.66	700338.92	0.0135	0.0012
Uranus	-2795-06-08 16:47 J	700707.95	700708.20	700708.46	0.0135	0.0020
Uranus	-2794-06-13 04:47 J	701077.46	701077.70	701077.94	0.0134	0.0052
Uranus	-2793-06-16 16:19 J	701446.98	701447.18	701447.39	0.0134	0.0082
Uranus	-2792-06-21 02:38 J	701816.50	701816.61	701816.77	0.0134	0.0113
Jupiter	-2785-06-03 12:43 J	704355.84	704356.03	704356.23	0.0520	0.0303
Jupiter	-2773-06-08 12:57 J	708743.81	708744.04	708744.28	0.0521	0.0023

Neptune	-2772-07-02 01:12 J	709132.39	709132.55	709132.77	0.0089	0.0062
Neptune	-2771-07-04 14:52 J	709499.88	709500.12	709500.37	0.0089	0.0032
Neptune	-2770-07-07 03:50 J	709867.40	709867.66	709867.92	0.0089	0.0002
Neptune	-2769-07-08 16:33 J	710234.95	710235.19	710235.44	0.0089	0.0027
Neptune	-2768-07-11 05:31 J	710602.53	710602.73	710602.93	0.0089	0.0056
Jupiter	-2768-12-01 06:14 J	710745.58	710745.76	710745.95	0.0507	0.0300
Neptune	-2767-07-13 18:00 J	710970.18	710970.25	710970.32	0.0089	0.0085
Pluto	-2762-11-29 22:19 J	712935.37	712935.43	712935.54	0.0065	0.0062
Jupiter	-2761-06-13 09:21 J	713131.72	713131.89	713132.08	0.0522	0.0337
Pluto	-2761-11-30 10:19 J	713301.74	713301.93	713302.16	0.0066	0.0037
Uranus	-2756-11-16 09:21 J	715113.82	715113.89	715113.97	0.0142	0.0135
Jupiter	-2756-12-05 17:31 J	715133.00	715133.23	715133.46	0.0506	0.0014
Uranus	-2755-11-21 01:40 J	715483.41	715483.57	715483.76	0.0142	0.0101
Uranus	-2754-11-25 19:12 J	715853.09	715853.30	715853.53	0.0143	0.0065
Uranus	-2753-11-29 13:12 J	716222.81	716223.05	716223.30	0.0143	0.0028
Uranus	-2752-12-04 08:09 J	716592.59	716592.84	716593.09	0.0144	0.0009
Saturn	-2751-06-29 18:14 J	716800.02	716800.26	716800.51	0.0275	0.0050
Uranus	-2751-12-09 03:36 J	716962.42	716962.65	716962.89	0.0144	0.0046
Uranus	-2750-12-13 23:31 J	717332.29	717332.48	717332.70	0.0144	0.0085
Uranus	-2749-12-17 20:23 J	717702.24	717702.35	717702.51	0.0145	0.0122
Jupiter	-2744-12-10 02:09 J	719520.39	719520.59	719520.78	0.0504	0.0262
Saturn	-2738-12-26 02:23 J	721727.36	721727.60	721727.85	0.0287	0.0036
Saturn	-2722-06-24 11:16 J	727386.85	727386.97	727387.10	0.0273	0.0235
Uranus	-2715-05-22 18:43 J	729911.14	729911.28	729911.46	0.0136	0.0106
Uranus	-2714-05-27 10:04 J	730280.71	730280.92	730281.15	0.0136	0.0072
Uranus	-2713-05-31 00:43 J	730650.29	730650.53	730650.78	0.0135	0.0040
Mars	-2713-10-26 04:04 J	730798.50	730798.67	730798.84	0.1680	0.0719
Uranus	-2712-06-04 14:23 J	731019.84	731020.10	731020.36	0.0135	0.0007
Uranus	-2711-06-09 03:07 J	731389.38	731389.63	731389.89	0.0135	0.0025
Uranus	-2710-06-13 15:21 J	731758.90	731759.14	731759.37	0.0134	0.0056

Uranus	-2709-06-17 02:23 J	732128.43	732128.60	732128.82	0.0134	0.0087
Saturn	-2709-12-19 16:47 J	732314.14	732314.20	732314.26	0.0289	0.0279
Uranus	-2708-06-21 12:57 J	732497.94	732498.04	732498.19	0.0134	0.0117
Jupiter	-2702-06-03 06:00 J	734670.59	734670.75	734670.92	0.0518	0.0377
Saturn	-2692-07-01 08:23 J	738351.65	738351.85	738352.07	0.0275	0.0140
Neptune	-2692-12-26 12:57 J	738529.99	738530.04	738530.10	0.0089	0.0086
Neptune	-2691-12-28 22:47 J	738897.28	738897.45	738897.66	0.0089	0.0058
Jupiter	-2690-06-08 06:00 J	739058.52	739058.75	739058.99	0.0520	0.0056
Neptune	-2690-12-31 09:07 J	739264.66	739264.88	739265.14	0.0089	0.0030
Neptune	-2688-01-01 19:55 J	739632.08	739632.33	739632.59	0.0089	0.0001
Neptune	-2687-01-04 06:00 J	739999.52	739999.75	740000.01	0.0089	0.0028
Neptune	-2686-01-06 16:04 J	740367.00	740367.17	740367.40	0.0088	0.0057
Neptune	-2685-01-09 02:38 J	740734.56	740734.61	740734.70	0.0088	0.0085
Jupiter	-2685-11-30 07:26 J	741060.66	741060.81	741060.98	0.0508	0.0358
Saturn	-2679-12-27 19:26 J	743279.10	743279.31	743279.53	0.0286	0.0138
Jupiter	-2678-06-13 08:23 J	743446.65	743446.85	743447.05	0.0522	0.0273
Jupiter	-2673-12-04 18:00 J	745448.03	745448.25	745448.48	0.0506	0.0074
Uranus	-2672-11-16 18:43 J	745795.20	745795.28	745795.39	0.0142	0.0131
Uranus	-2671-11-21 11:16 J	746164.80	746164.97	746165.16	0.0142	0.0096
Uranus	-2670-11-26 04:19 J	746534.47	746534.68	746534.92	0.0143	0.0061
Uranus	-2669-11-29 22:19 J	746904.19	746904.43	746904.68	0.0143	0.0025
Uranus	-2668-12-04 17:02 J	747273.97	747274.21	747274.46	0.0144	0.0013
Uranus	-2667-12-09 12:14 J	747643.78	747644.01	747644.25	0.0144	0.0050
Uranus	-2666-12-14 08:23 J	748013.66	748013.85	748014.06	0.0144	0.0088
Uranus	-2665-12-18 05:16 J	748383.60	748383.72	748383.85	0.0145	0.0125
Saturn	-2663-06-26 01:12 J	748938.35	748938.55	748938.77	0.0273	0.0147
Jupiter	-2661-12-09 02:09 J	749835.38	749835.59	749835.80	0.0505	0.0200
Saturn	-2650-12-22 09:50 J	753865.73	753865.91	753866.11	0.0288	0.0176
Jupiter	-2649-12-13 12:00 J	754222.93	754223.00	754223.07	0.0503	0.0477
Mars	-2634-10-29 08:38 J	759655.69	759655.86	759656.04	0.1676	0.0602

Saturn	-2633-07-02 22:33 J	759903.32	759903.44	759903.59	0.0276	0.0232
Uranus	-2632-05-18 11:45 J	760222.96	760222.99	760223.07	0.0137	0.0134
Uranus	-2631-05-23 04:19 J	760592.51	760592.68	760592.85	0.0136	0.0101
Uranus	-2630-05-27 19:26 J	760962.09	760962.31	760962.54	0.0136	0.0068
Uranus	-2629-05-31 10:04 J	761331.68	761331.92	761332.18	0.0135	0.0036
Uranus	-2628-06-04 23:45 J	761701.23	761701.49	761701.75	0.0135	0.0003
Uranus	-2627-06-09 12:28 J	762070.78	762071.02	762071.28	0.0135	0.0029
Uranus	-2626-06-14 00:43 J	762440.30	762440.53	762440.76	0.0134	0.0060
Uranus	-2625-06-17 12:00 J	762809.82	762810.00	762810.20	0.0134	0.0091
Uranus	-2624-06-21 22:47 J	763179.35	763179.45	763179.57	0.0134	0.0120
Saturn	-2620-12-29 12:57 J	764830.92	764831.04	764831.17	0.0286	0.0241
Jupiter	-2619-06-02 03:36 J	764985.53	764985.65	764985.77	0.0519	0.0443
Neptune	-2608-07-01 08:23 J	769032.74	769032.85	769033.00	0.0089	0.0077
Jupiter	-2607-06-07 05:31 J	769373.50	769373.73	769373.96	0.0520	0.0119
Neptune	-2607-07-03 21:21 J	769400.19	769400.39	769400.62	0.0089	0.0048
Neptune	-2606-07-06 10:47 J	769767.69	769767.95	769768.21	0.0089	0.0018
Neptune	-2605-07-07 23:45 J	770135.24	770135.49	770135.75	0.0089	0.0011
Saturn	-2604-06-27 14:38 J	770489.87	770490.11	770490.36	0.0274	0.0058
Neptune	-2604-07-10 12:28 J	770502.79	770503.02	770503.26	0.0089	0.0040
Neptune	-2603-07-13 00:57 J	770870.40	770870.54	770870.73	0.0089	0.0070
Jupiter	-2602-11-30 07:26 J	771375.69	771375.81	771375.95	0.0508	0.0419
Jupiter	-2595-06-12 06:28 J	773761.56	773761.77	773762.00	0.0521	0.0207
Saturn	-2591-12-24 02:38 J	775417.38	775417.61	775417.85	0.0288	0.0073
Jupiter	-2590-12-04 18:00 J	775763.03	775763.25	775763.48	0.0507	0.0136
Uranus	-2588-11-17 04:33 J	776476.60	776476.69	776476.83	0.0142	0.0127
Uranus	-2587-11-21 20:52 J	776846.20	776846.37	776846.58	0.0142	0.0092
Uranus	-2586-11-26 14:09 J	777215.88	777216.09	777216.33	0.0143	0.0057
Uranus	-2585-11-30 08:09 J	777585.60	777585.84	777586.09	0.0143	0.0020
Uranus	-2584-12-05 02:52 J	777955.38	777955.62	777955.87	0.0144	0.0017
Uranus	-2583-12-09 22:04 J	778325.20	778325.42	778325.66	0.0144	0.0054

Uranus	-2582-12-14 18:14 J	778695.08	778695.26	778695.46	0.0144	0.0091
Uranus	-2581-12-18 14:52 J	779065.03	779065.12	779065.26	0.0145	0.0129
Jupiter	-2578-12-09 04:19 J	780150.46	780150.68	780150.90	0.0505	0.0144
Jupiter	-2566-12-13 13:12 J	784537.93	784538.05	784538.18	0.0504	0.0417
Mars	-2561-04-27 10:19 J	786134.73	786134.93	786135.13	0.1847	0.0231
Uranus	-2548-05-18 22:19 J	790904.35	790904.43	790904.52	0.0137	0.0128
Uranus	-2547-05-23 14:09 J	791273.93	791274.09	791274.29	0.0136	0.0096
Uranus	-2546-05-28 05:45 J	791643.51	791643.74	791643.97	0.0136	0.0063
Uranus	-2545-05-31 20:09 J	792013.09	792013.34	792013.60	0.0136	0.0031
Saturn	-2545-06-29 02:23 J	792041.35	792041.60	792041.85	0.0274	0.0028
Uranus	-2544-06-05 09:50 J	792382.65	792382.91	792383.17	0.0135	0.0001
Uranus	-2543-06-09 22:47 J	792752.20	792752.45	792752.70	0.0135	0.0033
Uranus	-2542-06-14 10:33 J	793121.73	793121.94	793122.18	0.0134	0.0065
Uranus	-2541-06-17 22:04 J	793491.26	793491.42	793491.62	0.0134	0.0095
Uranus	-2540-06-22 08:52 J	793860.79	793860.87	793860.98	0.0134	0.0124
Jupiter	-2536-06-01 04:04 J	795300.61	795300.67	795300.73	0.0518	0.0499
Saturn	-2532-12-25 17:02 J	796968.97	796969.21	796969.46	0.0287	0.0024
Neptune	-2527-12-28 08:38 J	798797.73	798797.86	798798.02	0.0089	0.0073
Neptune	-2526-12-30 18:57 J	799165.09	799165.29	799165.53	0.0089	0.0045
Neptune	-2524-01-01 05:45 J	799532.49	799532.74	799532.99	0.0089	0.0016
Jupiter	-2524-06-06 02:09 J	799688.38	799688.59	799688.82	0.0519	0.0187
Neptune	-2523-01-03 16:04 J	799899.92	799900.17	799900.43	0.0089	0.0012
Neptune	-2522-01-06 01:55 J	800267.37	800267.58	800267.83	0.0089	0.0041
Neptune	-2521-01-08 12:43 J	800634.88	800635.03	800635.20	0.0088	0.0069
Jupiter	-2519-11-29 09:21 J	801690.82	801690.89	801690.98	0.0509	0.0476
Saturn	-2516-06-23 23:45 J	802628.40	802628.49	802628.60	0.0273	0.0247
Pluto	-2516-11-30 23:45 J	802788.37	802788.49	802788.65	0.0065	0.0055
Pluto	-2515-12-02 11:31 J	803154.81	803154.98	803155.19	0.0066	0.0044
Jupiter	-2512-06-11 02:09 J	804076.36	804076.59	804076.82	0.0521	0.0134
Mars	-2508-10-25 00:00 J	805673.45	805673.50	805673.56	0.1689	0.1605

Jupiter	-2507-12-03 20:38 J	806078.15	806078.36	806078.57	0.0507	0.0194
Uranus	-2504-11-17 16:47 J	807158.09	807158.20	807158.35	0.0142	0.0121
Uranus	-2503-11-22 09:21 J	807527.70	807527.89	807528.10	0.0142	0.0086
Saturn	-2503-12-20 08:23 J	807555.84	807555.85	807555.86	0.0289	0.0288
Uranus	-2502-11-27 02:38 J	807897.38	807897.61	807897.85	0.0143	0.0051
Uranus	-2501-11-30 20:23 J	808267.11	808267.35	808267.61	0.0143	0.0015
Jupiter	-2500-06-16 02:52 J	808464.52	808464.62	808464.74	0.0523	0.0455
Uranus	-2500-12-05 15:07 J	808636.89	808637.13	808637.39	0.0144	0.0023
Uranus	-2499-12-10 10:19 J	809006.71	809006.93	809007.17	0.0144	0.0059
Uranus	-2498-12-15 06:43 J	809376.60	809376.78	809376.97	0.0144	0.0096
Uranus	-2497-12-19 03:21 J	809746.57	809746.64	809746.75	0.0145	0.0134
Jupiter	-2495-12-08 08:23 J	810465.62	810465.85	810466.07	0.0505	0.0091
Saturn	-2486-07-01 10:33 J	813592.71	813592.94	813593.17	0.0274	0.0107
Jupiter	-2483-12-12 16:47 J	814853.04	814853.20	814853.36	0.0504	0.0363
Saturn	-2473-12-27 04:19 J	818520.46	818520.68	818520.91	0.0287	0.0114
Uranus	-2464-05-19 09:36 J	821585.80	821585.90	821586.03	0.0137	0.0123
Uranus	-2463-05-24 01:26 J	821955.39	821955.56	821955.78	0.0136	0.0091
Uranus	-2462-05-28 16:47 J	822324.98	822325.20	822325.45	0.0136	0.0058
Uranus	-2461-06-01 07:26 J	822694.56	822694.81	822695.07	0.0136	0.0025
Uranus	-2460-06-05 20:52 J	823064.11	823064.37	823064.63	0.0135	0.0007
Uranus	-2459-06-10 09:50 J	823433.66	823433.91	823434.16	0.0135	0.0038
Uranus	-2458-06-14 22:04 J	823803.20	823803.42	823803.64	0.0134	0.0069
Uranus	-2457-06-18 09:07 J	824172.72	824172.88	824173.07	0.0134	0.0099
Saturn	-2457-06-25 06:14 J	824179.57	824179.76	824179.95	0.0273	0.0172
Uranus	-2456-06-22 19:55 J	824542.28	824542.33	824542.42	0.0134	0.0129
Saturn	-2444-12-21 18:00 J	829107.08	829107.25	829107.43	0.0289	0.0201
Neptune	-2443-07-03 04:04 J	829300.49	829300.67	829300.85	0.0089	0.0063
Neptune	-2442-07-05 16:33 J	829667.97	829668.19	829668.45	0.0089	0.0035
Jupiter	-2441-06-05 00:57 J	830003.34	830003.54	830003.75	0.0519	0.0252
Neptune	-2441-07-07 05:45 J	830035.49	830035.74	830036.01	0.0089	0.0005

Neptune	-2440-07-09 18:43 J	830403.04	830403.28	830403.54	0.0089	0.0024
Neptune	-2439-07-12 07:40 J	830770.62	830770.82	830771.04	0.0089	0.0053
Neptune	-2438-07-14 20:23 J	831138.27	831138.35	831138.47	0.0089	0.0082
Jupiter	-2429-06-10 04:33 J	834391.45	834391.69	834391.92	0.0521	0.0076
Mars	-2429-10-27 05:45 J	834530.56	834530.74	834530.93	0.1685	0.0247
Pluto	-2428-06-03 10:19 J	834749.92	834749.93	834749.98	0.0079	0.0078
Saturn	-2427-07-02 15:21 J	835143.97	835144.14	835144.34	0.0274	0.0180
Jupiter	-2424-12-03 02:38 J	836393.41	836393.61	836393.81	0.0507	0.0239
Uranus	-2420-11-18 04:33 J	837839.56	837839.69	837839.84	0.0142	0.0115
Uranus	-2419-11-22 21:07 J	838209.17	838209.38	838209.58	0.0142	0.0081
Uranus	-2418-11-27 14:09 J	838578.86	838579.09	838579.33	0.0143	0.0046
Jupiter	-2417-06-15 07:26 J	838779.67	838779.81	838779.96	0.0522	0.0405
Uranus	-2417-12-01 08:09 J	838948.59	838948.84	838949.09	0.0143	0.0009
Uranus	-2416-12-06 02:52 J	839318.38	839318.62	839318.87	0.0144	0.0027
Uranus	-2415-12-10 22:04 J	839688.21	839688.42	839688.66	0.0144	0.0065
Uranus	-2414-12-15 18:43 J	840058.11	840058.28	840058.46	0.0144	0.0102
Saturn	-2414-12-29 10:47 J	840071.78	840071.95	840072.13	0.0287	0.0194
Uranus	-2413-12-19 15:36 J	840428.10	840428.15	840428.24	0.0145	0.0139
Jupiter	-2412-12-07 12:57 J	840780.81	840781.04	840781.27	0.0506	0.0041
Jupiter	-2400-12-11 22:47 J	845168.28	845168.45	845168.63	0.0505	0.0316
Saturn	-2398-06-27 08:52 J	845730.65	845730.87	845731.11	0.0273	0.0106
Saturn	-2385-12-22 23:31 J	850658.26	850658.48	850658.70	0.0289	0.0123
Uranus	-2380-05-19 23:02 J	852267.34	852267.46	852267.61	0.0137	0.0116
Uranus	-2379-05-24 15:21 J	852636.94	852637.14	852637.34	0.0136	0.0084
Uranus	-2378-05-29 06:14 J	853006.52	853006.76	853007.00	0.0136	0.0051
Uranus	-2377-06-01 20:23 J	853376.10	853376.35	853376.61	0.0136	0.0019
Uranus	-2376-06-06 09:50 J	853745.65	853745.91	853746.17	0.0135	0.0013
Uranus	-2375-06-10 22:33 J	854115.20	854115.44	854115.69	0.0135	0.0044
Uranus	-2374-06-15 10:33 J	854484.73	854484.94	854485.16	0.0134	0.0075
Uranus	-2373-06-18 21:50 J	854854.27	854854.41	854854.59	0.0134	0.0105

Uranus	-2372-06-23 09:07 J	855223.88	855223.88	855223.88	0.0134	0.0134
Saturn	-2368-07-03 17:45 J	856695.13	856695.24	856695.35	0.0274	0.0245
Neptune	-2363-12-27 17:16 J	858698.21	858698.22	858698.27	0.0089	0.0088
Neptune	-2362-12-30 03:50 J	859065.49	859065.66	859065.86	0.0089	0.0060
Neptune	-2361-12-31 14:23 J	859432.87	859433.10	859433.34	0.0089	0.0032
Neptune	-2359-01-03 00:43 J	859800.27	859800.53	859800.78	0.0089	0.0004
Neptune	-2358-01-05 11:02 J	860167.72	860167.96	860168.21	0.0089	0.0025
Jupiter	-2358-06-05 08:23 J	860318.66	860318.85	860319.05	0.0519	0.0291
Neptune	-2357-01-07 21:07 J	860535.19	860535.38	860535.60	0.0088	0.0053
Neptune	-2356-01-09 07:26 J	860902.72	860902.81	860902.93	0.0088	0.0081
Saturn	-2355-12-30 13:12 J	861622.97	861623.05	861623.15	0.0287	0.0264
Mars	-2350-10-30 10:47 J	863387.81	863387.95	863388.09	0.1681	0.1094
Jupiter	-2346-06-10 09:36 J	864706.66	864706.90	864707.14	0.0520	0.0028
Jupiter	-2341-12-02 09:50 J	866708.72	866708.91	866709.10	0.0508	0.0283
Saturn	-2339-06-28 09:21 J	867281.64	867281.89	867282.13	0.0273	0.0043
Uranus	-2336-11-18 16:47 J	868521.04	868521.20	868521.36	0.0142	0.0109
Uranus	-2335-11-23 08:52 J	868890.67	868890.87	868891.09	0.0142	0.0075
Jupiter	-2334-06-15 10:33 J	869094.77	869094.94	869095.12	0.0522	0.0350
Uranus	-2334-11-28 02:09 J	869260.36	869260.59	869260.84	0.0143	0.0040
Uranus	-2333-12-01 20:23 J	869630.10	869630.35	869630.60	0.0143	0.0004
Uranus	-2332-12-06 15:07 J	869999.89	870000.13	870000.38	0.0144	0.0033
Uranus	-2331-12-11 10:33 J	870369.73	870369.94	870370.17	0.0144	0.0070
Uranus	-2330-12-16 07:12 J	870739.65	870739.80	870739.98	0.0144	0.0107
Jupiter	-2329-12-06 22:33 J	871096.21	871096.44	871096.67	0.0506	0.0006
Uranus	-2329-12-20 04:33 J	871109.68	871109.69	871109.72	0.0145	0.0144
Saturn	-2326-12-25 00:00 J	872209.26	872209.50	872209.74	0.0289	0.0056
Jupiter	-2317-12-11 10:47 J	875483.77	875483.95	875484.15	0.0504	0.0283
Uranus	-2296-05-20 12:57 J	882948.91	882949.04	882949.21	0.0137	0.0110
Uranus	-2295-05-25 04:47 J	883318.50	883318.70	883318.93	0.0136	0.0078
Uranus	-2294-05-29 19:55 J	883688.09	883688.33	883688.58	0.0136	0.0045

Uranus	-2293-06-02 10:04 J	884057.66	884057.92	884058.18	0.0135	0.0013
Uranus	-2292-06-06 23:16 J	884427.22	884427.47	884427.73	0.0135	0.0019
Uranus	-2291-06-11 12:00 J	884796.77	884797.00	884797.25	0.0135	0.0050
Uranus	-2290-06-15 23:45 J	885166.30	885166.49	885166.72	0.0134	0.0081
Uranus	-2289-06-19 11:16 J	885535.84	885535.97	885536.13	0.0134	0.0110
Saturn	-2280-06-29 07:12 J	888832.55	888832.80	888833.05	0.0273	0.0014
Neptune	-2279-07-02 08:52 J	889200.78	889200.87	889201.01	0.0089	0.0080
Neptune	-2278-07-04 21:50 J	889568.22	889568.41	889568.65	0.0089	0.0051
Mars	-2277-04-26 22:04 J	889865.22	889865.42	889865.62	0.1839	0.0171
Neptune	-2277-07-06 11:02 J	889935.72	889935.96	889936.23	0.0089	0.0022
Neptune	-2276-07-09 00:14 J	890303.25	890303.51	890303.77	0.0089	0.0007
Jupiter	-2275-06-04 14:09 J	890633.91	890634.09	890634.27	0.0518	0.0335
Neptune	-2275-07-11 13:26 J	890670.82	890671.06	890671.29	0.0089	0.0036
Neptune	-2274-07-14 01:55 J	891038.42	891038.58	891038.77	0.0089	0.0065
Pluto	-2270-12-02 23:02 J	892641.34	892641.46	892641.63	0.0065	0.0054
Pluto	-2269-12-03 11:02 J	893007.80	893007.96	893008.18	0.0066	0.0045
Saturn	-2267-12-25 21:21 J	893760.15	893760.39	893760.63	0.0289	0.0003
Jupiter	-2263-06-09 11:45 J	895021.75	895021.99	895022.22	0.0520	0.0029
Jupiter	-2258-12-03 00:28 J	897024.34	897024.52	897024.70	0.0508	0.0307
Uranus	-2253-11-14 10:33 J	898832.89	898832.94	898833.00	0.0141	0.0138
Uranus	-2252-11-19 01:55 J	899202.43	899202.58	899202.76	0.0142	0.0105
Jupiter	-2251-06-14 16:04 J	899409.98	899410.17	899410.36	0.0522	0.0302
Saturn	-2251-06-23 22:04 J	899419.40	899419.42	899419.44	0.0270	0.0269
Uranus	-2251-11-23 18:14 J	899572.06	899572.26	899572.49	0.0142	0.0071
Uranus	-2250-11-28 11:45 J	899941.75	899941.99	899942.24	0.0143	0.0035
Uranus	-2249-12-02 05:45 J	900311.49	900311.74	900311.99	0.0143	0.0002
Uranus	-2248-12-07 00:28 J	900681.29	900681.52	900681.77	0.0144	0.0038
Uranus	-2247-12-11 20:09 J	901051.14	901051.34	901051.57	0.0144	0.0075
Jupiter	-2246-12-07 11:02 J	901411.73	901411.96	901412.19	0.0506	0.0028
Uranus	-2246-12-16 17:02 J	901421.06	901421.21	901421.37	0.0144	0.0112

Jupiter	-2234-12-11 21:21 J	905799.19	905799.39	905799.59	0.0505	0.0249
Mars	-2224-10-26 00:43 J	909405.40	909405.53	909405.67	0.1694	0.1147
Saturn	-2221-06-30 04:04 J	910383.43	910383.67	910383.91	0.0273	0.0068
Uranus	-2213-05-16 10:04 J	913260.91	913260.92	913260.98	0.0137	0.0136
Uranus	-2212-05-21 02:23 J	913630.46	913630.60	913630.79	0.0137	0.0104
Uranus	-2211-05-25 18:28 J	914000.06	914000.27	914000.50	0.0136	0.0072
Uranus	-2210-05-30 09:21 J	914369.65	914369.89	914370.15	0.0136	0.0039
Uranus	-2209-06-02 23:31 J	914739.23	914739.48	914739.74	0.0136	0.0008
Uranus	-2208-06-07 12:57 J	915108.79	915109.04	915109.30	0.0135	0.0024
Saturn	-2208-12-26 16:33 J	915310.95	915311.19	915311.43	0.0289	0.0057
Uranus	-2207-06-12 01:40 J	915478.35	915478.57	915478.82	0.0135	0.0056
Uranus	-2206-06-16 13:40 J	915847.88	915848.07	915848.28	0.0134	0.0086
Uranus	-2205-06-20 01:26 J	916217.43	916217.56	916217.69	0.0134	0.0115
Neptune	-2198-12-29 12:28 J	918965.89	918966.02	918966.16	0.0089	0.0075
Neptune	-2197-12-30 22:47 J	919333.24	919333.45	919333.67	0.0089	0.0047
Neptune	-2195-01-02 09:07 J	919700.64	919700.88	919701.14	0.0089	0.0019
Neptune	-2194-01-04 19:26 J	920068.06	920068.31	920068.57	0.0089	0.0009
Neptune	-2193-01-07 05:45 J	920435.51	920435.74	920435.98	0.0088	0.0037
Neptune	-2192-01-08 15:50 J	920803.00	920803.16	920803.35	0.0088	0.0065
Jupiter	-2192-06-03 18:43 J	920949.13	920949.28	920949.45	0.0519	0.0382
Saturn	-2192-06-24 19:40 J	920970.18	920970.32	920970.48	0.0270	0.0214
Pluto	-2182-06-05 08:23 J	924602.80	924602.85	924602.93	0.0079	0.0077
Jupiter	-2180-06-08 23:16 J	925337.24	925337.47	925337.71	0.0520	0.0055
Jupiter	-2175-12-02 11:16 J	927339.80	927339.97	927340.14	0.0508	0.0338
Uranus	-2169-11-14 21:07 J	929514.32	929514.38	929514.49	0.0141	0.0133
Jupiter	-2168-06-14 02:09 J	929725.39	929725.59	929725.79	0.0522	0.0267
Uranus	-2168-11-19 12:43 J	929883.87	929884.03	929884.22	0.0142	0.0100
Uranus	-2167-11-24 05:16 J	930253.50	930253.72	930253.94	0.0142	0.0066
Uranus	-2166-11-28 22:33 J	930623.19	930623.44	930623.68	0.0143	0.0030
Uranus	-2165-12-02 16:19 J	930992.93	930993.18	930993.43	0.0143	0.0006

Uranus	-2164-12-07 11:16 J	931362.73	931362.97	931363.21	0.0144	0.0043
Jupiter	-2163-12-06 21:36 J	931727.18	931727.40	931727.63	0.0507	0.0062
Uranus	-2163-12-12 06:57 J	931732.58	931732.79	931733.00	0.0144	0.0079
Saturn	-2162-07-02 01:40 J	931934.36	931934.57	931934.80	0.0273	0.0124
Uranus	-2162-12-17 03:07 J	932102.50	932102.63	932102.80	0.0144	0.0117
Jupiter	-2151-12-11 10:33 J	936114.73	936114.94	936115.15	0.0505	0.0219
Saturn	-2149-12-27 10:47 J	936861.73	936861.95	936862.18	0.0289	0.0108
Mars	-2145-10-28 06:57 J	938262.61	938262.79	938262.98	0.1690	0.0228
Jupiter	-2139-12-15 22:47 J	940502.43	940502.45	940502.49	0.0503	0.0499
Saturn	-2133-06-25 18:14 J	942521.07	942521.26	942521.47	0.0271	0.0157
Uranus	-2129-05-16 22:04 J	943942.34	943942.42	943942.49	0.0137	0.0131
Uranus	-2128-05-21 14:09 J	944311.93	944312.09	944312.29	0.0137	0.0099
Uranus	-2127-05-26 06:14 J	944681.55	944681.76	944682.00	0.0136	0.0067
Uranus	-2126-05-30 21:21 J	945051.14	945051.39	945051.64	0.0136	0.0034
Uranus	-2125-06-03 11:45 J	945420.73	945420.99	945421.25	0.0136	0.0003
Uranus	-2124-06-08 01:12 J	945790.30	945790.55	945790.80	0.0135	0.0029
Uranus	-2123-06-12 13:55 J	946159.86	946160.08	946160.32	0.0135	0.0061
Uranus	-2122-06-17 02:09 J	946529.41	946529.59	946529.79	0.0134	0.0091
Uranus	-2121-06-20 13:40 J	946898.98	946899.07	946899.20	0.0134	0.0120
Saturn	-2120-12-21 07:40 J	947447.71	947447.82	947447.95	0.0291	0.0251
Neptune	-2114-07-04 02:38 J	949468.44	949468.61	949468.78	0.0089	0.0067
Neptune	-2113-07-05 15:07 J	949835.91	949836.13	949836.38	0.0089	0.0039
Neptune	-2112-07-08 04:19 J	950203.43	950203.68	950203.95	0.0089	0.0010
Neptune	-2111-07-10 17:16 J	950570.97	950571.22	950571.48	0.0089	0.0019
Neptune	-2110-07-13 05:45 J	950938.54	950938.74	950938.98	0.0089	0.0048
Jupiter	-2109-06-03 05:45 J	951264.60	951264.74	951264.89	0.0518	0.0410
Neptune	-2109-07-14 18:57 J	951306.17	951306.29	951306.43	0.0089	0.0076
Saturn	-2103-07-03 00:28 J	953485.35	953485.52	953485.71	0.0273	0.0182
Jupiter	-2097-06-08 06:28 J	955652.54	955652.77	955653.00	0.0520	0.0095
Jupiter	-2092-12-01 23:16 J	957655.32	957655.47	957655.64	0.0508	0.0369

Saturn	-2090-12-29 06:00 J	958412.56	958412.75	958412.96	0.0288	0.0161
Jupiter	-2085-06-13 03:07 J	960040.42	960040.63	960040.85	0.0521	0.0210
Uranus	-2085-11-15 07:40 J	960195.73	960195.82	960195.93	0.0141	0.0129
Uranus	-2084-11-19 22:47 J	960565.29	960565.45	960565.65	0.0142	0.0096
Uranus	-2083-11-24 15:07 J	960934.92	960935.13	960935.37	0.0142	0.0061
Uranus	-2082-11-29 08:23 J	961304.61	961304.85	961305.10	0.0143	0.0026
Uranus	-2081-12-03 02:23 J	961674.36	961674.60	961674.86	0.0143	0.0011
Jupiter	-2080-12-06 13:12 J	962042.82	962043.05	962043.28	0.0507	0.0082
Uranus	-2080-12-07 21:07 J	962044.15	962044.38	962044.63	0.0143	0.0047
Uranus	-2079-12-12 17:02 J	962414.01	962414.21	962414.41	0.0144	0.0083
Uranus	-2078-12-17 13:26 J	962783.92	962784.06	962784.20	0.0144	0.0120
Saturn	-2074-06-27 18:57 J	964072.06	964072.29	964072.53	0.0271	0.0097
Jupiter	-2068-12-10 23:16 J	966430.26	966430.47	966430.69	0.0505	0.0194
Mars	-2066-10-31 13:12 J	967119.99	967120.05	967120.11	0.1686	0.1594
Saturn	-2061-12-22 04:47 J	968998.53	968998.70	968998.88	0.0291	0.0194
Jupiter	-2056-12-15 09:07 J	970817.80	970817.88	970817.97	0.0504	0.0465
Uranus	-2045-05-17 09:21 J	974623.79	974623.89	974623.99	0.0137	0.0126
Uranus	-2044-05-22 01:26 J	974993.40	974993.56	974993.77	0.0137	0.0094
Saturn	-2044-07-04 01:55 J	975036.48	975036.58	975036.69	0.0273	0.0244
Uranus	-2043-05-26 17:45 J	975363.02	975363.24	975363.48	0.0136	0.0061
Uranus	-2042-05-31 08:52 J	975732.62	975732.87	975733.13	0.0136	0.0029
Uranus	-2041-06-03 23:31 J	976102.22	976102.48	976102.74	0.0136	0.0003
Uranus	-2040-06-08 13:12 J	976471.80	976472.05	976472.30	0.0135	0.0034
Uranus	-2039-06-13 01:55 J	976841.38	976841.58	976841.83	0.0135	0.0066
Uranus	-2038-06-17 14:23 J	977210.93	977211.10	977211.29	0.0134	0.0096
Uranus	-2037-06-21 02:09 J	977580.52	977580.59	977580.70	0.0134	0.0125
Neptune	-2033-12-30 06:14 J	979233.59	979233.76	979233.94	0.0089	0.0063
Neptune	-2031-01-01 16:19 J	979600.96	979601.18	979601.43	0.0089	0.0036
Saturn	-2031-12-30 03:21 J	979963.49	979963.64	979963.80	0.0288	0.0218
Neptune	-2030-01-04 03:07 J	979968.38	979968.63	979968.89	0.0088	0.0007

Neptune	-2029-01-06 13:12 J	980335.82	980336.05	980336.31	0.0088	0.0021
Neptune	-2028-01-07 23:45 J	980703.28	980703.49	980703.71	0.0088	0.0048
Neptune	-2027-01-10 09:50 J	981070.80	981070.91	981071.06	0.0088	0.0076
Jupiter	-2026-06-03 06:00 J	981579.65	981579.75	981579.85	0.0517	0.0464
Pluto	-2024-12-03 20:09 J	982494.26	982494.34	982494.45	0.0065	0.0061
Pluto	-2023-12-05 08:09 J	982860.64	982860.84	982861.07	0.0066	0.0037
Saturn	-2015-06-28 22:04 J	985623.17	985623.42	985623.67	0.0271	0.0032
Jupiter	-2014-06-08 07:40 J	985967.60	985967.82	985968.05	0.0519	0.0149
Jupiter	-2009-12-01 10:47 J	987970.81	987970.95	987971.10	0.0509	0.0396
Jupiter	-2002-06-13 12:00 J	990355.77	990356.00	990356.22	0.0521	0.0175
Saturn	-2002-12-24 04:47 J	990549.49	990549.70	990549.92	0.0291	0.0130
Uranus	-2001-11-15 20:52 J	990877.27	990877.37	990877.51	0.0141	0.0123

2ND MILLENNIUM BCE

This is a list of transits of Earth in the 2nd millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
Uranus	-2000-11-20 12:28 J		991246.84	991247.02	991247.22	0.0142	0.0090	
Uranus	-1999-11-25 05:02 J		991616.48	991616.71	991616.94	0.0142	0.0055	
Uranus	-1998-11-29 22:19 J		991986.18	991986.43	991986.68	0.0143	0.0020	
Uranus	-1997-12-03 16:04 J		992355.93	992356.17	992356.42	0.0143	0.0016	
Jupiter	-1997-12-05 21:36 J		992358.18	992358.40	992358.63	0.0507	0.0119	
Uranus	-1996-12-08 10:47 J		992725.73	992725.95	992726.19	0.0143	0.0053	
Uranus	-1995-12-13 06:14 J		993095.58	993095.76	993095.97	0.0144	0.0089	

Uranus	-1994-12-18 02:23 J	993465.50	993465.60	993465.74	0.0144	0.0125
Mars	-1993-04-26 12:14 J	993595.82	993596.01	993596.21	0.1831	0.0478
Jupiter	-1990-06-18 15:07 J	994744.06	994744.13	994744.20	0.0523	0.0497
Jupiter	-1985-12-10 06:57 J	996745.58	996745.79	996746.01	0.0506	0.0153
Jupiter	-1973-12-14 18:43 J	1001133.16	1001133.28	1001133.40	0.0504	0.0428
Saturn	-1972-12-31 04:47 J	1001514.66	1001514.70	1001514.74	0.0288	0.0282
Uranus	-1961-05-17 20:38 J	1005305.26	1005305.36	1005305.50	0.0137	0.0121
Uranus	-1960-05-22 13:40 J	1005674.88	1005675.07	1005675.27	0.0137	0.0088
Uranus	-1959-05-27 05:45 J	1006044.51	1006044.74	1006044.98	0.0136	0.0056
Uranus	-1958-05-31 20:38 J	1006414.12	1006414.36	1006414.63	0.0136	0.0024
Uranus	-1957-06-04 11:31 J	1006783.72	1006783.98	1006784.24	0.0136	0.0008
Uranus	-1956-06-09 01:12 J	1007153.31	1007153.55	1007153.81	0.0135	0.0040
Saturn	-1956-06-30 04:04 J	1007174.42	1007174.67	1007174.91	0.0271	0.0039
Uranus	-1955-06-13 14:23 J	1007522.89	1007523.10	1007523.33	0.0135	0.0071
Uranus	-1954-06-18 02:52 J	1007892.46	1007892.62	1007892.80	0.0134	0.0101
Uranus	-1953-06-21 14:38 J	1008262.07	1008262.11	1008262.19	0.0134	0.0130
Neptune	-1950-07-03 05:45 J	1009368.68	1009368.74	1009368.85	0.0089	0.0084
Neptune	-1949-07-04 18:43 J	1009736.10	1009736.28	1009736.51	0.0089	0.0056
Neptune	-1948-07-07 08:09 J	1010103.60	1010103.84	1010104.10	0.0089	0.0027
Neptune	-1947-07-09 21:07 J	1010471.12	1010471.38	1010471.64	0.0089	0.0001
Neptune	-1946-07-12 09:50 J	1010838.67	1010838.91	1010839.16	0.0089	0.0030
Neptune	-1945-07-13 22:19 J	1011206.26	1011206.43	1011206.65	0.0089	0.0059
Neptune	-1944-07-16 11:16 J	1011573.94	1011573.97	1011574.04	0.0089	0.0087
Jupiter	-1943-06-02 12:28 J	1011894.97	1011895.02	1011895.08	0.0517	0.0502
Saturn	-1943-12-25 08:38 J	1012100.63	1012100.86	1012101.10	0.0290	0.0058
Mars	-1940-10-27 01:40 J	1013137.40	1013137.57	1013137.74	0.1699	0.0677
Pluto	-1935-06-08 03:50 J	1014822.65	1014822.66	1014822.73	0.0079	0.0078
Jupiter	-1931-06-07 14:09 J	1016282.87	1016283.09	1016283.31	0.0519	0.0190
Saturn	-1927-06-24 20:52 J	1017761.27	1017761.37	1017761.49	0.0270	0.0241
Jupiter	-1926-12-01 15:50 J	1018286.05	1018286.16	1018286.27	0.0509	0.0443

Jupiter	-1919-06-12 14:38 J	1020670.88	1020671.11	1020671.34	0.0520	0.0124
Uranus	-1917-11-16 09:50 J	1021558.79	1021558.91	1021559.06	0.0141	0.0117
Uranus	-1916-11-21 01:26 J	1021928.37	1021928.56	1021928.77	0.0142	0.0084
Uranus	-1915-11-25 18:00 J	1022298.02	1022298.25	1022298.49	0.0142	0.0049
Uranus	-1914-11-30 11:02 J	1022667.72	1022667.96	1022668.21	0.0142	0.0015
Jupiter	-1914-12-06 04:19 J	1022673.46	1022673.68	1022673.90	0.0508	0.0162
Uranus	-1913-12-04 05:02 J	1023037.47	1023037.71	1023037.96	0.0143	0.0022
Uranus	-1912-12-08 23:45 J	1023407.27	1023407.49	1023407.72	0.0143	0.0058
Uranus	-1911-12-13 19:12 J	1023777.12	1023777.30	1023777.50	0.0144	0.0094
Uranus	-1910-12-18 15:21 J	1024147.05	1024147.14	1024147.26	0.0144	0.0130
Jupiter	-1907-06-17 10:47 J	1025058.82	1025058.95	1025059.09	0.0522	0.0427
Jupiter	-1902-12-10 16:19 J	1027060.96	1027061.18	1027061.40	0.0506	0.0118
Saturn	-1897-07-01 12:28 J	1028725.80	1028726.02	1028726.25	0.0272	0.0116
Jupiter	-1890-12-15 01:26 J	1031448.42	1031448.56	1031448.71	0.0504	0.0386
Saturn	-1884-12-26 17:45 J	1033652.00	1033652.24	1033652.48	0.0290	0.0026
Uranus	-1877-05-18 10:33 J	1035986.80	1035986.94	1035987.09	0.0137	0.0114
Uranus	-1876-05-23 03:07 J	1036356.44	1036356.63	1036356.85	0.0137	0.0082
Uranus	-1875-05-27 19:12 J	1036726.07	1036726.30	1036726.55	0.0136	0.0050
Uranus	-1874-06-01 10:47 J	1037095.69	1037095.95	1037096.21	0.0136	0.0017
Uranus	-1873-06-05 01:26 J	1037465.31	1037465.56	1037465.82	0.0136	0.0015
Uranus	-1872-06-09 15:07 J	1037834.90	1037835.13	1037835.39	0.0135	0.0047
Uranus	-1871-06-14 04:19 J	1038204.49	1038204.68	1038204.91	0.0135	0.0077
Uranus	-1870-06-18 16:47 J	1038574.06	1038574.20	1038574.37	0.0134	0.0107
Neptune	-1869-12-29 13:12 J	1039133.95	1039134.05	1039134.18	0.0089	0.0079
Saturn	-1868-06-26 06:28 J	1039312.58	1039312.77	1039312.97	0.0271	0.0163
Neptune	-1868-12-31 23:16 J	1039501.29	1039501.47	1039501.70	0.0089	0.0052
Neptune	-1866-01-03 10:04 J	1039868.68	1039868.92	1039869.17	0.0089	0.0024
Neptune	-1865-01-05 20:23 J	1040236.09	1040236.35	1040236.60	0.0088	0.0004
Neptune	-1864-01-07 06:28 J	1040603.54	1040603.77	1040604.02	0.0088	0.0031
Neptune	-1863-01-09 16:47 J	1040971.02	1040971.20	1040971.40	0.0088	0.0059

Neptune	-1862-01-12 02:38 J	1041338.59	1041338.61	1041338.70	0.0088	0.0087
Mars	-1861-10-29 07:40 J	1041994.66	1041994.82	1041994.99	0.1695	0.0702
Jupiter	-1848-06-06 09:21 J	1046597.69	1046597.89	1046598.10	0.0518	0.0257
Jupiter	-1843-11-30 21:50 J	1048601.34	1048601.41	1048601.47	0.0510	0.0487
Saturn	-1838-07-03 23:45 J	1050277.33	1050277.49	1050277.67	0.0273	0.0199
Jupiter	-1836-06-11 09:35 J	1050985.66	1050985.90	1050986.14	0.0520	0.0053
Uranus	-1833-11-17 00:57 J	1052240.39	1052240.54	1052240.70	0.0141	0.0110
Uranus	-1832-11-21 16:33 J	1052609.99	1052610.19	1052610.40	0.0142	0.0077
Uranus	-1831-11-26 09:07 J	1052979.64	1052979.88	1052980.12	0.0142	0.0042
Jupiter	-1831-12-05 08:24 J	1052988.64	1052988.85	1052989.06	0.0508	0.0210
Uranus	-1830-12-01 02:24 J	1053349.35	1053349.60	1053349.85	0.0143	0.0007
Uranus	-1829-12-04 20:24 J	1053719.10	1053719.35	1053719.59	0.0143	0.0028
Uranus	-1828-12-09 14:52 J	1054088.91	1054089.12	1054089.35	0.0143	0.0065
Uranus	-1827-12-14 10:04 J	1054458.76	1054458.92	1054459.12	0.0144	0.0101
Uranus	-1826-12-19 06:28 J	1054828.70	1054828.77	1054828.86	0.0144	0.0136
Saturn	-1825-12-28 06:14 J	1055203.55	1055203.76	1055203.99	0.0289	0.0119
Jupiter	-1824-06-16 12:14 J	1055373.85	1055374.01	1055374.18	0.0522	0.0372
Jupiter	-1819-12-09 19:12 J	1057376.07	1057376.30	1057376.53	0.0506	0.0065
Saturn	-1809-06-27 17:45 J	1060864.01	1060864.24	1060864.49	0.0271	0.0082
Jupiter	-1807-12-14 03:07 J	1061763.46	1061763.63	1061763.81	0.0505	0.0331
Saturn	-1796-12-22 18:28 J	1065790.11	1065790.27	1065790.45	0.0291	0.0203
Uranus	-1793-05-19 01:12 J	1066668.41	1066668.55	1066668.73	0.0137	0.0108
Uranus	-1792-05-23 18:14 J	1067038.06	1067038.26	1067038.49	0.0137	0.0075
Uranus	-1791-05-28 10:19 J	1067407.69	1067407.93	1067408.19	0.0136	0.0043
Uranus	-1790-06-02 01:40 J	1067777.32	1067777.57	1067777.84	0.0136	0.0011
Uranus	-1789-06-05 16:33 J	1068146.94	1068147.19	1068147.45	0.0136	0.0021
Uranus	-1788-06-10 06:28 J	1068516.53	1068516.77	1068517.01	0.0135	0.0052
Uranus	-1787-06-14 19:12 J	1068886.11	1068886.30	1068886.52	0.0135	0.0083
Uranus	-1786-06-19 07:40 J	1069255.69	1069255.82	1069255.97	0.0134	0.0113
Neptune	-1785-07-03 21:21 J	1069636.26	1069636.39	1069636.56	0.0089	0.0073

Neptune	-1784-07-06 10:19 J	1070003.72	1070003.93	1070004.17	0.0089	0.0045
Neptune	-1783-07-08 23:45 J	1070371.23	1070371.49	1070371.75	0.0089	0.0016
Neptune	-1782-07-11 12:43 J	1070738.77	1070739.03	1070739.29	0.0089	0.0012
Neptune	-1781-07-13 01:12 J	1071106.34	1071106.55	1071106.80	0.0089	0.0041
Neptune	-1780-07-15 13:55 J	1071473.94	1071474.08	1071474.27	0.0089	0.0069
Pluto	-1777-12-06 01:12 J	1072713.32	1072713.55	1072713.82	0.0066	0.0018
Saturn	-1766-12-30 22:19 J	1076755.29	1076755.43	1076755.60	0.0289	0.0219
Jupiter	-1765-06-05 08:24 J	1076912.67	1076912.85	1076913.04	0.0518	0.0317
Jupiter	-1753-06-10 10:04 J	1081300.69	1081300.92	1081301.16	0.0520	0.0008
Saturn	-1750-06-30 06:57 J	1082415.54	1082415.79	1082416.04	0.0272	0.0006
Uranus	-1750-11-13 22:33 J	1082552.40	1082552.44	1082552.51	0.0141	0.0137
Uranus	-1749-11-17 13:26 J	1082921.90	1082922.06	1082922.24	0.0141	0.0104
Uranus	-1748-11-22 05:02 J	1083291.50	1083291.71	1083291.93	0.0142	0.0071
Jupiter	-1748-12-04 08:38 J	1083303.67	1083303.86	1083304.06	0.0509	0.0270
Uranus	-1747-11-26 21:21 J	1083661.16	1083661.39	1083661.64	0.0142	0.0037
Uranus	-1746-12-01 14:38 J	1084030.86	1084031.11	1084031.36	0.0143	0.0002
Uranus	-1745-12-05 08:24 J	1084400.61	1084400.85	1084401.10	0.0143	0.0034
Uranus	-1744-12-10 03:07 J	1084770.41	1084770.63	1084770.85	0.0144	0.0070
Uranus	-1743-12-14 22:19 J	1085140.27	1085140.43	1085140.61	0.0144	0.0106
Uranus	-1742-12-19 18:28 J	1085510.23	1085510.27	1085510.33	0.0144	0.0142
Jupiter	-1741-06-15 10:47 J	1085688.76	1085688.95	1085689.14	0.0521	0.0308
Saturn	-1737-12-24 10:47 J	1087341.73	1087341.95	1087342.18	0.0290	0.0101
Jupiter	-1736-12-08 19:26 J	1087691.08	1087691.31	1087691.54	0.0507	0.0009
Mars	-1735-10-25 18:28 J	1088012.22	1088012.27	1088012.31	0.1709	0.1656
Jupiter	-1724-12-13 05:45 J	1092078.56	1092078.74	1092078.94	0.0506	0.0278
Saturn	-1721-06-24 09:07 J	1093002.81	1093002.88	1093002.97	0.0270	0.0255
Uranus	-1710-05-15 22:47 J	1096980.41	1096980.45	1096980.54	0.0138	0.0133
Mars	-1709-04-26 04:47 J	1097326.52	1097326.70	1097326.89	0.1823	0.0706
Uranus	-1709-05-19 16:33 J	1097350.04	1097350.19	1097350.39	0.0137	0.0101
Uranus	-1708-05-24 09:35 J	1097719.69	1097719.90	1097720.14	0.0137	0.0068

Uranus	-1707-05-29 01:55 J	1098089.33	1098089.58	1098089.83	0.0136	0.0036
Uranus	-1706-06-02 17:16 J	1098458.97	1098459.22	1098459.48	0.0136	0.0004
Uranus	-1705-06-06 08:09 J	1098828.58	1098828.84	1098829.09	0.0136	0.0028
Uranus	-1704-06-10 21:35 J	1099198.18	1099198.40	1099198.64	0.0135	0.0059
Neptune	-1704-12-31 06:14 J	1099401.62	1099401.76	1099401.95	0.0089	0.0068
Uranus	-1703-06-15 11:02 J	1099567.77	1099567.96	1099568.15	0.0135	0.0089
Neptune	-1702-01-02 16:47 J	1099768.98	1099769.20	1099769.43	0.0089	0.0040
Uranus	-1702-06-19 23:02 J	1099937.35	1099937.46	1099937.59	0.0134	0.0119
Neptune	-1701-01-05 03:07 J	1100136.38	1100136.63	1100136.89	0.0089	0.0013
Neptune	-1700-01-06 13:26 J	1100503.81	1100504.06	1100504.31	0.0088	0.0015
Neptune	-1699-01-08 23:31 J	1100871.27	1100871.48	1100871.72	0.0088	0.0042
Neptune	-1698-01-11 09:35 J	1101238.77	1101238.90	1101239.08	0.0088	0.0070
Saturn	-1691-07-01 19:26 J	1103967.08	1103967.31	1103967.55	0.0272	0.0091
Pluto	-1689-06-08 16:33 J	1104674.97	1104675.19	1104675.42	0.0079	0.0041
Jupiter	-1682-06-05 07:40 J	1107227.66	1107227.82	1107227.98	0.0517	0.0376
Saturn	-1678-12-27 04:19 J	1108893.44	1108893.68	1108893.92	0.0290	0.0004
Jupiter	-1670-06-10 04:47 J	1111615.47	1111615.70	1111615.93	0.0518	0.0077
Uranus	-1666-11-14 12:00 J	1113233.92	1113234.00	1113234.09	0.0140	0.0131
Uranus	-1665-11-18 02:52 J	1113603.44	1113603.62	1113603.80	0.0141	0.0098
Jupiter	-1665-12-03 09:21 J	1113618.72	1113618.89	1113619.07	0.0510	0.0329
Uranus	-1664-11-22 18:00 J	1113973.04	1113973.25	1113973.48	0.0142	0.0066
Uranus	-1663-11-27 10:19 J	1114342.69	1114342.93	1114343.18	0.0142	0.0031
Saturn	-1662-06-26 21:21 J	1114554.20	1114554.39	1114554.59	0.0271	0.0170
Uranus	-1662-12-02 03:21 J	1114712.39	1114712.64	1114712.89	0.0143	0.0005
Uranus	-1661-12-05 20:52 J	1115082.14	1115082.37	1115082.62	0.0143	0.0040
Uranus	-1660-12-10 15:35 J	1115451.94	1115452.15	1115452.37	0.0144	0.0076
Uranus	-1659-12-15 10:47 J	1115821.81	1115821.95	1115822.12	0.0144	0.0111
Jupiter	-1658-06-15 04:04 J	1116003.46	1116003.67	1116003.88	0.0520	0.0232
Mars	-1656-10-28 01:12 J	1116869.37	1116869.55	1116869.74	0.1705	0.0228
Jupiter	-1653-12-07 20:24 J	1118006.13	1118006.35	1118006.58	0.0508	0.0055

Jupiter	-1641-12-12 07:40 J	1122393.62	1122393.82	1122394.03	0.0506	0.0220
Saturn	-1632-07-03 06:43 J	1125518.61	1125518.78	1125518.98	0.0272	0.0177
Jupiter	-1629-12-16 15:50 J	1126781.10	1126781.16	1126781.23	0.0504	0.0482
Uranus	-1626-05-16 12:57 J	1127661.97	1127662.04	1127662.17	0.0138	0.0127
Uranus	-1625-05-20 06:57 J	1128031.62	1128031.79	1128032.00	0.0138	0.0095
Uranus	-1624-05-25 00:00 J	1128401.28	1128401.50	1128401.74	0.0137	0.0062
Uranus	-1623-05-29 16:19 J	1128770.94	1128771.18	1128771.44	0.0137	0.0030
Uranus	-1622-06-03 08:09 J	1129140.58	1129140.84	1129141.10	0.0136	0.0003
Uranus	-1621-06-06 22:47 J	1129510.20	1129510.45	1129510.70	0.0136	0.0034
Uranus	-1620-06-11 12:14 J	1129879.80	1129880.01	1129880.25	0.0135	0.0065
Neptune	-1620-07-05 12:43 J	1129903.86	1129904.03	1129904.23	0.0089	0.0062
Uranus	-1619-06-16 01:26 J	1130249.39	1130249.56	1130249.75	0.0135	0.0095
Neptune	-1619-07-08 01:40 J	1130271.34	1130271.57	1130271.83	0.0089	0.0034
Saturn	-1619-12-28 20:09 J	1130445.13	1130445.34	1130445.58	0.0289	0.0106
Uranus	-1618-06-20 13:26 J	1130618.99	1130619.06	1130619.18	0.0135	0.0125
Neptune	-1618-07-10 15:07 J	1130638.87	1130639.13	1130639.39	0.0089	0.0006
Neptune	-1617-07-12 03:50 J	1131006.42	1131006.66	1131006.92	0.0089	0.0023
Neptune	-1616-07-14 16:19 J	1131373.99	1131374.18	1131374.42	0.0089	0.0051
Neptune	-1615-07-17 05:02 J	1131741.62	1131741.71	1131741.86	0.0089	0.0079
Saturn	-1603-06-28 07:26 J	1136105.58	1136105.81	1136106.05	0.0271	0.0089
Jupiter	-1599-06-04 03:21 J	1137542.53	1137542.64	1137542.77	0.0516	0.0443
Saturn	-1590-12-23 11:02 J	1141031.80	1141031.96	1141032.14	0.0291	0.0208
Jupiter	-1587-06-09 01:40 J	1141930.34	1141930.57	1141930.80	0.0519	0.0144
Uranus	-1582-11-15 00:00 J	1143915.40	1143915.50	1143915.61	0.0140	0.0126
Jupiter	-1582-12-03 13:12 J	1143933.90	1143934.05	1143934.21	0.0509	0.0380
Uranus	-1581-11-18 14:09 J	1144284.92	1144285.09	1144285.29	0.0141	0.0094
Uranus	-1580-11-23 05:31 J	1144654.51	1144654.73	1144654.96	0.0141	0.0060
Uranus	-1579-11-27 21:35 J	1145024.16	1145024.40	1145024.65	0.0142	0.0026
Uranus	-1578-12-02 14:09 J	1145393.85	1145394.09	1145394.35	0.0142	0.0010
Mars	-1577-10-30 08:09 J	1145726.71	1145726.84	1145726.97	0.1700	0.1175

Uranus	-1577-12-06 07:55 J	1145763.59	1145763.83	1145764.07	0.0143	0.0044
Uranus	-1576-12-11 02:09 J	1146133.39	1146133.59	1146133.80	0.0143	0.0080
Jupiter	-1575-06-14 04:04 J	1146318.45	1146318.67	1146318.90	0.0520	0.0171
Uranus	-1575-12-15 21:07 J	1146503.24	1146503.38	1146503.54	0.0144	0.0115
Saturn	-1573-07-04 16:33 J	1147070.13	1147070.19	1147070.29	0.0272	0.0258
Jupiter	-1570-12-07 23:16 J	1148321.24	1148321.47	1148321.69	0.0508	0.0107
Jupiter	-1563-06-19 06:14 J	1150706.68	1150706.76	1150706.85	0.0522	0.0487
Saturn	-1560-12-30 09:35 J	1151996.73	1151996.90	1151997.08	0.0289	0.0200
Jupiter	-1558-12-12 09:21 J	1152708.68	1152708.89	1152709.11	0.0506	0.0165
Jupiter	-1546-12-16 19:12 J	1157096.18	1157096.30	1157096.42	0.0505	0.0429
Saturn	-1544-06-29 15:07 J	1157656.88	1157657.13	1157657.38	0.0271	0.0012
Uranus	-1542-05-17 00:57 J	1158343.44	1158343.54	1158343.68	0.0138	0.0122
Uranus	-1541-05-20 18:57 J	1158713.11	1158713.29	1158713.51	0.0138	0.0090
Uranus	-1540-05-25 12:28 J	1159082.80	1159083.02	1159083.27	0.0137	0.0057
Neptune	-1540-12-30 12:28 J	1159301.97	1159302.02	1159302.13	0.0089	0.0084
Uranus	-1539-05-30 05:02 J	1159452.46	1159452.71	1159452.97	0.0137	0.0025
Neptune	-1538-01-01 22:47 J	1159669.28	1159669.45	1159669.67	0.0089	0.0057
Uranus	-1538-06-03 20:52 J	1159822.11	1159822.37	1159822.63	0.0136	0.0008
Neptune	-1537-01-04 09:07 J	1160036.66	1160036.88	1160037.14	0.0089	0.0030
Uranus	-1537-06-07 11:45 J	1160191.74	1160191.99	1160192.24	0.0136	0.0039
Neptune	-1536-01-05 19:40 J	1160404.07	1160404.32	1160404.58	0.0089	0.0003
Uranus	-1536-06-12 01:12 J	1160561.34	1160561.55	1160561.78	0.0135	0.0070
Neptune	-1535-01-08 05:31 J	1160771.50	1160771.73	1160771.99	0.0088	0.0026
Uranus	-1535-06-16 14:24 J	1160930.94	1160931.10	1160931.29	0.0135	0.0100
Neptune	-1534-01-10 15:50 J	1161138.97	1161139.16	1161139.38	0.0088	0.0053
Uranus	-1534-06-21 03:07 J	1161300.56	1161300.63	1161300.70	0.0135	0.0129
Neptune	-1533-01-13 02:09 J	1161506.50	1161506.59	1161506.72	0.0088	0.0080
Pluto	-1531-12-07 16:04 J	1162565.93	1162566.17	1162566.44	0.0065	0.0011
Saturn	-1531-12-24 23:02 J	1162583.24	1162583.46	1162583.68	0.0291	0.0115
Jupiter	-1516-06-03 03:50 J	1167857.61	1167857.66	1167857.72	0.0517	0.0500

Jupiter	-1504-06-08 05:45 J	1172245.52	1172245.74	1172245.96	0.0518	0.0191
Saturn	-1501-12-31 18:43 J	1173548.25	1173548.28	1173548.32	0.0289	0.0285
Jupiter	-1499-12-02 16:33 J	1174249.07	1174249.19	1174249.31	0.0510	0.0430
Uranus	-1498-11-15 13:40 J	1174596.96	1174597.07	1174597.21	0.0140	0.0121
Uranus	-1497-11-19 04:19 J	1174966.50	1174966.68	1174966.89	0.0141	0.0088
Uranus	-1496-11-23 19:26 J	1175336.09	1175336.31	1175336.55	0.0141	0.0055
Uranus	-1495-11-28 11:16 J	1175705.73	1175705.97	1175706.22	0.0142	0.0021
Uranus	-1494-12-03 03:50 J	1176075.42	1176075.66	1176075.91	0.0142	0.0014
Uranus	-1493-12-06 21:07 J	1176445.16	1176445.38	1176445.63	0.0143	0.0050
Jupiter	-1492-06-13 05:45 J	1176633.51	1176633.74	1176633.97	0.0519	0.0114
Uranus	-1492-12-11 15:07 J	1176814.95	1176815.13	1176815.35	0.0143	0.0085
Uranus	-1491-12-16 10:19 J	1177184.81	1177184.93	1177185.08	0.0144	0.0120
Jupiter	-1487-12-07 03:07 J	1178636.42	1178636.63	1178636.85	0.0509	0.0159
Saturn	-1485-06-30 19:55 J	1179208.09	1179208.33	1179208.57	0.0271	0.0059
Jupiter	-1480-06-18 06:00 J	1181021.62	1181021.75	1181021.89	0.0521	0.0424
Jupiter	-1475-12-11 15:21 J	1183023.92	1183024.14	1183024.37	0.0507	0.0115
Saturn	-1472-12-26 06:43 J	1184134.54	1184134.78	1184135.02	0.0291	0.0031
Jupiter	-1463-12-16 03:35 J	1187411.51	1187411.65	1187411.80	0.0505	0.0388
Uranus	-1458-05-17 13:12 J	1189024.93	1189025.05	1189025.20	0.0138	0.0117
Uranus	-1457-05-21 07:26 J	1189394.61	1189394.81	1189395.02	0.0138	0.0084
Uranus	-1456-05-26 00:43 J	1189764.30	1189764.53	1189764.78	0.0137	0.0052
Saturn	-1456-06-25 12:57 J	1189794.90	1189795.04	1189795.20	0.0269	0.0216
Neptune	-1456-07-04 14:09 J	1189803.99	1189804.09	1189804.23	0.0089	0.0079
Uranus	-1455-05-30 17:16 J	1190133.97	1190134.22	1190134.48	0.0137	0.0019
Neptune	-1455-07-07 03:50 J	1190171.45	1190171.66	1190171.88	0.0089	0.0051
Uranus	-1454-06-04 09:07 J	1190503.62	1190503.88	1190504.14	0.0136	0.0013
Neptune	-1454-07-09 17:02 J	1190538.96	1190539.21	1190539.46	0.0089	0.0023
Uranus	-1453-06-07 23:31 J	1190873.25	1190873.48	1190873.74	0.0136	0.0045
Neptune	-1453-07-11 06:00 J	1190906.49	1190906.75	1190907.01	0.0089	0.0005
Uranus	-1452-06-12 13:26 J	1191242.86	1191243.06	1191243.29	0.0135	0.0076

Neptune	-1452-07-13 18:43 J	1191274.05	1191274.28	1191274.54	0.0089	0.0033
Uranus	-1451-06-17 02:52 J	1191612.47	1191612.62	1191612.79	0.0135	0.0105
Neptune	-1451-07-16 07:26 J	1191641.65	1191641.81	1191642.02	0.0089	0.0061
Mars	-1451-10-26 16:33 J	1191744.06	1191744.19	1191744.31	0.1715	0.1244
Uranus	-1450-06-21 15:21 J	1191982.13	1191982.14	1191982.18	0.0135	0.0134
Neptune	-1450-07-18 20:24 J	1192009.35	1192009.35	1192009.39	0.0089	0.0089
Pluto	-1443-06-09 20:38 J	1194527.12	1194527.36	1194527.62	0.0079	0.0025
Saturn	-1426-07-02 21:35 J	1200759.19	1200759.40	1200759.63	0.0271	0.0123
Mars	-1425-04-25 21:50 J	1201057.24	1201057.41	1201057.59	0.1815	0.0899
Jupiter	-1421-06-07 08:24 J	1202560.64	1202560.85	1202561.06	0.0517	0.0242
Jupiter	-1416-12-02 00:14 J	1204564.43	1204564.51	1204564.60	0.0510	0.0473
Uranus	-1414-11-16 04:04 J	1205278.54	1205278.67	1205278.82	0.0140	0.0115
Uranus	-1413-11-19 18:14 J	1205648.07	1205648.26	1205648.47	0.0141	0.0083
Saturn	-1413-12-27 09:07 J	1205685.64	1205685.88	1205686.12	0.0291	0.0040
Uranus	-1412-11-24 09:07 J	1206017.65	1206017.88	1206018.12	0.0141	0.0049
Uranus	-1411-11-29 00:57 J	1206387.30	1206387.54	1206387.79	0.0142	0.0015
Uranus	-1410-12-03 17:16 J	1206756.98	1206757.22	1206757.47	0.0142	0.0020
Jupiter	-1409-06-12 05:45 J	1206948.50	1206948.74	1206948.98	0.0520	0.0055
Uranus	-1409-12-07 10:33 J	1207126.72	1207126.94	1207127.18	0.0143	0.0055
Uranus	-1408-12-12 04:47 J	1207496.51	1207496.70	1207496.90	0.0143	0.0090
Uranus	-1407-12-16 23:31 J	1207866.37	1207866.48	1207866.61	0.0144	0.0125
Jupiter	-1404-12-06 14:52 J	1208951.91	1208952.12	1208952.33	0.0509	0.0190
Jupiter	-1397-06-17 09:21 J	1211336.73	1211336.89	1211337.06	0.0522	0.0372
Saturn	-1397-06-26 14:24 J	1211345.90	1211346.10	1211346.31	0.0269	0.0153
Jupiter	-1392-12-11 01:40 J	1213339.34	1213339.57	1213339.79	0.0507	0.0082
Jupiter	-1380-12-15 12:00 J	1217726.84	1217727.00	1217727.17	0.0505	0.0349
Neptune	-1374-01-01 05:45 J	1219569.60	1219569.74	1219569.90	0.0089	0.0072
Uranus	-1374-05-18 01:12 J	1219706.41	1219706.55	1219706.72	0.0138	0.0111
Neptune	-1373-01-03 15:50 J	1219936.96	1219937.16	1219937.40	0.0089	0.0046
Uranus	-1373-05-21 19:12 J	1220076.10	1220076.30	1220076.53	0.0138	0.0079

Neptune	-1372-01-05 02:09 J	1220304.35	1220304.59	1220304.85	0.0089	0.0019
Uranus	-1372-05-26 12:43 J	1220445.80	1220446.03	1220446.29	0.0137	0.0047
Mars	-1372-10-28 23:45 J	1220601.31	1220601.49	1220601.68	0.1710	0.0215
Neptune	-1371-01-07 12:28 J	1220671.77	1220672.02	1220672.28	0.0089	0.0009
Uranus	-1371-05-31 05:31 J	1220815.48	1220815.73	1220815.99	0.0137	0.0014
Neptune	-1370-01-09 22:33 J	1221039.22	1221039.44	1221039.68	0.0089	0.0036
Uranus	-1370-06-04 21:21 J	1221185.14	1221185.39	1221185.65	0.0136	0.0019
Neptune	-1369-01-12 08:38 J	1221406.70	1221406.86	1221407.05	0.0088	0.0063
Uranus	-1369-06-08 12:00 J	1221554.77	1221555.00	1221555.25	0.0136	0.0050
Uranus	-1368-06-13 01:55 J	1221924.39	1221924.58	1221924.80	0.0135	0.0081
Uranus	-1367-06-17 15:07 J	1222294.00	1222294.13	1222294.30	0.0135	0.0111
Saturn	-1367-07-03 21:21 J	1222310.21	1222310.39	1222310.57	0.0271	0.0183
Saturn	-1354-12-29 07:26 J	1227236.59	1227236.81	1227237.04	0.0290	0.0101
Mars	-1346-04-30 03:21 J	1229915.54	1229915.64	1229915.73	0.1821	0.1579
Jupiter	-1338-06-07 12:14 J	1232875.82	1232876.01	1232876.21	0.0518	0.0290
Saturn	-1338-06-28 13:55 J	1232896.85	1232897.08	1232897.32	0.0269	0.0094
Jupiter	-1333-12-01 12:43 J	1234879.99	1234880.03	1234880.08	0.0510	0.0498
Uranus	-1331-11-12 06:14 J	1235590.75	1235590.76	1235590.79	0.0140	0.0139
Uranus	-1330-11-16 19:12 J	1235960.17	1235960.30	1235960.48	0.0140	0.0109
Uranus	-1329-11-20 09:35 J	1236329.71	1236329.90	1236330.13	0.0141	0.0076
Uranus	-1328-11-25 00:43 J	1236699.30	1236699.53	1236699.77	0.0141	0.0042
Uranus	-1327-11-29 16:33 J	1237068.94	1237069.19	1237069.44	0.0142	0.0008
Jupiter	-1326-06-12 16:04 J	1237263.93	1237264.17	1237264.40	0.0519	0.0025
Uranus	-1326-12-04 08:52 J	1237438.63	1237438.87	1237439.12	0.0142	0.0026
Uranus	-1325-12-08 02:24 J	1237808.38	1237808.60	1237808.83	0.0143	0.0061
Saturn	-1325-12-22 02:24 J	1237822.51	1237822.60	1237822.72	0.0293	0.0263
Uranus	-1324-12-12 20:09 J	1238178.17	1238178.34	1238178.54	0.0143	0.0096
Uranus	-1323-12-17 15:21 J	1238548.05	1238548.14	1238548.25	0.0144	0.0131
Jupiter	-1321-12-06 00:28 J	1239267.31	1239267.52	1239267.73	0.0509	0.0223
Jupiter	-1314-06-17 18:14 J	1241652.09	1241652.26	1241652.45	0.0521	0.0335

Jupiter	-1309-12-10 11:02 J	1243654.73	1243654.96	1243655.19	0.0507	0.0045
Saturn	-1308-07-04 18:57 J	1243861.18	1243861.29	1243861.41	0.0271	0.0238
Jupiter	-1297-12-14 23:45 J	1248042.31	1248042.49	1248042.67	0.0506	0.0316
Saturn	-1295-12-30 03:21 J	1248787.44	1248787.64	1248787.85	0.0290	0.0156
Mars	-1293-10-31 06:57 J	1249458.74	1249458.79	1249458.84	0.1706	0.1631
Uranus	-1291-05-13 20:38 J	1250018.33	1250018.36	1250018.41	0.0139	0.0137
Neptune	-1291-07-06 05:02 J	1250071.58	1250071.71	1250071.91	0.0089	0.0069
Uranus	-1290-05-18 15:35 J	1250388.00	1250388.15	1250388.33	0.0138	0.0104
Neptune	-1290-07-08 18:28 J	1250439.06	1250439.27	1250439.52	0.0089	0.0041
Uranus	-1289-05-22 09:50 J	1250757.70	1250757.91	1250758.14	0.0138	0.0072
Neptune	-1289-07-10 07:55 J	1250806.58	1250806.83	1250807.09	0.0089	0.0013
Uranus	-1288-05-27 03:07 J	1251127.39	1251127.63	1251127.89	0.0137	0.0040
Neptune	-1288-07-12 21:07 J	1251174.12	1251174.38	1251174.64	0.0089	0.0015
Uranus	-1287-05-31 19:55 J	1251497.07	1251497.33	1251497.59	0.0137	0.0007
Neptune	-1287-07-15 09:50 J	1251541.70	1251541.91	1251542.15	0.0089	0.0043
Uranus	-1286-06-05 11:31 J	1251866.73	1251866.98	1251867.24	0.0136	0.0025
Neptune	-1286-07-17 22:33 J	1251909.31	1251909.44	1251909.62	0.0089	0.0071
Uranus	-1285-06-09 01:55 J	1252236.36	1252236.58	1252236.83	0.0136	0.0056
Pluto	-1285-12-08 03:21 J	1252418.48	1252418.64	1252418.80	0.0065	0.0051
Uranus	-1284-06-13 15:50 J	1252605.98	1252606.16	1252606.38	0.0135	0.0087
Pluto	-1284-12-09 14:38 J	1252784.95	1252785.11	1252785.31	0.0066	0.0047
Uranus	-1283-06-18 05:02 J	1252975.61	1252975.71	1252975.87	0.0135	0.0117
Saturn	-1279-06-29 12:28 J	1254447.77	1254448.02	1254448.27	0.0269	0.0038
Saturn	-1266-12-23 21:35 J	1259373.24	1259373.40	1259373.57	0.0293	0.0210
Jupiter	-1255-06-06 23:16 J	1263191.28	1263191.47	1263191.65	0.0517	0.0318
Uranus	-1247-11-12 20:52 J	1266272.31	1266272.37	1266272.45	0.0140	0.0133
Uranus	-1246-11-17 10:19 J	1266641.76	1266641.93	1266642.10	0.0140	0.0102
Uranus	-1245-11-21 00:14 J	1267011.31	1267011.51	1267011.74	0.0141	0.0070
Uranus	-1244-11-25 15:07 J	1267380.89	1267381.13	1267381.38	0.0141	0.0036
Jupiter	-1243-06-11 23:31 J	1267579.24	1267579.48	1267579.72	0.0519	0.0014

Uranus	-1243-11-30 06:57 J	1267750.54	1267750.79	1267751.04	0.0142	0.0003
Uranus	-1242-12-04 23:16 J	1268120.23	1268120.47	1268120.72	0.0142	0.0032
Uranus	-1241-12-08 16:47 J	1268489.98	1268490.20	1268490.42	0.0143	0.0067
Uranus	-1240-12-13 10:19 J	1268859.78	1268859.93	1268860.13	0.0143	0.0103
Uranus	-1239-12-18 05:45 J	1269229.68	1269229.74	1269229.82	0.0144	0.0137
Jupiter	-1238-12-06 12:28 J	1269582.83	1269583.02	1269583.22	0.0509	0.0254
Saturn	-1236-12-30 21:35 J	1270338.23	1270338.40	1270338.57	0.0290	0.0206
Jupiter	-1231-06-16 19:55 J	1271967.14	1271967.33	1271967.53	0.0521	0.0282
Jupiter	-1226-12-11 02:52 J	1273970.39	1273970.62	1273970.85	0.0508	0.0026
Saturn	-1220-06-30 10:33 J	1275998.69	1275998.94	1275999.19	0.0269	0.0016
Jupiter	-1214-12-15 13:40 J	1278357.88	1278358.07	1278358.26	0.0506	0.0293
Neptune	-1211-12-31 11:45 J	1279469.98	1279469.99	1279470.04	0.0089	0.0088
Neptune	-1209-01-02 22:19 J	1279837.25	1279837.43	1279837.62	0.0089	0.0061
Neptune	-1208-01-04 08:09 J	1280204.62	1280204.84	1280205.09	0.0089	0.0035
Neptune	-1207-01-06 18:43 J	1280572.03	1280572.28	1280572.54	0.0089	0.0008
Uranus	-1207-05-14 10:33 J	1280699.87	1280699.94	1280700.05	0.0139	0.0131
Saturn	-1207-12-24 16:47 J	1280924.00	1280924.20	1280924.41	0.0293	0.0157
Neptune	-1206-01-09 04:47 J	1280939.46	1280939.70	1280939.96	0.0089	0.0020
Uranus	-1206-05-19 05:45 J	1281069.57	1281069.74	1281069.94	0.0138	0.0098
Neptune	-1205-01-11 15:21 J	1281306.92	1281307.14	1281307.36	0.0089	0.0046
Uranus	-1205-05-22 23:31 J	1281439.27	1281439.48	1281439.73	0.0138	0.0066
Neptune	-1204-01-13 01:12 J	1281674.42	1281674.55	1281674.71	0.0088	0.0073
Uranus	-1204-05-27 17:02 J	1281808.97	1281809.21	1281809.47	0.0137	0.0034
Uranus	-1203-06-01 09:35 J	1282178.65	1282178.90	1282179.16	0.0137	0.0003
Uranus	-1202-06-06 01:12 J	1282548.30	1282548.55	1282548.81	0.0136	0.0031
Uranus	-1201-06-09 15:35 J	1282917.94	1282918.15	1282918.40	0.0136	0.0062
Uranus	-1200-06-14 06:00 J	1283287.57	1283287.75	1283287.95	0.0136	0.0092
Uranus	-1199-06-18 19:12 J	1283657.20	1283657.30	1283657.43	0.0135	0.0122
Pluto	-1196-06-12 01:12 J	1284746.49	1284746.55	1284746.68	0.0079	0.0074
Saturn	-1191-06-25 02:24 J	1286585.56	1286585.60	1286585.67	0.0268	0.0261

Saturn	-1177-12-31 16:19 J	1291889.07	1291889.18	1291889.30	0.0290	0.0257
Jupiter	-1172-06-06 00:43 J	1293506.37	1293506.53	1293506.70	0.0517	0.0367
Mars	-1167-10-27 12:43 J	1295475.86	1295476.03	1295476.19	0.1721	0.0859
Uranus	-1163-11-13 10:47 J	1296953.86	1296953.95	1296954.07	0.0140	0.0127
Uranus	-1162-11-18 00:14 J	1297323.33	1297323.51	1297323.70	0.0140	0.0096
Saturn	-1161-07-01 10:04 J	1297549.68	1297549.92	1297550.16	0.0269	0.0073
Uranus	-1161-11-21 14:24 J	1297692.88	1297693.10	1297693.32	0.0141	0.0063
Jupiter	-1160-06-11 02:38 J	1297894.37	1297894.61	1297894.85	0.0519	0.0061
Uranus	-1160-11-26 05:02 J	1298062.47	1298062.71	1298062.96	0.0141	0.0030
Uranus	-1159-11-30 20:52 J	1298432.12	1298432.37	1298432.62	0.0142	0.0004
Uranus	-1158-12-05 13:12 J	1298801.81	1298802.05	1298802.30	0.0142	0.0039
Uranus	-1157-12-09 06:43 J	1299171.57	1299171.78	1299172.00	0.0143	0.0073
Uranus	-1156-12-14 00:28 J	1299541.38	1299541.52	1299541.70	0.0143	0.0109
Jupiter	-1155-12-06 01:55 J	1299898.39	1299898.58	1299898.77	0.0509	0.0276
Uranus	-1155-12-18 19:40 J	1299911.32	1299911.32	1299911.37	0.0144	0.0143
Jupiter	-1148-06-16 06:43 J	1302282.58	1302282.78	1302282.99	0.0521	0.0253
Saturn	-1148-12-25 12:43 J	1302474.81	1302475.03	1302475.26	0.0292	0.0103
Jupiter	-1143-12-10 13:26 J	1304285.83	1304286.06	1304286.29	0.0508	0.0005
Mars	-1141-04-25 16:19 J	1304788.02	1304788.18	1304788.34	0.1806	0.1038
Saturn	-1132-06-26 01:55 J	1308136.43	1308136.58	1308136.75	0.0268	0.0205
Jupiter	-1131-12-14 23:16 J	1308673.27	1308673.47	1308673.66	0.0506	0.0258
Neptune	-1127-07-05 07:55 J	1309971.79	1309971.83	1309971.94	0.0089	0.0085
Neptune	-1126-07-07 21:35 J	1310339.21	1310339.40	1310339.61	0.0089	0.0057
Neptune	-1125-07-09 10:19 J	1310706.70	1310706.93	1310707.20	0.0089	0.0030
Neptune	-1124-07-12 00:00 J	1311074.24	1311074.50	1311074.76	0.0089	0.0002
Uranus	-1123-05-15 02:09 J	1311381.48	1311381.59	1311381.71	0.0139	0.0124
Neptune	-1123-07-14 12:43 J	1311441.80	1311442.03	1311442.29	0.0089	0.0026
Uranus	-1122-05-19 20:52 J	1311751.19	1311751.37	1311751.57	0.0138	0.0092
Neptune	-1122-07-17 01:55 J	1311809.38	1311809.58	1311809.80	0.0089	0.0053
Uranus	-1121-05-23 14:52 J	1312120.89	1312121.12	1312121.36	0.0138	0.0059

Neptune	-1121-07-18 14:24 J	1312177.02	1312177.10	1312177.23	0.0089	0.0081
Uranus	-1120-05-28 08:09 J	1312490.59	1312490.84	1312491.10	0.0137	0.0027
Uranus	-1119-06-02 00:28 J	1312860.27	1312860.52	1312860.78	0.0137	0.0006
Uranus	-1118-06-06 15:50 J	1313229.93	1313230.16	1313230.42	0.0136	0.0038
Uranus	-1117-06-10 06:43 J	1313599.56	1313599.78	1313600.01	0.0136	0.0068
Uranus	-1116-06-14 21:07 J	1313969.20	1313969.38	1313969.56	0.0136	0.0098
Uranus	-1115-06-19 10:19 J	1314338.86	1314338.93	1314339.03	0.0135	0.0127
Saturn	-1102-07-03 11:16 J	1319100.76	1319100.97	1319101.19	0.0270	0.0134
Jupiter	-1089-06-05 10:04 J	1323821.77	1323821.92	1323822.07	0.0516	0.0397
Saturn	-1089-12-26 12:14 J	1324025.77	1324026.01	1324026.25	0.0292	0.0040
Mars	-1088-10-29 21:21 J	1324333.22	1324333.39	1324333.57	0.1716	0.0640
Uranus	-1079-11-13 23:31 J	1327635.38	1327635.48	1327635.62	0.0140	0.0122
Uranus	-1078-11-18 12:43 J	1328004.85	1328005.03	1328005.23	0.0140	0.0091
Jupiter	-1077-06-10 11:45 J	1328209.76	1328209.99	1328210.23	0.0518	0.0095
Uranus	-1077-11-22 02:38 J	1328374.40	1328374.61	1328374.85	0.0141	0.0059
Uranus	-1076-11-26 17:16 J	1328743.98	1328744.22	1328744.48	0.0141	0.0026
Uranus	-1075-12-01 09:07 J	1329113.63	1329113.88	1329114.13	0.0142	0.0009
Uranus	-1074-12-06 01:26 J	1329483.33	1329483.56	1329483.80	0.0142	0.0043
Saturn	-1073-06-27 04:04 J	1329687.47	1329687.67	1329687.89	0.0269	0.0143
Uranus	-1073-12-09 18:43 J	1329853.08	1329853.28	1329853.49	0.0143	0.0078
Jupiter	-1072-12-05 09:35 J	1330213.72	1330213.90	1330214.08	0.0510	0.0315
Uranus	-1072-12-14 12:43 J	1330222.89	1330223.03	1330223.19	0.0143	0.0112
Jupiter	-1065-06-15 12:28 J	1332597.80	1332598.02	1332598.24	0.0520	0.0209
Mars	-1062-04-29 20:24 J	1333646.22	1333646.35	1333646.48	0.1813	0.1351
Jupiter	-1060-12-09 22:33 J	1334601.22	1334601.44	1334601.67	0.0508	0.0042
Jupiter	-1053-06-20 08:38 J	1336985.80	1336985.86	1336985.92	0.0521	0.0502
Jupiter	-1048-12-14 11:31 J	1338988.78	1338988.98	1338989.19	0.0507	0.0232
Neptune	-1045-01-02 04:33 J	1339737.59	1339737.69	1339737.84	0.0089	0.0077
Neptune	-1044-01-03 15:21 J	1340104.93	1340105.14	1340105.35	0.0089	0.0050
Neptune	-1043-01-06 01:12 J	1340472.32	1340472.55	1340472.81	0.0089	0.0024

Saturn	-1043-07-04 15:21 J	1340651.98	1340652.14	1340652.31	0.0270	0.0200
Neptune	-1042-01-08 11:45 J	1340839.74	1340839.99	1340840.25	0.0089	0.0004
Neptune	-1041-01-10 21:50 J	1341207.18	1341207.41	1341207.66	0.0089	0.0030
Neptune	-1040-01-12 07:40 J	1341574.65	1341574.82	1341575.04	0.0089	0.0057
Neptune	-1039-01-14 18:14 J	1341942.19	1341942.26	1341942.36	0.0089	0.0083
Uranus	-1039-05-15 12:57 J	1342062.93	1342063.04	1342063.19	0.0139	0.0120
Uranus	-1038-05-20 08:09 J	1342432.65	1342432.84	1342433.05	0.0138	0.0087
Pluto	-1038-12-11 00:00 J	1342637.25	1342637.50	1342637.76	0.0065	0.0000
Uranus	-1037-05-24 02:24 J	1342802.37	1342802.60	1342802.84	0.0138	0.0054
Uranus	-1036-05-28 19:55 J	1343172.08	1343172.33	1343172.59	0.0137	0.0022
Jupiter	-1036-12-18 21:35 J	1343376.36	1343376.40	1343376.45	0.0505	0.0493
Uranus	-1035-06-02 12:28 J	1343541.76	1343542.02	1343542.28	0.0137	0.0010
Uranus	-1034-06-07 04:04 J	1343911.43	1343911.67	1343911.92	0.0136	0.0042
Uranus	-1033-06-10 18:57 J	1344281.08	1344281.29	1344281.52	0.0136	0.0072
Uranus	-1032-06-15 09:21 J	1344650.73	1344650.89	1344651.07	0.0136	0.0103
Uranus	-1031-06-19 22:33 J	1345020.41	1345020.44	1345020.52	0.0135	0.0132
Saturn	-1030-12-28 15:07 J	1345576.89	1345577.13	1345577.37	0.0292	0.0030
Saturn	-1014-06-29 09:07 J	1351238.64	1351238.88	1351239.12	0.0269	0.0075
Jupiter	-1006-06-05 14:38 J	1354136.99	1354137.11	1354137.24	0.0516	0.0438

1ST MILLENNIUM BCE

This is a list of transits of Earth in the 1st millennium BCE.

FROM	MAX- TRANSIT TIME	C	START	MAX	END	SUNRAD	DEPTH	S
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Uranus	-995-11-14 12:14 J	1358316.89	1358317.01	1358317.16	0.0140	0.0117
Jupiter	-994-06-10 09:35 J	1358524.67	1358524.90	1358525.13	0.0517	0.0153
Uranus	-994-11-19 01:12 J	1358686.37	1358686.55	1358686.76	0.0140	0.0086
Uranus	-993-11-22 15:07 J	1359055.91	1359056.13	1359056.37	0.0141	0.0054
Uranus	-992-11-27 06:00 J	1359425.50	1359425.75	1359426.00	0.0141	0.0020
Uranus	-991-12-01 21:35 J	1359795.15	1359795.40	1359795.65	0.0142	0.0014
Uranus	-990-12-06 13:40 J	1360164.84	1360165.07	1360165.31	0.0142	0.0048
Jupiter	-989-12-04 18:28 J	1360529.11	1360529.27	1360529.44	0.0511	0.0349
Uranus	-989-12-10 06:57 J	1360534.59	1360534.79	1360535.00	0.0143	0.0083
Uranus	-988-12-15 00:57 J	1360904.40	1360904.54	1360904.69	0.0143	0.0117
Jupiter	-982-06-15 10:04 J	1362912.69	1362912.92	1362913.15	0.0519	0.0148
Jupiter	-977-12-09 06:14 J	1364916.53	1364916.76	1364916.99	0.0509	0.0080
Saturn	-971-12-29 22:47 J	1367128.23	1367128.45	1367128.68	0.0291	0.0111
Jupiter	-970-06-20 13:12 J	1367300.94	1367301.05	1367301.17	0.0521	0.0457
Jupiter	-965-12-13 17:16 J	1369304.01	1369304.22	1369304.44	0.0507	0.0188
Neptune	-962-07-07 00:57 J	1370239.40	1370239.54	1370239.69	0.0089	0.0073
Neptune	-961-07-08 13:55 J	1370606.87	1370607.08	1370607.32	0.0089	0.0046
Neptune	-960-07-11 02:52 J	1370974.38	1370974.62	1370974.89	0.0089	0.0019
Neptune	-959-07-13 16:19 J	1371341.92	1371342.18	1371342.44	0.0089	0.0009
Neptune	-958-07-16 04:47 J	1371709.48	1371709.70	1371709.96	0.0089	0.0037
Neptune	-957-07-17 18:00 J	1372077.09	1372077.25	1372077.45	0.0089	0.0064
Uranus	-955-05-16 00:00 J	1372744.37	1372744.50	1372744.66	0.0139	0.0115
Saturn	-955-06-30 17:02 J	1372789.96	1372790.21	1372790.46	0.0269	0.0004
Uranus	-954-05-20 18:57 J	1373114.10	1373114.29	1373114.51	0.0138	0.0083
Uranus	-953-05-24 13:12 J	1373483.82	1373484.05	1373484.31	0.0138	0.0050
Jupiter	-953-12-18 01:40 J	1373691.47	1373691.57	1373691.69	0.0505	0.0446
Uranus	-952-05-29 06:57 J	1373853.54	1373853.79	1373854.05	0.0137	0.0018
Uranus	-951-06-02 23:31 J	1374223.23	1374223.48	1374223.74	0.0137	0.0015
Uranus	-950-06-07 15:21 J	1374592.91	1374593.14	1374593.39	0.0137	0.0047
Pluto	-950-06-12 21:50 J	1374598.17	1374598.41	1374598.67	0.0079	0.0025

Uranus	-949-06-11 06:43 J	1374962.57	1374962.78	1374963.00	0.0136	0.0077
Uranus	-948-06-15 20:52 J	1375332.24	1375332.37	1375332.55	0.0136	0.0108
Saturn	-942-12-24 06:57 J	1377714.63	1377714.79	1377714.95	0.0293	0.0219
Saturn	-926-06-25 20:24 J	1383377.28	1383377.35	1383377.43	0.0268	0.0254
Jupiter	-923-06-04 11:31 J	1384451.93	1384451.98	1384452.05	0.0515	0.0497
Saturn	-912-12-31 10:47 J	1388679.78	1388679.95	1388680.13	0.0291	0.0201
Jupiter	-911-06-09 11:31 J	1388839.77	1388839.98	1388840.20	0.0517	0.0204
Uranus	-911-11-15 01:55 J	1388998.43	1388998.58	1388998.73	0.0139	0.0112
Uranus	-910-11-19 14:52 J	1389367.91	1389368.12	1389368.32	0.0140	0.0080
Uranus	-909-11-23 04:33 J	1389737.46	1389737.69	1389737.93	0.0140	0.0048
Uranus	-908-11-27 19:12 J	1390107.05	1390107.30	1390107.55	0.0141	0.0015
Uranus	-907-12-02 10:47 J	1390476.70	1390476.95	1390477.19	0.0141	0.0019
Jupiter	-906-12-04 22:19 J	1390844.30	1390844.43	1390844.58	0.0511	0.0397
Uranus	-906-12-07 02:52 J	1390846.39	1390846.62	1390846.86	0.0142	0.0053
Uranus	-905-12-10 19:40 J	1391216.14	1391216.32	1391216.53	0.0142	0.0088
Uranus	-904-12-15 13:26 J	1391585.95	1391586.06	1391586.21	0.0143	0.0122
Jupiter	-899-06-14 13:12 J	1393227.82	1393228.05	1393228.29	0.0519	0.0099
Saturn	-896-07-02 03:21 J	1394341.41	1394341.64	1394341.88	0.0270	0.0079
Jupiter	-894-12-09 08:24 J	1395231.63	1395231.85	1395232.07	0.0509	0.0133
Jupiter	-887-06-19 13:26 J	1397615.92	1397616.06	1397616.22	0.0520	0.0400
Mars	-883-10-28 08:24 J	1399207.67	1399207.85	1399208.03	0.1727	0.0471
Saturn	-883-12-25 20:09 J	1399266.13	1399266.34	1399266.56	0.0292	0.0124
Jupiter	-882-12-13 19:55 J	1399619.10	1399619.33	1399619.55	0.0508	0.0136
Neptune	-880-01-02 22:04 J	1400005.26	1400005.42	1400005.60	0.0089	0.0065
Neptune	-879-01-05 08:38 J	1400372.64	1400372.86	1400373.10	0.0089	0.0039
Neptune	-878-01-07 18:57 J	1400740.04	1400740.29	1400740.55	0.0089	0.0012
Neptune	-877-01-10 05:02 J	1401107.47	1401107.71	1401107.97	0.0089	0.0015
Neptune	-876-01-11 15:21 J	1401474.92	1401475.14	1401475.38	0.0089	0.0041
Neptune	-875-01-14 01:40 J	1401842.42	1401842.57	1401842.75	0.0089	0.0067
Uranus	-871-05-16 08:24 J	1403425.72	1403425.85	1403426.03	0.0139	0.0111

Uranus	-870-05-21 03:35 J	1403795.45	1403795.65	1403795.88	0.0139	0.0079
Jupiter	-870-12-18 06:43 J	1404006.65	1404006.78	1404006.92	0.0506	0.0400
Uranus	-869-05-24 22:19 J	1404165.19	1404165.43	1404165.67	0.0138	0.0045
Uranus	-868-05-29 15:50 J	1404534.91	1404535.16	1404535.42	0.0138	0.0013
Uranus	-867-06-03 08:38 J	1404904.61	1404904.86	1404905.12	0.0137	0.0019
Saturn	-867-06-27 07:12 J	1404928.63	1404928.80	1404929.00	0.0269	0.0174
Uranus	-866-06-08 00:43 J	1405274.30	1405274.53	1405274.78	0.0137	0.0051
Uranus	-865-06-11 16:04 J	1405643.98	1405644.17	1405644.39	0.0136	0.0081
Uranus	-864-06-16 06:43 J	1406013.66	1406013.78	1406013.95	0.0136	0.0112
Mars	-857-04-25 13:40 J	1408518.91	1408519.07	1408519.23	0.1798	0.1095
Saturn	-837-07-03 15:07 J	1415892.94	1415893.13	1415893.34	0.0270	0.0162
Jupiter	-828-06-08 11:45 J	1419154.79	1419154.99	1419155.20	0.0516	0.0257
Uranus	-828-11-11 03:07 J	1419310.59	1419310.63	1419310.68	0.0139	0.0136
Uranus	-827-11-15 15:07 J	1419679.99	1419680.13	1419680.31	0.0139	0.0106
Uranus	-826-11-20 04:19 J	1420049.48	1420049.68	1420049.90	0.0140	0.0075
Uranus	-825-11-23 18:14 J	1420419.03	1420419.26	1420419.50	0.0140	0.0042
Uranus	-824-11-28 09:07 J	1420788.63	1420788.88	1420789.13	0.0141	0.0009
Saturn	-824-12-27 12:00 J	1420817.76	1420818.00	1420818.24	0.0292	0.0024
Uranus	-823-12-03 00:43 J	1421158.28	1421158.53	1421158.77	0.0141	0.0025
Jupiter	-823-12-03 22:33 J	1421159.34	1421159.44	1421159.54	0.0512	0.0455
Uranus	-822-12-07 16:33 J	1421527.97	1421528.19	1421528.43	0.0142	0.0059
Uranus	-821-12-11 09:50 J	1421897.72	1421897.91	1421898.10	0.0142	0.0093
Uranus	-820-12-16 03:21 J	1422267.54	1422267.64	1422267.76	0.0143	0.0127
Jupiter	-816-06-13 07:55 J	1423542.60	1423542.83	1423543.07	0.0518	0.0031
Jupiter	-811-12-08 09:50 J	1425546.70	1425546.91	1425547.13	0.0510	0.0188
Saturn	-808-06-28 19:26 J	1426480.08	1426480.31	1426480.55	0.0269	0.0091
Jupiter	-804-06-18 06:57 J	1427930.61	1427930.79	1427930.98	0.0519	0.0326
Mars	-804-10-30 17:31 J	1428065.08	1428065.23	1428065.38	0.1722	0.1048
Jupiter	-799-12-12 21:21 J	1429934.17	1429934.39	1429934.62	0.0508	0.0080
Neptune	-798-07-06 06:00 J	1430139.73	1430139.75	1430139.80	0.0089	0.0088

Neptune	-797-07-07 18:57 J	1430507.12	1430507.29	1430507.49	0.0089	0.0061
Neptune	-796-07-10 07:55 J	1430874.60	1430874.83	1430875.08	0.0089	0.0034
Neptune	-795-07-12 21:07 J	1431242.12	1431242.38	1431242.64	0.0089	0.0007
Neptune	-794-07-15 09:50 J	1431609.67	1431609.91	1431610.18	0.0089	0.0021
Neptune	-793-07-16 22:33 J	1431977.24	1431977.44	1431977.68	0.0089	0.0048
Neptune	-792-07-19 11:31 J	1432344.87	1432344.98	1432345.14	0.0089	0.0075
Pluto	-792-12-11 04:47 J	1432489.62	1432489.70	1432489.83	0.0065	0.0059
Pluto	-791-12-12 16:47 J	1432856.01	1432856.20	1432856.43	0.0065	0.0038
Uranus	-788-05-11 23:45 J	1433737.47	1433737.49	1433737.55	0.0140	0.0138
Uranus	-787-05-16 19:40 J	1434107.17	1434107.32	1434107.50	0.0139	0.0106
Jupiter	-787-12-17 08:24 J	1434321.69	1434321.85	1434322.02	0.0506	0.0344
Uranus	-786-05-21 14:52 J	1434476.91	1434477.12	1434477.35	0.0139	0.0073
Uranus	-785-05-25 09:21 J	1434846.65	1434846.89	1434847.14	0.0138	0.0040
Uranus	-784-05-30 03:21 J	1435216.38	1435216.64	1435216.90	0.0138	0.0008
Uranus	-783-06-03 19:55 J	1435586.08	1435586.33	1435586.59	0.0137	0.0025
Uranus	-782-06-08 12:14 J	1435955.78	1435956.01	1435956.25	0.0137	0.0056
Uranus	-781-06-12 03:50 J	1436325.46	1436325.66	1436325.86	0.0136	0.0087
Uranus	-780-06-16 18:14 J	1436695.15	1436695.26	1436695.41	0.0136	0.0117
Mars	-778-04-29 15:07 J	1437376.99	1437377.13	1437377.28	0.1805	0.1188
Saturn	-778-07-06 03:50 J	1437444.56	1437444.66	1437444.76	0.0270	0.0247
Saturn	-765-12-29 04:47 J	1442369.47	1442369.70	1442369.93	0.0291	0.0079
Saturn	-749-06-30 07:12 J	1448031.55	1448031.80	1448032.05	0.0270	0.0009
Jupiter	-745-06-07 06:28 J	1449469.59	1449469.77	1449469.96	0.0515	0.0325
Uranus	-744-11-11 16:33 J	1449992.14	1449992.19	1449992.30	0.0139	0.0131
Uranus	-743-11-16 05:16 J	1450361.56	1450361.72	1450361.91	0.0139	0.0100
Uranus	-742-11-20 18:14 J	1450731.06	1450731.26	1450731.49	0.0140	0.0069
Uranus	-741-11-24 08:24 J	1451100.62	1451100.85	1451101.10	0.0140	0.0037
Uranus	-740-11-28 23:16 J	1451470.22	1451470.47	1451470.72	0.0141	0.0004
Uranus	-739-12-03 14:52 J	1451839.88	1451840.12	1451840.36	0.0141	0.0031
Uranus	-738-12-08 06:43 J	1452209.57	1452209.78	1452210.01	0.0142	0.0065

Uranus	-737-12-11 23:45 J	1452579.32	1452579.49	1452579.68	0.0142	0.0099
Uranus	-736-12-16 17:02 J	1452949.14	1452949.21	1452949.32	0.0143	0.0133
Saturn	-736-12-23 18:14 J	1452956.13	1452956.26	1452956.41	0.0293	0.0237
Jupiter	-733-06-12 04:47 J	1453857.46	1453857.70	1453857.94	0.0518	0.0037
Jupiter	-728-12-07 12:14 J	1455861.81	1455862.01	1455862.22	0.0510	0.0242
Jupiter	-721-06-17 06:28 J	1458245.57	1458245.77	1458245.97	0.0520	0.0265
Neptune	-716-01-02 05:31 J	1459905.63	1459905.73	1459905.85	0.0089	0.0080
Jupiter	-716-12-11 22:19 J	1460249.20	1460249.43	1460249.66	0.0509	0.0023
Neptune	-715-01-04 15:50 J	1460272.97	1460273.16	1460273.37	0.0089	0.0054
Neptune	-714-01-07 02:09 J	1460640.36	1460640.59	1460640.84	0.0089	0.0028
Neptune	-713-01-09 12:43 J	1461007.78	1461008.03	1461008.29	0.0089	0.0001
Neptune	-712-01-10 22:47 J	1461375.22	1461375.45	1461375.71	0.0089	0.0026
Neptune	-711-01-13 08:52 J	1461742.69	1461742.87	1461743.10	0.0089	0.0052
Neptune	-710-01-15 19:12 J	1462110.20	1462110.30	1462110.44	0.0089	0.0078
Saturn	-706-12-31 21:21 J	1463921.21	1463921.39	1463921.58	0.0291	0.0181
Uranus	-704-05-12 10:19 J	1464418.87	1464418.93	1464419.03	0.0140	0.0133
Jupiter	-704-12-16 08:38 J	1464636.67	1464636.86	1464637.05	0.0507	0.0286
Uranus	-703-05-17 06:00 J	1464788.59	1464788.75	1464788.95	0.0139	0.0100
Pluto	-703-06-14 18:14 J	1464817.06	1464817.26	1464817.51	0.0079	0.0041
Uranus	-702-05-22 01:26 J	1465158.34	1465158.56	1465158.79	0.0139	0.0068
Uranus	-701-05-25 19:55 J	1465528.09	1465528.33	1465528.59	0.0138	0.0035
Uranus	-700-05-30 13:40 J	1465897.81	1465898.07	1465898.33	0.0138	0.0003
Uranus	-699-06-04 06:43 J	1466267.52	1466267.78	1466268.03	0.0137	0.0029
Uranus	-698-06-08 23:02 J	1466637.23	1466637.46	1466637.69	0.0137	0.0061
Uranus	-697-06-12 14:24 J	1467006.92	1467007.10	1467007.30	0.0136	0.0091
Uranus	-696-06-17 05:31 J	1467376.61	1467376.73	1467376.84	0.0136	0.0121
Saturn	-690-07-02 17:31 J	1469582.99	1469583.23	1469583.47	0.0270	0.0073
Mars	-678-10-26 18:00 J	1474082.19	1474082.25	1474082.31	0.1739	0.1639
Saturn	-677-12-25 11:02 J	1474507.75	1474507.96	1474508.18	0.0292	0.0133
Jupiter	-662-06-07 05:16 J	1479784.58	1479784.72	1479784.89	0.0516	0.0385

Saturn	-661-06-26 13:26 J	1480169.90	1480170.06	1480170.24	0.0268	0.0192
Uranus	-660-11-12 05:45 J	1480673.65	1480673.74	1480673.87	0.0139	0.0125
Uranus	-659-11-16 18:14 J	1481043.09	1481043.26	1481043.46	0.0139	0.0095
Uranus	-658-11-21 07:26 J	1481412.61	1481412.81	1481413.05	0.0140	0.0063
Uranus	-657-11-24 21:35 J	1481782.17	1481782.40	1481782.66	0.0140	0.0031
Uranus	-656-11-29 12:28 J	1482151.78	1482152.02	1482152.27	0.0141	0.0004
Uranus	-655-12-04 04:04 J	1482521.43	1482521.67	1482521.91	0.0141	0.0037
Uranus	-654-12-08 19:40 J	1482891.12	1482891.32	1482891.56	0.0142	0.0071
Uranus	-653-12-12 12:43 J	1483260.88	1483261.03	1483261.22	0.0142	0.0105
Uranus	-652-12-17 06:28 J	1483630.72	1483630.77	1483630.84	0.0143	0.0138
Jupiter	-650-06-12 06:00 J	1484172.52	1484172.75	1484172.99	0.0517	0.0090
Saturn	-646-01-02 11:16 J	1485472.91	1485472.97	1485473.05	0.0291	0.0277
Jupiter	-645-12-06 12:57 J	1486176.85	1486177.04	1486177.22	0.0511	0.0298
Jupiter	-638-06-17 04:47 J	1488560.49	1488560.70	1488560.92	0.0518	0.0202
Neptune	-633-07-07 00:28 J	1490407.41	1490407.52	1490407.68	0.0089	0.0076
Jupiter	-633-12-10 23:31 J	1490564.25	1490564.48	1490564.71	0.0510	0.0035
Neptune	-632-07-09 13:26 J	1490774.86	1490775.06	1490775.30	0.0089	0.0049
Saturn	-631-07-04 01:26 J	1491134.35	1491134.56	1491134.77	0.0270	0.0149
Neptune	-631-07-12 02:38 J	1491142.37	1491142.61	1491142.88	0.0089	0.0022
Neptune	-630-07-14 15:50 J	1491509.90	1491510.16	1491510.42	0.0089	0.0005
Neptune	-629-07-16 04:47 J	1491877.46	1491877.70	1491877.95	0.0089	0.0032
Neptune	-628-07-18 17:31 J	1492245.05	1492245.23	1492245.44	0.0089	0.0059
Neptune	-627-07-21 06:14 J	1492612.72	1492612.76	1492612.85	0.0089	0.0086
Jupiter	-626-06-22 04:19 J	1492948.62	1492948.68	1492948.75	0.0520	0.0499
Jupiter	-621-12-15 11:31 J	1494951.78	1494951.98	1494952.19	0.0508	0.0230
Uranus	-620-05-12 23:16 J	1495100.38	1495100.47	1495100.59	0.0140	0.0127
Uranus	-619-05-17 18:57 J	1495470.12	1495470.29	1495470.50	0.0139	0.0094
Uranus	-618-05-22 14:09 J	1495839.88	1495840.09	1495840.34	0.0138	0.0062
Saturn	-618-12-28 00:43 J	1496059.29	1496059.53	1496059.77	0.0292	0.0036
Uranus	-617-05-26 08:38 J	1496209.62	1496209.86	1496210.12	0.0138	0.0029

Uranus	-616-05-31 02:38 J	1496579.35	1496579.61	1496579.87	0.0138	0.0004
Uranus	-615-06-04 19:12 J	1496949.06	1496949.30	1496949.56	0.0137	0.0036
Uranus	-614-06-09 11:45 J	1497318.77	1497318.99	1497319.22	0.0137	0.0067
Uranus	-613-06-13 03:07 J	1497688.46	1497688.63	1497688.82	0.0136	0.0098
Uranus	-612-06-17 17:31 J	1498058.16	1498058.23	1498058.34	0.0136	0.0127
Jupiter	-609-12-19 23:31 J	1499339.45	1499339.48	1499339.54	0.0506	0.0494
Saturn	-602-06-28 21:07 J	1501721.16	1501721.38	1501721.61	0.0268	0.0117
Mars	-599-10-29 04:04 J	1502939.48	1502939.67	1502939.85	0.1733	0.0084
Jupiter	-579-06-06 07:26 J	1510099.69	1510099.81	1510099.95	0.0515	0.0434
Uranus	-576-11-12 18:00 J	1511355.14	1511355.25	1511355.39	0.0139	0.0120
Uranus	-575-11-17 06:57 J	1511724.60	1511724.79	1511724.98	0.0139	0.0089
Uranus	-574-11-21 19:55 J	1512094.11	1512094.33	1512094.57	0.0140	0.0057
Mars	-573-04-25 13:12 J	1512249.89	1512250.05	1512250.21	0.1790	0.1084
Uranus	-573-11-25 10:04 J	1512463.68	1512463.92	1512464.17	0.0140	0.0025
Saturn	-572-07-05 07:12 J	1512685.66	1512685.80	1512685.95	0.0270	0.0221
Uranus	-572-11-30 00:43 J	1512833.29	1512833.53	1512833.78	0.0141	0.0009
Uranus	-571-12-04 16:04 J	1513202.93	1513203.17	1513203.41	0.0141	0.0042
Uranus	-570-12-09 07:40 J	1513572.63	1513572.82	1513573.05	0.0142	0.0076
Uranus	-569-12-13 00:43 J	1513942.38	1513942.53	1513942.70	0.0142	0.0110
Uranus	-568-12-17 18:14 J	1514312.26	1514312.26	1514312.27	0.0143	0.0143
Jupiter	-567-06-11 05:45 J	1514487.51	1514487.74	1514487.97	0.0516	0.0146
Jupiter	-562-12-06 17:02 J	1516492.05	1516492.21	1516492.39	0.0512	0.0350
Saturn	-559-12-29 09:50 J	1517610.67	1517610.91	1517611.15	0.0292	0.0050
Jupiter	-555-06-16 02:24 J	1518875.38	1518875.60	1518875.83	0.0519	0.0139
Neptune	-551-01-04 00:14 J	1520173.36	1520173.51	1520173.69	0.0089	0.0068
Neptune	-550-01-06 10:47 J	1520540.73	1520540.95	1520541.18	0.0089	0.0042
Jupiter	-550-12-11 07:40 J	1520879.60	1520879.82	1520880.05	0.0510	0.0074
Neptune	-549-01-08 21:07 J	1520908.14	1520908.38	1520908.64	0.0089	0.0016
Neptune	-548-01-10 07:40 J	1521275.57	1521275.82	1521276.08	0.0089	0.0010
Neptune	-547-01-12 17:45 J	1521643.02	1521643.24	1521643.49	0.0089	0.0037

Neptune	-546-01-15 04:04 J	1522010.51	1522010.67	1522010.87	0.0089	0.0063
Neptune	-545-01-17 14:38 J	1522378.11	1522378.11	1522378.13	0.0089	0.0088
Pluto	-545-12-12 20:09 J	1522708.11	1522708.34	1522708.57	0.0065	0.0029
Jupiter	-543-06-21 05:16 J	1523263.60	1523263.72	1523263.85	0.0521	0.0443
Saturn	-543-06-30 02:09 J	1523272.34	1523272.59	1523272.84	0.0268	0.0048
Jupiter	-538-12-15 18:28 J	1525267.06	1525267.27	1525267.49	0.0508	0.0190
Uranus	-536-05-13 09:50 J	1525781.80	1525781.91	1525782.04	0.0140	0.0122
Uranus	-535-05-18 05:31 J	1526151.55	1526151.73	1526151.94	0.0139	0.0089
Uranus	-534-05-23 00:57 J	1526521.31	1526521.54	1526521.79	0.0138	0.0057
Uranus	-533-05-26 19:26 J	1526891.07	1526891.31	1526891.58	0.0138	0.0024
Uranus	-532-05-31 13:26 J	1527260.80	1527261.06	1527261.32	0.0138	0.0009
Uranus	-531-06-05 06:14 J	1527630.52	1527630.76	1527631.01	0.0137	0.0040
Uranus	-530-06-09 22:33 J	1528000.23	1528000.44	1528000.67	0.0137	0.0072
Uranus	-529-06-13 13:40 J	1528369.92	1528370.07	1528370.26	0.0136	0.0102
Uranus	-528-06-18 04:47 J	1528739.64	1528739.70	1528739.76	0.0136	0.0131
Jupiter	-526-12-20 04:47 J	1529654.60	1529654.70	1529654.81	0.0506	0.0448
Mars	-520-10-31 13:26 J	1531796.97	1531797.06	1531797.16	0.1728	0.1465
Saturn	-500-12-30 14:38 J	1539161.90	1539162.11	1539162.33	0.0292	0.0126
Jupiter	-496-06-05 06:28 J	1540414.70	1540414.77	1540414.84	0.0515	0.0490
Mars	-494-04-29 13:26 J	1541107.90	1541108.06	1541108.21	0.1796	0.1120
Uranus	-492-11-13 05:02 J	1542036.59	1542036.71	1542036.86	0.0139	0.0115
Uranus	-491-11-17 17:31 J	1542406.04	1542406.23	1542406.44	0.0139	0.0084
Uranus	-490-11-22 06:43 J	1542775.56	1542775.78	1542776.02	0.0140	0.0053
Uranus	-489-11-25 20:38 J	1543145.12	1543145.36	1543145.61	0.0140	0.0020
Uranus	-488-11-30 11:02 J	1543514.72	1543514.96	1543515.21	0.0141	0.0013
Uranus	-487-12-05 02:09 J	1543884.36	1543884.59	1543884.83	0.0141	0.0047
Uranus	-486-12-09 18:00 J	1544254.05	1544254.25	1544254.46	0.0142	0.0080
Uranus	-485-12-13 10:33 J	1544623.80	1544623.94	1544624.10	0.0142	0.0114
Jupiter	-484-06-10 07:26 J	1544802.59	1544802.81	1544803.03	0.0517	0.0198
Saturn	-484-07-01 05:02 J	1544823.46	1544823.71	1544823.96	0.0268	0.0018

Jupiter	-479-12-06 02:38 J	1546807.46	1546807.61	1546807.77	0.0512	0.0381
Jupiter	-472-06-15 10:04 J	1549190.69	1549190.92	1549191.15	0.0518	0.0102
Saturn	-471-12-24 10:19 J	1549747.79	1549747.93	1549748.08	0.0294	0.0234
Neptune	-468-07-08 20:24 J	1550675.19	1550675.35	1550675.56	0.0089	0.0063
Neptune	-467-07-11 09:50 J	1551042.68	1551042.91	1551043.15	0.0089	0.0036
Jupiter	-467-12-10 14:38 J	1551194.89	1551195.11	1551195.34	0.0510	0.0113
Neptune	-466-07-13 22:33 J	1551410.19	1551410.44	1551410.71	0.0089	0.0010
Neptune	-465-07-15 11:31 J	1551777.73	1551777.98	1551778.24	0.0089	0.0017
Neptune	-464-07-18 00:14 J	1552145.30	1552145.51	1552145.75	0.0089	0.0044
Neptune	-463-07-20 12:57 J	1552512.91	1552513.04	1552513.22	0.0089	0.0071
Jupiter	-460-06-20 11:31 J	1553578.84	1553578.98	1553579.14	0.0520	0.0400
Saturn	-455-06-26 00:57 J	1555410.46	1555410.54	1555410.64	0.0267	0.0248
Jupiter	-455-12-15 01:12 J	1555582.34	1555582.55	1555582.78	0.0508	0.0147
Uranus	-452-05-13 19:12 J	1556463.18	1556463.30	1556463.46	0.0140	0.0118
Uranus	-451-05-18 15:21 J	1556832.95	1556833.14	1556833.36	0.0139	0.0085
Uranus	-450-05-23 11:16 J	1557202.73	1557202.97	1557203.21	0.0139	0.0052
Uranus	-449-05-27 05:45 J	1557572.49	1557572.74	1557573.00	0.0138	0.0019
Uranus	-448-05-31 23:31 J	1557942.23	1557942.48	1557942.75	0.0138	0.0014
Uranus	-447-06-05 16:33 J	1558311.96	1558312.19	1558312.45	0.0137	0.0045
Uranus	-446-06-10 09:07 J	1558681.67	1558681.88	1558682.10	0.0137	0.0076
Uranus	-445-06-14 00:14 J	1559051.37	1559051.51	1559051.69	0.0136	0.0107
Uranus	-444-06-18 14:52 J	1559421.12	1559421.12	1559421.15	0.0136	0.0136
Jupiter	-443-12-19 13:55 J	1559969.95	1559970.08	1559970.22	0.0507	0.0409
Saturn	-441-12-31 14:52 J	1560712.95	1560713.12	1560713.31	0.0292	0.0192
Saturn	-425-07-02 05:31 J	1566374.50	1566374.73	1566374.97	0.0268	0.0077
Saturn	-412-12-25 09:21 J	1571298.70	1571298.89	1571299.09	0.0294	0.0172
Uranus	-408-11-13 16:04 J	1572718.04	1572718.17	1572718.34	0.0139	0.0111
Uranus	-407-11-18 04:47 J	1573087.50	1573087.70	1573087.91	0.0139	0.0080
Uranus	-406-11-22 17:45 J	1573457.01	1573457.24	1573457.48	0.0140	0.0048
Uranus	-405-11-26 07:26 J	1573826.56	1573826.81	1573827.06	0.0140	0.0016

Uranus	-404-11-30 21:50 J	1574196.16	1574196.41	1574196.66	0.0141	0.0017
Uranus	-403-12-05 12:43 J	1574565.80	1574566.03	1574566.27	0.0141	0.0051
Uranus	-402-12-10 04:19 J	1574935.49	1574935.68	1574935.89	0.0142	0.0084
Jupiter	-401-06-09 16:47 J	1575117.98	1575118.20	1575118.41	0.0516	0.0230
Uranus	-401-12-13 20:52 J	1575305.24	1575305.37	1575305.52	0.0142	0.0117
Saturn	-396-06-27 00:14 J	1576961.35	1576961.51	1576961.70	0.0267	0.0191
Jupiter	-396-12-05 10:19 J	1577122.80	1577122.93	1577123.06	0.0512	0.0420
Mars	-394-10-27 12:28 J	1577813.89	1577814.02	1577814.15	0.1745	0.1273
Jupiter	-389-06-14 16:19 J	1579505.95	1579506.18	1579506.42	0.0518	0.0061
Neptune	-387-01-03 09:21 J	1580073.81	1580073.89	1580074.01	0.0089	0.0082
Neptune	-386-01-05 19:55 J	1580441.14	1580441.33	1580441.53	0.0089	0.0056
Neptune	-385-01-08 06:14 J	1580808.53	1580808.76	1580809.01	0.0089	0.0030
Neptune	-384-01-09 16:33 J	1581175.94	1581176.19	1581176.45	0.0089	0.0005
Jupiter	-384-12-10 01:12 J	1581510.33	1581510.55	1581510.77	0.0510	0.0148
Neptune	-383-01-12 02:52 J	1581543.38	1581543.62	1581543.88	0.0089	0.0022
Neptune	-382-01-14 13:12 J	1581910.85	1581911.05	1581911.28	0.0089	0.0048
Saturn	-381-01-02 12:28 J	1582263.90	1582264.02	1582264.14	0.0292	0.0249
Neptune	-381-01-16 23:31 J	1582278.36	1582278.48	1582278.64	0.0089	0.0074
Jupiter	-377-06-19 12:14 J	1583893.84	1583894.01	1583894.19	0.0520	0.0346
Jupiter	-372-12-14 15:50 J	1585897.94	1585898.16	1585898.39	0.0509	0.0126
Uranus	-368-05-14 02:24 J	1587144.45	1587144.60	1587144.75	0.0140	0.0114
Uranus	-367-05-18 22:19 J	1587514.23	1587514.43	1587514.65	0.0139	0.0081
Uranus	-366-05-23 17:45 J	1587884.01	1587884.24	1587884.50	0.0139	0.0049
Saturn	-366-07-04 05:02 J	1587925.51	1587925.71	1587925.94	0.0268	0.0135
Uranus	-365-05-27 12:43 J	1588253.78	1588254.03	1588254.29	0.0138	0.0016
Uranus	-364-06-01 06:43 J	1588623.52	1588623.78	1588624.04	0.0138	0.0017
Uranus	-363-06-06 00:00 J	1588993.26	1588993.50	1588993.74	0.0137	0.0049
Uranus	-362-06-10 16:04 J	1589362.98	1589363.17	1589363.39	0.0137	0.0080
Uranus	-361-06-14 07:26 J	1589732.67	1589732.81	1589732.98	0.0136	0.0110
Jupiter	-360-12-19 03:07 J	1590285.49	1590285.63	1590285.78	0.0507	0.0385

Saturn	-353-12-26 05:45 J	1592849.52	1592849.74	1592849.97	0.0294	0.0116
Saturn	-337-06-27 22:33 J	1598512.24	1598512.44	1598512.67	0.0267	0.0137
Uranus	-325-11-09 15:35 J	1603030.12	1603030.15	1603030.21	0.0138	0.0136
Uranus	-324-11-14 03:21 J	1603399.50	1603399.64	1603399.82	0.0139	0.0106
Uranus	-323-11-18 15:35 J	1603768.95	1603769.15	1603769.37	0.0139	0.0075
Uranus	-322-11-23 04:33 J	1604138.47	1604138.69	1604138.94	0.0140	0.0044
Uranus	-321-11-26 18:14 J	1604508.02	1604508.26	1604508.52	0.0140	0.0012
Uranus	-320-12-01 08:24 J	1604877.61	1604877.85	1604878.10	0.0141	0.0022
Uranus	-319-12-05 23:16 J	1605247.25	1605247.47	1605247.71	0.0141	0.0055
Jupiter	-318-06-09 18:28 J	1605433.07	1605433.27	1605433.47	0.0515	0.0278
Uranus	-318-12-10 14:38 J	1605616.94	1605617.11	1605617.33	0.0142	0.0089
Uranus	-317-12-14 07:26 J	1605986.69	1605986.81	1605986.94	0.0142	0.0121
Mars	-315-10-29 23:02 J	1606671.27	1606671.46	1606671.64	0.1740	0.0319
Jupiter	-313-12-05 01:40 J	1607438.45	1607438.57	1607438.69	0.0513	0.0438
Saturn	-307-07-05 04:19 J	1609476.51	1609476.68	1609476.86	0.0268	0.0190
Jupiter	-306-06-14 19:55 J	1609821.09	1609821.33	1609821.57	0.0518	0.0017
Neptune	-304-07-08 04:19 J	1610575.56	1610575.68	1610575.83	0.0089	0.0076
Neptune	-303-07-10 17:16 J	1610943.03	1610943.22	1610943.46	0.0089	0.0050
Neptune	-302-07-13 06:43 J	1611310.53	1611310.78	1611311.04	0.0089	0.0023
Neptune	-301-07-14 19:40 J	1611678.06	1611678.32	1611678.58	0.0089	0.0004
Jupiter	-301-12-09 14:52 J	1611825.90	1611826.12	1611826.34	0.0511	0.0168
Neptune	-300-07-17 08:38 J	1612045.62	1612045.86	1612046.11	0.0089	0.0030
Neptune	-299-07-19 21:07 J	1612413.20	1612413.38	1612413.60	0.0089	0.0057
Neptune	-298-07-22 10:04 J	1612780.85	1612780.92	1612781.03	0.0089	0.0083
Pluto	-298-12-15 05:45 J	1612926.50	1612926.74	1612927.00	0.0065	0.0015
Jupiter	-294-06-19 23:45 J	1614209.30	1614209.49	1614209.67	0.0520	0.0319
Saturn	-294-12-28 01:40 J	1614400.33	1614400.57	1614400.80	0.0294	0.0062
Mars	-289-04-25 15:07 J	1615980.97	1615981.13	1615981.29	0.1782	0.1000
Jupiter	-289-12-14 03:07 J	1616213.40	1616213.63	1616213.85	0.0509	0.0096
Uranus	-284-05-14 09:50 J	1617825.77	1617825.91	1617826.09	0.0140	0.0110

Uranus	-283-05-19 06:14 J	1618195.56	1618195.76	1618195.99	0.0139	0.0077
Uranus	-282-05-24 01:55 J	1618565.34	1618565.58	1618565.84	0.0139	0.0044
Uranus	-281-05-27 20:38 J	1618935.11	1618935.36	1618935.62	0.0138	0.0012
Uranus	-280-06-01 14:38 J	1619304.86	1619305.11	1619305.37	0.0138	0.0021
Uranus	-279-06-06 07:40 J	1619674.59	1619674.82	1619675.07	0.0137	0.0053
Uranus	-278-06-10 23:45 J	1620044.31	1620044.49	1620044.71	0.0137	0.0084
Saturn	-278-06-29 21:21 J	1620063.15	1620063.39	1620063.63	0.0267	0.0081
Uranus	-277-06-14 15:35 J	1620414.02	1620414.15	1620414.30	0.0136	0.0114
Jupiter	-277-12-18 12:57 J	1620600.88	1620601.04	1620601.21	0.0507	0.0350
Saturn	-248-07-06 03:50 J	1631027.57	1631027.66	1631027.76	0.0268	0.0246
Uranus	-241-11-10 03:21 J	1633711.57	1633711.64	1633711.73	0.0138	0.0130
Uranus	-240-11-14 14:52 J	1634080.97	1634081.12	1634081.31	0.0139	0.0101
Uranus	-239-11-19 03:35 J	1634450.43	1634450.65	1634450.86	0.0139	0.0070
Uranus	-238-11-23 16:19 J	1634819.95	1634820.18	1634820.43	0.0140	0.0038
Uranus	-237-11-27 05:45 J	1635189.50	1635189.74	1635190.00	0.0140	0.0006
Uranus	-236-12-01 20:09 J	1635559.09	1635559.34	1635559.58	0.0141	0.0027
Jupiter	-235-06-09 05:02 J	1635748.52	1635748.71	1635748.91	0.0515	0.0304
Uranus	-235-12-06 10:47 J	1635928.73	1635928.95	1635929.18	0.0141	0.0060
Saturn	-235-12-28 21:35 J	1635951.16	1635951.40	1635951.64	0.0294	0.0007
Uranus	-234-12-11 02:24 J	1636298.43	1636298.60	1636298.80	0.0142	0.0094
Uranus	-233-12-14 18:57 J	1636668.19	1636668.29	1636668.42	0.0142	0.0126
Jupiter	-230-12-05 12:14 J	1637753.92	1637754.01	1637754.11	0.0513	0.0466
Jupiter	-223-06-14 06:57 J	1640136.55	1640136.79	1640137.02	0.0517	0.0014
Neptune	-222-01-05 06:43 J	1640341.62	1640341.78	1640341.94	0.0089	0.0069
Neptune	-221-01-07 16:33 J	1640708.98	1640709.19	1640709.42	0.0089	0.0044
Neptune	-220-01-09 02:52 J	1641076.38	1641076.62	1641076.88	0.0089	0.0018
Neptune	-219-01-11 13:12 J	1641443.80	1641444.05	1641444.31	0.0089	0.0008
Saturn	-219-06-30 20:38 J	1641614.12	1641614.36	1641614.61	0.0267	0.0026
Neptune	-218-01-13 23:16 J	1641811.25	1641811.47	1641811.72	0.0089	0.0034
Jupiter	-218-12-09 23:45 J	1642141.28	1642141.49	1642141.70	0.0511	0.0203

Neptune	-217-01-16 09:21 J	1642178.73	1642178.89	1642179.10	0.0089	0.0060
Neptune	-216-01-17 20:09 J	1642546.28	1642546.34	1642546.42	0.0089	0.0085
Jupiter	-211-06-19 07:12 J	1644524.60	1644524.80	1644525.00	0.0519	0.0281
Mars	-210-04-29 13:55 J	1644838.93	1644839.08	1644839.23	0.1788	0.1124
Pluto	-210-06-16 15:21 J	1644887.05	1644887.14	1644887.28	0.0079	0.0072
Jupiter	-206-12-14 13:40 J	1646528.84	1646529.07	1646529.30	0.0509	0.0064
Uranus	-201-05-09 20:52 J	1648137.34	1648137.37	1648137.43	0.0140	0.0137
Uranus	-200-05-14 17:45 J	1648507.09	1648507.24	1648507.42	0.0140	0.0105
Uranus	-199-05-19 14:09 J	1648876.88	1648877.09	1648877.32	0.0139	0.0072
Uranus	-198-05-24 09:21 J	1649246.66	1649246.89	1649247.15	0.0139	0.0040
Uranus	-197-05-28 04:19 J	1649616.43	1649616.68	1649616.94	0.0138	0.0007
Uranus	-196-06-01 22:04 J	1649986.17	1649986.42	1649986.68	0.0138	0.0026
Uranus	-195-06-06 15:07 J	1650355.91	1650356.13	1650356.38	0.0137	0.0057
Uranus	-194-06-11 07:26 J	1650725.62	1650725.81	1650726.02	0.0137	0.0088
Jupiter	-194-12-19 03:35 J	1650916.47	1650916.65	1650916.82	0.0508	0.0330
Uranus	-193-06-14 22:47 J	1651095.33	1651095.45	1651095.59	0.0136	0.0118
Saturn	-176-12-29 19:55 J	1657502.09	1657502.33	1657502.57	0.0293	0.0052
Saturn	-160-07-01 22:04 J	1663165.17	1663165.42	1663165.67	0.0268	0.0033
Uranus	-157-11-10 14:24 J	1664393.01	1664393.10	1664393.22	0.0138	0.0125
Uranus	-156-11-15 02:24 J	1664762.43	1664762.60	1664762.79	0.0139	0.0095
Uranus	-155-11-19 14:24 J	1665131.89	1665132.10	1665132.33	0.0139	0.0065
Uranus	-154-11-24 03:21 J	1665501.41	1665501.64	1665501.90	0.0140	0.0033
Uranus	-153-11-27 17:16 J	1665870.97	1665871.22	1665871.47	0.0140	0.0002
Jupiter	-152-06-08 12:28 J	1666063.84	1666064.02	1666064.20	0.0515	0.0338
Uranus	-152-12-02 07:26 J	1666240.57	1666240.81	1666241.05	0.0141	0.0032
Uranus	-151-12-06 22:19 J	1666610.21	1666610.43	1666610.66	0.0141	0.0065
Uranus	-150-12-11 13:40 J	1666979.91	1666980.07	1666980.27	0.0142	0.0099
Uranus	-149-12-15 06:28 J	1667349.69	1667349.77	1667349.87	0.0142	0.0131
Jupiter	-147-12-04 20:38 J	1668069.32	1668069.36	1668069.41	0.0514	0.0501
Saturn	-147-12-23 23:16 J	1668088.44	1668088.47	1668088.53	0.0294	0.0288

Jupiter	-140-06-13 06:57 J	1670451.55	1670451.79	1670452.02	0.0516	0.0064
Neptune	-139-07-10 01:26 J	1670843.39	1670843.56	1670843.76	0.0089	0.0063
Neptune	-138-07-12 14:24 J	1671210.88	1671211.10	1671211.36	0.0089	0.0037
Neptune	-137-07-14 04:04 J	1671578.41	1671578.67	1671578.93	0.0089	0.0010
Neptune	-136-07-16 16:47 J	1671945.96	1671946.20	1671946.47	0.0089	0.0017
Neptune	-135-07-19 05:45 J	1672313.53	1672313.74	1672313.99	0.0089	0.0043
Jupiter	-135-12-09 11:31 J	1672456.78	1672456.98	1672457.19	0.0512	0.0230
Neptune	-134-07-21 18:28 J	1672681.13	1672681.27	1672681.45	0.0089	0.0069
Saturn	-131-06-26 23:16 J	1673752.34	1673752.47	1673752.62	0.0266	0.0220
Jupiter	-128-06-18 07:26 J	1674839.60	1674839.81	1674840.02	0.0518	0.0229
Jupiter	-123-12-14 00:28 J	1676844.29	1676844.52	1676844.75	0.0510	0.0035
Uranus	-117-05-10 07:12 J	1678818.73	1678818.80	1678818.90	0.0140	0.0132
Saturn	-117-12-30 22:04 J	1679053.20	1679053.42	1679053.64	0.0293	0.0120
Uranus	-116-05-15 03:50 J	1679188.50	1679188.66	1679188.86	0.0140	0.0100
Uranus	-115-05-20 00:28 J	1679558.29	1679558.52	1679558.74	0.0139	0.0066
Uranus	-114-05-24 19:26 J	1679928.07	1679928.31	1679928.57	0.0139	0.0034
Uranus	-113-05-28 14:09 J	1680297.83	1680298.09	1680298.35	0.0138	0.0002
Uranus	-112-06-02 07:40 J	1680667.57	1680667.82	1680668.08	0.0138	0.0031
Uranus	-111-06-07 00:28 J	1681037.31	1681037.52	1681037.77	0.0137	0.0063
Jupiter	-111-12-18 12:00 J	1681231.82	1681232.00	1681232.19	0.0508	0.0294
Uranus	-110-06-11 16:33 J	1681407.02	1681407.19	1681407.40	0.0137	0.0093
Mars	-110-10-28 06:00 J	1681545.59	1681545.75	1681545.91	0.1752	0.0920
Uranus	-109-06-15 07:55 J	1681776.74	1681776.83	1681776.97	0.0136	0.0123
Saturn	-101-07-03 01:12 J	1684716.33	1684716.55	1684716.79	0.0268	0.0097
Saturn	-88-12-25 02:38 J	1689639.46	1689639.61	1689639.78	0.0294	0.0217
Uranus	-73-11-11 00:57 J	1695074.44	1695074.54	1695074.68	0.0138	0.0121
Saturn	-72-06-28 04:04 J	1695303.48	1695303.67	1695303.89	0.0267	0.0154
Uranus	-72-11-15 12:57 J	1695443.86	1695444.04	1695444.24	0.0139	0.0090
Uranus	-71-11-20 00:57 J	1695813.33	1695813.54	1695813.78	0.0139	0.0060
Uranus	-70-11-24 14:09 J	1696182.85	1696183.09	1696183.34	0.0140	0.0028

Jupiter	-69-06-07 12:00 J	1696378.84	1696379.00	1696379.15	0.0514	0.0389
Uranus	-69-11-28 03:50 J	1696552.41	1696552.66	1696552.91	0.0140	0.0005
Uranus	-68-12-02 18:00 J	1696922.02	1696922.25	1696922.50	0.0141	0.0038
Uranus	-67-12-07 08:52 J	1697291.67	1697291.87	1697292.10	0.0141	0.0071
Uranus	-66-12-12 00:43 J	1697661.38	1697661.53	1697661.72	0.0142	0.0104
Uranus	-65-12-15 17:31 J	1698031.17	1698031.23	1698031.31	0.0142	0.0136
Neptune	-58-01-04 17:16 J	1700242.14	1700242.22	1700242.33	0.0089	0.0082
Saturn	-57-01-02 03:50 J	1700604.49	1700604.66	1700604.85	0.0293	0.0197
Neptune	-57-01-07 03:21 J	1700609.47	1700609.64	1700609.86	0.0089	0.0057
Jupiter	-57-06-12 12:14 J	1700766.78	1700767.01	1700767.24	0.0516	0.0104
Neptune	-56-01-08 13:55 J	1700976.85	1700977.08	1700977.33	0.0089	0.0031
Neptune	-55-01-11 00:28 J	1701344.26	1701344.52	1701344.77	0.0089	0.0006
Neptune	-54-01-13 10:19 J	1701711.70	1701711.93	1701712.19	0.0089	0.0021
Neptune	-53-01-15 20:38 J	1702079.16	1702079.36	1702079.59	0.0089	0.0046
Neptune	-52-01-17 06:28 J	1702446.65	1702446.77	1702446.95	0.0089	0.0072
Jupiter	-52-12-08 18:14 J	1702772.07	1702772.26	1702772.46	0.0512	0.0270
Pluto	-51-12-16 13:26 J	1703144.81	1703145.06	1703145.32	0.0065	0.0009
Jupiter	-45-06-17 13:40 J	1705154.85	1705155.07	1705155.29	0.0518	0.0187
Saturn	-42-07-05 06:57 J	1706267.61	1706267.79	1706268.00	0.0268	0.0166
Jupiter	-40-12-13 04:47 J	1707159.47	1707159.70	1707159.93	0.0510	0.0014
Uranus	-33-05-10 17:02 J	1709500.13	1709500.21	1709500.34	0.0140	0.0127
Jupiter	-33-06-22 13:40 J	1709542.99	1709543.07	1709543.17	0.0520	0.0478
Uranus	-32-05-15 13:40 J	1709869.90	1709870.07	1709870.28	0.0140	0.0095
Uranus	-31-05-20 10:04 J	1710239.69	1710239.92	1710240.16	0.0139	0.0061
Mars	-31-10-30 17:31 J	1710403.06	1710403.23	1710403.40	0.1746	0.0713
Uranus	-30-05-25 05:02 J	1710609.46	1710609.71	1710609.97	0.0139	0.0029
Uranus	-29-05-28 23:31 J	1710979.22	1710979.48	1710979.74	0.0138	0.0004
Saturn	-29-12-26 10:33 J	1711190.73	1711190.94	1711191.16	0.0294	0.0136
Uranus	-28-06-02 17:02 J	1711348.97	1711349.21	1711349.47	0.0138	0.0036
Jupiter	-28-12-17 17:02 J	1711547.02	1711547.21	1711547.42	0.0509	0.0250

Uranus	-27-06-07 10:04 J	1711718.69	1711718.92	1711719.14	0.0137	0.0067
Uranus	-26-06-12 01:55 J	1712088.41	1712088.58	1712088.77	0.0137	0.0097
Uranus	-25-06-15 17:31 J	1712458.14	1712458.23	1712458.33	0.0136	0.0127
Jupiter	-16-12-22 04:47 J	1715934.70	1715934.70	1715934.73	0.0507	0.0506
Saturn	-13-06-29 11:31 J	1716854.74	1716854.98	1716855.21	0.0267	0.0083
Mars	-5-04-25 19:40 J	1719712.14	1719712.32	1719712.49	0.1775	0.0854